

THE NEW INTERNATIONAL YEAR BOOK

==
A COMPENDIUM OF THE WORLD'S
PROGRESS

FOR THE YEAR

1933

EDITOR

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PREFACE

CONSIDERED in its entirety, with full regard for its record, the year 1933 was a year of achievement in the face of discouraging odds. The road to recovery, paved with common sense, was trodden with confidence. Most noteworthy among the elements that produced this condition in the United States was the vigor with which the Administration pressed drastic reforms. Supported by Congress, extraordinary powers were given to the Executive to cope with problems that the outgoing Administration had conceded threatened the country with virtual collapse.

Whereas a few years before, the attention of the world was fixed on the Five-Year Plan of the Union of Soviet Socialist Republics, in 1933 that attention was centred on the United States, and it is watching, not by any means uninterestedly, the progress of that nation. Viewed as a whole, the year was a period of trial tempered with triumph. In the loom of life, the shuttle wove its fabric with mixed yarn—with enough black in it to provoke pessimism in those pessimistically minded, but also with enough white to justify optimism in minds less morbid—a gray year in total blend of hues. As the months passed the sun of recovery appeared between the clouds to brighten that gray in places. Confidence was restored, spread rapidly, and the popular feeling was one of distinct faith in the future. With the return of that faith business gradually began to improve, and daily more people were employed. In the United States the new President won the confidence of the people by handling the financial situation promptly and resolutely, and later, by the introduction of measure after measure to relieve unemployment. In the face of defaulted obligations the United States suffered from the economic depression more severely than any other nation in the world; the country went through a grueling time. It was face to face with a national crisis that seemed in a fair way to become a catastrophe.

As presented in the accompanying pages the history of the year marks the turning point toward greater things. Prosperity, long proclaimed to be "just around the corner," did not reach that corner until urged forward vigorously by drastic reforms. The urgency of the situation called for emergency measures, and these emergency measures proved that honesty in business was a guarantee to the restoration of confidence. The one heartening lesson of this daring is its demonstration that enterprise has fully measured up with the obstacles that it faced. The rebound from depression not only inspired but caused actual achievement.

MR. PHILIP COAN, contributor of the articles on the UNITED STATES and the forty-eight STATES of the Union, summarized domestic developments as follows:

A dozen Acts, each greatly affecting the economic status of all the American population or a great part of it, became part of the law of the land; each is summarized for brief reference in the article on the *United States*. The inaugural-day crisis of 1933 compared in gravity with that of 1861; its course and solution are chronicled in that article. Therein are recorded also the Federal Administration's assumption of unprecedented powers, its sweeping alterations in the monetary system, its creation of a great group of organizations to regulate or succor every important branch of industry, and the means that it took to support, at public expense, millions of destitute victims of depression. The great majority of States passed laws of an exceptional nature and of great import to those affected, which are treated in articles on the several States. Also there are given data on the efforts made to cope with the difficulties of the leading cities and of public education. The United States have been covered with a view to meeting the need for a compact, readily consultable, permanent record of factual matter of prime importance, correlated by a single hand.

Overseas, as well as in lands to the south of us, the spirit of restlessness led to appeals to arms and brought about revolutions of which the end is not yet. Fighting continued during the year in China, Bolivia, and Paraguay. In Cuba, internecine disturbances brought about changes in administration. In India and in the Irish Free State disturbances of the public peace were caused by clashes of different races and factions. In Germany, the eccentricities of a virtual dictatorship helped to alienate the good will of those nations that held out the hand of fellowship. Almost daily charges of aggression were made by the Union of Soviet Socialist Republics against Japan. Spain continued in a state of ferment.

MR. RONALD S. KAIN, Associate Editor in charge of INTERNATIONAL RELATIONS AND FOREIGN AFFAIRS, reported developments of special interest in this field during 1933 as follows:

1. *Failure of the World Economic Conference*. Conflict between gold-standard and non-gold-standard countries over currency stabilization. President Roosevelt's decisive message, rejecting stabilization. The subsequent increase in economic nationalism.

2. *The Disarmament Impasse*. The MacDonald Plan won support of the United States and a majority of powers. Decision of France, Italy, Great Britain and United States to amend the MacDonald Plan so as to equalize armaments in from five to eight years precipitated Germany's withdrawal from the Disarmament Conference.

3. *Partial Disintegration of League of Nations*. Japan's withdrawal after being censured for aggression in Manchuria. Germany's withdrawal and Italy's demand for revision of the League Covenant and methods. The League's efforts to settle the Leticia and Chaco disputes in South America.

4. *Pan American Conference's Unexpected Success*. The "good-neighbor" policies of President Roosevelt and Secretary of State Hull inaugurated a new era of Pan-American political and economic cooperation.

5. *The Growing Instability in Europe*. Adolf Hitler's triumph in Germany, accompanied by the "liquidation" of all non-Nazi groups, anti-Semitism, and economic reorganization. The sweep of Fascism into other European states. The far-reaching political realignments among the European powers produced by Hitler's accession to power in Germany. Austria's struggle against absorption by Germany, and the Dollfuss dictatorship. Consolidation of the Little Entente to oppose the German drive for treaty revision. Negotiations for a Balkan peace pact and economic union. Mussolini's steps toward reform of the capitalist system in Italy; signing of the Four-Power Pact in Rome; the lessening of Italian-French hostility and Mussolini's growing opposition to Hitler's Austrian policy. The collapse of three Radical Socialist cabinets in France; the growth of unrest in France, marked by taxpayers' demonstrations, strikes, and disorders. Great Britain's noteworthy economic recovery; continuation of the Anglo-Irish tariff war; heavy gains by Labor in British municipal and by-elections. The reaction against radicalism in Spain, causing the downfall of the Azafia Ministry.

6. *Soviet Union*. The triumph of collectivism on the farms. Inauguration of second Five-Year Plan. Trial of British engineers and the British anti-Soviet embargo. Recognition by the United States. Growing friction with Japan. The safeguarding of Soviet western and southern frontiers by a series of non-aggression pacts.

7. *The Far East*. Extension of Japanese hegemony over Eastern Asia by the conquest of Jehol, the demilitarization of North China, and the Tanguku truce. The Nanking government's fifth anti-Communist campaign, interrupted by the Fukien revolt. The Siamese rebellions. Rejection of Hawes-Cutting bill by Philippine Legislature.

8. *Latin America*. War between Bolivia and Paraguay in the Chaco temporarily suspended, following a great Paraguayan victory. Assassination of President Sánchez Cerro of Peru paved way for termination of hostilities with Colombia over Leticia. The Cuban revolutions and the refusal of the United States to intervene. Establish-

PREFACE

ment of a dictatorship in Uruguay by President Terra. Meeting of the constitutional convention in Brazil. Withdrawal of last United States marines from Nicaragua and the negotiation of an agreement for early evacuation of Haiti. Mexico's adoption of Six-Year Plan, with socialism as the goal.

9. *War Debts.* Great Britain, Italy, Czechoslovakia, Latvia, and Lithuania made "token payments" to the United States in place of full war-debt installments. Finland paid in full, while France, Belgium, Poland, and Estonia defaulted. Anglo-American negotiations for a war-debt adjustment proved fruitless.

Indeed, the year 1933 was a strenuous one, but one on which the world can look back with satisfaction as a whole for its achievements, and for the sense of security that the progress already made toward complete recovery in the face of nearly five years of economic blizzard, now assures.

MISS MARY CLAPP, Associate Editor in charge of the department of BIOGRAPHY, reports that the year has taken a heavy mortality toll of eminent men and women. From the 675 obituaries contained in the YEAR BOOK, there may be mentioned:

In the field of *Statesmanship*, Calvin Coolidge, Viscount Grey of Fallodon, Count Apponyi, Daniel Sánchez de Bustamante, Viscount Chelmsford, Ion Duca, King Feisal of Iraq, Georges Leygues, Francisco Macías y Llussa, and Paul Painlevé; in *Literature and Letters*, Augustine Birrell, John Galsworthy, Stefan George, George Moore, the Comtesse de Noailles, Sara Teasdale, and Henry van Dyke; in *Art*, Pierre Carrier-Belleuse, Charles H. Davis, and George Luks; in *Drama and the Stage*, Firmin Gémier, Edward H. Sothorn, and Louise Closser Hale; in *Music*, Robert Kajanus; in *Religion*, Felix Adler, Annie Besant, and the Dalai Lama of Tibet; in *Science*, Leon Calmette, Edmund Fournier d'Albe, Emile Roux, and Sir Arthur Thomson; in *Philosophy*, Irving Babbitt; and in the *Humanities*, James Loeb. Also, in *Exploration*, the Duke of the Abruzzi, and Knud Rasmussen; in *Aeronautics and Aviation*, Herbert J. L. Hinkler, Rear Admiral William A. Moffett, and the Marquis de Pinedo; in *Sport*, James J. Corbett, in *Law*, Thomas Watt Gregory; in *Medicine*, Alfred Hess and Sir Robert Jones; in *Engineering*, Sir Ernest Moir, Maj.-Gen. William M. Black, and Arthur P. Davis, in *Journalism*, Viscount Burnham and Cyrus H. K. Curtis; in *Education*, John Grier Hibben and Anatol Lunacharsky; in *Industry*, Wilhelm Cuno, Edward N. Hurley, and Alexander Legge; in *Finance*, Carl Joseph Melchior and Richard B. Mellon; in *Military Science*, Gen. Sir Arthur Currie and Field Marshal Sir William Robertson; in *Naval Science*, Admiral Sir Henry Campbell; in *Shipping*, Sir John Reeves Ellerman; and in *Civic and Political Reform*, Charles H. Parkhurst and Richard Rogers Bowker.

While Science is frequently blamed for the economic and social ills from which we suffer it is to Science alone that we must turn for their cure. It cannot be stayed in application or research, and one of the tasks that the future faces is the necessity to so modify economic and political systems that the people may enjoy to the full the fruits of scientific endeavor. THE NEW INTERNATIONAL YEAR BOOK's record shows not only what has happened during the year that has passed, but points to what is happening, and also, by deduction from stated facts or premises, what is likely to happen during the years to come. Whether or not the conclusions arrived at through such deductions are warranted may well rest on the axiom, "The thing that hath been, it is that which shall be: and that which is done is that which shall be done."

MR. LOUIS M. HACKER, contributor of articles on ECONOMIC, SOCIAL, and POLITICAL SCIENCE subjects, summed up developments in his fields as follows:

Significant among the events of the year in the fields of economics and governmental action were the legalization of beer and the repeal of the Prohibition Amendment; renewed interest among the States in the Child Labor Amendment; the passage of Minimum Wage Laws by a number of States, and greater Federal preoccupation with unemployment through the creation of the Civilian Conservation Corps, the Civil Works Administration, and Civil Works Service Bureau. The articles on LYNCHING and JEWS show the revival of mass terror in the United States and Germany during the year, those on UNEMPLOYMENT and CHILD LABOR show general improvement of employment conditions throughout the world, and betterment of conditions of work for children in the United States due to operations of industrial codes under the N. R. A. The article on STRIKES AND LOCKOUTS indicates that revival of industrial activity in the United States was accompanied by industrial unrest and labor struggles.

MR. CHARLES E. FUNK, Associate Editor in charge of the MINERAL DEPARTMENT, has reported that in general there was a slight cause for optimism by producers.

Though in most instances the net figures for output were lower than in 1932 or within a few per cent of the 1932 production, these were occasioned rather by the abnormal declines in the early months of the year than by a persistent lessening of activity. Tremendous declines in construction activities affected unfavorably those minerals directly dependent; but with the projects under the National Recovery Administration taking shape and this assured outlet for material of construction, the production of such minerals showed marked gains during the closing months of the year.

The Reader's attention is invited particularly to the Maps to be found distributed throughout this volume. The Economic Map of Asia brings to light for the first time in a work of this kind the distribution of various products over the Continent. Another map unique in character is the chart of World Radio Inter-communication.

It is a pleasure to welcome to the NEW INTERNATIONAL YEAR BOOK's body of specialists, DR. GORDON A. ALLPORT, of Harvard University, who ably presents the year's work in PSYCHOLOGY; DR. WILLIAM FOSTER, Professor of Chemistry at Princeton University, whose articles on CHEMISTRY present, with characteristic clarity and excellence, the strides that have been made throughout the year; and MR. RICHMOND T. ZOECH of the United States Weather Bureau, whose articles on ASTRONOMY, METEOROLOGY, EARTHQUAKES, FLOODS, and SEISMOLOGY cover the events of the year in those sciences.

Appreciative thanks for obligations incurred and courtesies received are offered to the Officers of the various Departments of the United States Government and their allied Bureaus; also, to the Officers of those other Governments who have supplied much information concerning their respective countries; to the Committee of "A Century of Progress" Exposition, Chicago; to MR. WILLIAM P. BANNING, of the American Telephone and Telegraph Company; and to each and every Association, Company, Corporation, or other Institution that has contributed material which will serve to maintain the high degree of accuracy required of this work.

It becomes my pleasant duty to acknowledge here the assiduous labors and painstaking care that have been exercised by the EDITORS and CONTRIBUTORS who have collaborated with me, and my Associate in editorial direction, HELEN READY BIRD, to whose unselfish devotion to an arduous task may be attributed, in no small measure, the merits of this work.

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ILLUSTRATIONS

	FACING PAGE
ARCHITECTURE: The Cincinnati Railroad Station; The William Rockhill Nelson Gallery of Art	50
The Palace of the Soviets; The Seattle Art Museum	51
ART: Boza, "Hanging of John Brown"; Curry, "Tornado"	60
Lawrence, "Mrs. Raikes and Daughter"; Hoppner, "Louisa, Countess of Mansfield"; Vermeer, "Woman Weighing Gold"	61
BRIDGES: Golden Gate Bridge; Traneberg Arch	108
CANALS and DAMS: Illinois Ship Canal; Boulder Dam	109
CENTURY OF PROGRESS: The Maya Temple; The Travel and Transport Building and Dome	134
Fort Dearborn; The New Standard Dictionary "with the Electric Eye"	135
CUBA: Dr. Ramon Grau San Martin; Col. Fulgencio Batista; Mob Sacks Presidential Palace	196
LATIN AMERICA: Gen. Oscar R. Benavides; Dr. Gabriel Terra; The Pan American Conference	197
DRAMA: "Ah Wilderness"; "Men in White"	224
"The Green Bay Tree"; "Mary of Scotland"	225
ELECTRICAL ENGINEERING: Stream-lined Train; Electric Generator	240
Illuminated Pylon; Arc Welding Outfit; Luminaire with Sodium Vapor Lamp; Room Cooler with Noiseless Fan	241
FRANCE: Joseph Paul-Boncour; Edouard Daladier; Albert Sarraut; Camille Chautemps	282
GREAT BRITAIN: Major Walter Elliott; Arthur Henderson; The World Economic Conference	283
GERMANY: Gen. Hermann Wilhelm Goering; Adolf Hitler; Dr. Joseph Goebbels; R. Walter Darré	314
Launching of National Socialist Dictatorship; The Close of the Nazi Congress	315
JAPAN: Viscount Makoto Saito; Koki Hirota; Japanese Invading Jehol	394
NEAR EAST: Gazi Mustafa Kemal Pasha; Ghazi I; Fuad I; Abdul-Aziz Ibn Sa'ud	395
MOTION PICTURES: "Little Women"; "Cradle Song"	514
"The Private Life of Henry VIII"; "She Done Him Wrong"	515
NECROLOGY: Prominent Persons who died in 1933	542 and 543
PHOTOGRAPHY: Metropolitan New York from the Air, with Key Map	664
Mt. Everest from the Air; Methods of Deciphering Charred Documents; High Speed Photography	665
RAPID TRANSIT: New York City's Three Subway Systems	710
SCULPTURE: Amendola, "The Archer"; Hoffman, "Kashmiri Praying"	740
SPORTS: Helen Jacobs; Dorothy Poynton; The Kentucky Derby	741
SPAIN: Alejandro Lerroux; Niceto Alcalá Zamora; Diego Martinez Barrios; Juan Botella Asensi	760
CENTRAL EUROPE: Dr. Engelbert Dollfuss; Alexander I; Carol II; Boris III	761
UNITED STATES: The President and His Cabinet	808
When the President Signed the Recovery Act; The President Signing the Beer Bill	809

MAPS

AERONAUTICS: LINDBERGH FLIGHT	8
CUBA	200
ECONOMIC MAP OF ASIA, INCLUDING THE UNION OF SOVIET SOCIALIST REPUBLICS IN EUROPE	800
GERMANY	310
LEAGUE OF NATIONS	438
POLAR REGIONS	676
RADIO-TELEPHONE COMMUNICATION	784

KEY TO PRONUNCIATION

ä	as in ale, fate. Also see ø, below.	ð	as in the Spanish Almodovar, pulgada, where it is nearly like th in English then, this.
ä	" " senate, chaotic.	g	" " go, get.
ä	" " glare, care, and as e in there. See ø, below.	g	" " the German Landtag, and ch in Feuerbach, buch; where it is a guttural sound made with the back part of the tongue raised toward the soft palate, as in the sound made in clearing the throat.
ä	" " am, at.	h	" j in the Spanish Jijona, g in the Spanish gila; where it is a fricative somewhat resembling the sound of h in English hue or y in yet, but stronger.
ä	" " arm, father.	hw	" wh in which.
ä	" " ant, and final a in America, armada, etc. In rapid speech this vowel readily becomes more or less obscured and like the neutral vowel or a short u (ü).	κ	" ch in the German ich, Albrecht, and g in the German Arensburg, Mecklenburg; where it is a fricative sound made between the tongue and the hard palate toward which the tongue is raised. It resembles the sound of h in hue, or y in yet; or the sound made by beginning to pronounce a k, but not completing the stoppage of the breath. The character κ is also used to indicate the rough aspirates or fricatives of some of the Oriental languages, as of kh in the word Khan.
æ	" " final, regal, where it is of a neutral or obscure quality.	ñ	" " in sinker, longer.
æ	" " all, fall.	ng	" " sing, long.
æ	" " eve.	n	" " the French bon, Bourbon, and m in the French Étampes; where it is equivalent to a nasalizing of the preceding vowel. This effect is approximately produced by attempting to pronounce "onion" without touching the tip of the tongue to the roof of the mouth. The corresponding nasal of Portuguese is also indicated by n, as in the case of São Antão.
æ	" " elate, evade.	sh	" " shine, shut.
æ	" " end, pet. The characters æ, ä, and å are used for ä, ae in German, as in Baedeker, Grafe, Handel, to the values of which they are the nearest English vowel sounds. The sound of Swedish ä is also sometimes indicated by æ, sometimes by å or å.	th	" " thrust, thin.
æ	" " fern, her, and as i in sir. Also for ø, oe, in German, as in Göthe, Goethe, Ortel, Oertel, and for eu and oeu in French, as in Neufchâtel, Crèvecœur; to which it is the nearest English vowel sound.	th	" " then, this.
e	" " agency, judgment, where it is of a neutral or obscure quality, æ.	zh	" z in azure, and s in pleasure.
i	" " ice, quiet.	An apostrophe ['] is sometimes used to denote a glide or neutral connecting vowel, as in tā'b'l (table), kāz'm (chasm).	
i	" " quiescent.	Otherwise than as noted above, the letters used in the respellings for pronunciation are to receive their ordinary English sounds.	
i	" " ill, fit.	When the pronunciation is sufficiently shown by indicating the accented syllables, this is done without respelling; as in the case of very common English and other words which are correctly accented. Pronunciation is discussed fully in THE NEW INTERNATIONAL ENCYCLOPÆDIA and in the NEW STANDARD DICTIONARY.	
o	" " old, sober.		
ö	" " obey, sobriety.		
ö	" " orb, nor.		
ö	" " odd, forest, not.		
o	" " atom, carol, where it has a neutral or obscure quality.		
oi	" " oil, boil, and for eu in German, as in Feuerbach.		
oo	" " food, fool, and as u in rude, rule.		
oo	" " foot, wool.		
ou	" " house, mouse.		
u	" " use, mule.		
ü	" " unite.		
ü	" " cut, but.		
u	" " full, put, or as oo in foot, book. Also for u in German, as in München, Muller, and u in French, as in Buchez, Budé; to which it approximates in English.		
u	" " urn, burn.		
y	" " yet, yield.		
h	" " the Spanish Habana, Córdoba, where it is like a v made with the lips alone, instead of with the teeth and lips.		
ch	" " chair, cheese.		

THE NEW INTERNATIONAL YEAR BOOK

ABBOTT, LAWRENCE FRASER. An American editor, publisher, and writer, died in New York City, Feb. 7, 1933. He was born in Brooklyn, N. Y., June 25, 1859, the son of Lyman Abbott, and was graduated from Amherst College in 1881, later receiving the Litt.D. degree from Bowdoin College and from the University of Vermont. Until 1891, when he succeeded his father as president of the Outlook Co., publishers of the periodical previously known as the *Christian Union*, he was engaged as a reporter on the San Francisco *Chronicle* and as assistant editor of *Outing*. He served as secretary to Theodore Roosevelt on his game-hunting expedition to Africa and tour of Europe after his retirement from the presidency and subsequently edited his *African and European Addresses* (1910). From his *Impressions of Theodore Roosevelt* (1919) and the biographical sketch of the ex-president which he wrote as a foreword to the *Letters of Archie Butt* (1924) he gained the sobriquet of "Roosevelt's Boswell."

Shortly after the death of his father in 1922 Dr. Abbott sold his interest in the *Outlook* but continued to serve as director and contributing editor under his brother, Ernest Hamlin Abbott, who held the position of editor-in-chief from 1923 until the merger of the *Outlook* with the *Independent* in 1928. He also served from 1918 to 1931 as a trustee of the New York Life Insurance Co. and after 1931 as its secretary. Among his other books are *Twelve Great Modernists* (1927) and *The Story of Nylic* (1930).

ABKHAZ AUTONOMOUS REPUBLIC. See TRANSCAUCASIAN SOCIALIST FEDERATED SOVIET REPUBLIC.

ABNORMAL PSYCHOLOGY. See PSYCHOLOGY.

ABRUZZI, PRINCE LUIGI AMEDEO GIUSEPPE MARIA FERDINANDO FRANCESCO, DUKE OF THE. An Italian explorer and prince of the House of Savoy, died at Abruzzi City, near Mogadiscio, Italian Somaliland, Mar. 18, 1933. He was born in Madrid, Jan. 29, 1873, the third son of Amedeo, Duke of Aosta, then King of Spain. Two weeks after his birth his father abdicated the Spanish throne and retired to Italy. Always a lover of adventure, at the age of 16 he cruised the shores of South America; at 20 he led a punitive expedition against insurrecting natives in Italian Somaliland; at 21 he scaled the Matterhorn; and at 24 was the first white man to reach the summit of Mt. St. Elias in Alaska, 18,092 ft. above sea level. He related the latter incident in *The Ascent of Mt. St. Elias* (1900).

In 1899, with a crew of Italian and Norwegian explorers, on the *Stella Polare*, a 60-ft. whaling vessel, Abruzzi commanded an expedition into the Arctic, determined to achieve, if possible, what Nansen four years earlier had barely failed in—the discovery of the North Pole. After a year of intense hardship the expedition withdrew but not until one of the sledge parties under Capt. Umberto Cagni had penetrated to a latitude of 80° 33', 229.15 statute miles from the Pole and almost 20 nautical miles farther north than any explorer had yet reached. He had, moreover, determined the northern coast of Franz-Josef Land and the non-existence of Petermann Land. He told the story of this expedition in *On the "Polar Star" in the Arctic Sea* (1903).

In 1906 the Duke carried his explorations into central Africa and made the first exhaustive survey of the Ruwenzori range, climbing, measuring and naming the 16 highest peaks and charting the physical characteristics of the region. His report of the expedition was published in *Ruwenzori* (1908). In 1908 rumors of the engagement of the Duke to Miss Katherine Elkins, daughter of Senator Stephen B. Elkins of West Virginia, were widely circulated. His uncle, King Humbert of Italy, and the royal family, resolutely opposed any fulfillment of the engagement, and the Duke remained a bachelor for the rest of his life.

It was presumed that the young duke sought forgetfulness in 1909 by risking his life in a series of mountain-climbing expeditions in the Himalayas, exploring the Baltoro and Godwin-Austen glaciers in the Karakoram Himalayas, and scaling the latter peak to a new record of 24,600 feet. In 1910 he joined the Italian Navy, and a year later, with the rank of captain, commanded a squadron during the war against Turkey. Upon the entry of Italy into the World War in 1915 Abruzzi was appointed commander-in-chief of the Italian Navy, resigning that post in 1917.

After the war the Duke became interested in the colonization of Italian Somaliland and, largely through his own efforts, converted this region into one of the most prosperous of Italy's colonies. In 1932, upon the merger of three of the largest Italian shipping companies into the Italia Line, he was elected president of the enlarged company. For his scientific achievements he received the honorary degree of LL.D. from Harvard University, and in 1930 was elected a member of the Italian Royal Academy.

ACADEMIES IN SOUTH AMERICA. See SPANISH-AMERICAN LITERATURE.

ACADEMY, FRENCH (ACADÉMIE FRANÇAISE).

The oldest of the five academies which make up the Institute of France and officially considered the highest; founded in 1635, reorganized in 1816. The membership is limited to 40. The list of the Immortals at the beginning of 1933, in order of their election, was as follows: Paul Bourget; Gabriel Hanotaux; Henri Lavedan; Maurice Donnay; Raymond Poincaré; René Doumic; Marcel Prévost; Henri de Régnier; le maréchal Louis Lyautey; Pierre de la Gorce; Henri Bergson; Louis Barthou; Mgr. Alfred Baudrillard; Jules Cambon; Henri Bordeaux; Joseph Bédier; André Chevrillon; Pierre de Nolhac; Georges Goyau; Henri Brémont (q.v.); Edouard Estaunié; Henri Robert; Camille Jullian (q.v.); Georges Lecomte; Émile Picard; Albert Besnard; Louis Bertrand; Auguste de Caumont, duc de la Force; Paul Valéry; Abel Hermant; Émile Mâle; Louis Madelin; Maurice Paléologue; le maréchal Henri Pétain; André Chaulmeix; Gen. Max Weygand; Pierre Benoit; Abel Bonnard; and Lenôtre (L. L. T. Gosselin). At the June meeting François Mauriac, the novelist, was elected to succeed the late Eugène Brieux.

ACADEMY OF ARTS AND LETTERS.

AMERICAN. A society founded in 1904 by members of the National Institute of Arts and Letters for the purpose of furthering and representing the interests of literature, painting, sculpture, architecture, and music. Its membership is limited to 50 chairs, vacancies caused by death being filled by election from the membership of the Institute.

The membership of the academy as of Nov. 9, 1933, consisted of the following in the order of their election: Robert Underwood Johnson, Edwin Howland Blashfield, George de Forest Brush, Bliss Perry, Abbott Lawrence Lowell, Nicholas Murray Butler, Owen Wister, Herbert Adams, Augustus Thomas, Cass Gilbert, Robert Grant, Frederick MacMonnies, William Gillette, Paul Elmer More, Elihu Root, Brand Whitlock, Hamlin Garland, Paul Shorey, Archer Milton Huntington, Childe Hassam, Lorado Taft, Newton Booth Tarkington, Charles Dana Gibson, Royal Cortissoz, Henry Hadley, Charles Downer Hazen, George Pierce Baker, Wilbur L. Cross, Herman A. MacNeil, John Russell Pope, Edwin Arlington Robinson, James Earle Fraser, John Huston Finley, William Mitchell Kendall, Edwin Markham, Robert Frost, James Truslow Adams, Edith Wharton, George Grey Barnard, Charles Martin Loeffler, William Lyon Phelps, Adolph Alexander Weinman, Walter Damrosch, Anna Hyatt Huntington, and Paul Manship.

At the annual meeting on Nov. 9, 1933, the following new members were elected: Cecilia Beaux, Eugene O'Neill, William James Henderson, and Henry Dwight Sedgwick. There were presented to Lawrence Tibbett, the Metropolitan Opera Company's baritone, the academy's medal for good diction on the stage and to James Wallington of the National Broadcasting Company its medal for good diction on the radio. Prof. Chauncey Brewster Tinker of Yale University, a member of the institute, made the fourteenth address on the Evangeline Wilbour Blashfield Foundation, entitled "Stedman as a Poet." This address was in celebration of the 100th anniversary of the birth of Edmund Clarence Stedman, one of the founders of the institute in 1898, its third presi-

dent, and one of the original seven members chosen to constitute the academy. A Stedman Centenary Exhibition was also opened.

The officers of the academy in 1933 were: President, Nicholas Murray Butler; chancellor and treasurer, Wilbur L. Cross; secretary, Robert Underwood Johnson; directors, Herbert Adams, Royal Cortissoz, Charles Dana Gibson, Robert Grant, Cass Gilbert, Archer Milton Huntington. Administrative offices are at 633 West 155th Street, New York City.

ACADEMY OF INTERNATIONAL LAW.

See INTERNATIONAL LAW.

ACCIDENTS. See RAILWAY ACCIDENTS; SAFETY AT SEA; WORKMEN'S COMPENSATION.

ACETAMIDE. See CHEMISTRY, INDUSTRIAL OR APPLIED, under *A Powerful Solvent*.

ADAMS, THOMAS SEWALL. An American economist and educator, died in New Haven, Conn., Feb. 8, 1933. Born in Baltimore, Md., Dec. 29, 1873, he attended the Baltimore City College and was graduated from Johns Hopkins University with the A.B. degree in 1896 and the Ph.D. degree in 1899. After serving as assistant to the Treasurer of Puerto Rico, he accepted in 1901 the position of associate professor of political economy at the University of Wisconsin, becoming full professor in 1908. While at Wisconsin he served also as Tax Commissioner of the State during 1911-15. In 1916 he was called to the chair of political economy at Yale University.

Appointed special adviser to the Federal Treasury Department in 1917, Adams rendered an indispensable service to Congress in his analyses of proposed measures of taxation. He was elected president of the National Tax Association in 1922 and of the American Economic Association in 1927, and after 1929 was a member of the fiscal committee of the League of Nations. Among his works were *Taxation in Maryland* (1900); *Labor Problems* (with Helen L. Sumner, 1905); *Mortgage Taxation in Wisconsin and Neighboring States* (1907); and *Outlines of Economics* (with Richard T. Ely, 1908).

ADELPHI COLLEGE. A nonsectarian college of liberal arts and sciences for women, located in Garden City, New York, incorporated in 1896. Adelphi was located in Brooklyn, New York, until the autumn of 1929 when it was transferred to its new home in Garden City, where it has a campus of about 70 acres and three buildings. The enrollment for the autumn term of 1933 was 456 students. The faculty numbered 44. The endowment was \$892,799, while the income for 1932-33 was \$206,935. The library contained 33,220 volumes. President, Frank Dickinson Blodgett, LL.D.

ADEN, ä'dën or ä'dën. A fortified British seaport and peninsula near the southern entrance of the Red Sea about 100 miles east of the Strait of Rab-el-Mandeb. Area of the peninsula 75 square miles; including the Aden Protectorate and the Hadramaut (under loose British control) 42,000 square miles; Perim (an island in the Strait of Rab-el-Mandeb) 5 square miles. Population of Aden and Perim, in 1931, 48,338. Aden is primarily a transshipment port and produces little itself—its chief industries are the manufacture of salt, cigarettes, and dhow building. It is the chief commercial centre for the Arabian peninsula and the chief commodities of trade are coal, cotton piece goods, fuel oil, gasoline, grain, hides and skins, tobacco, and pro-

visions. For 1931-32 the total imports amounted to 56,294,814 rupees; total exports, 37,662,839 rupees; total government receipts amounted to 979,642 rupees; total expenditure was 516,203 rupees (the rupee averaged \$0.2635 for 1932). Merchant vessels entering the port of Aden in 1931-32 numbered 1483 and aggregated 5,813,623 tons; at Perim 298 vessels entered.

Aden is a separate province under a Chief Commissioner who is under the direct control of the government of India. The Aden Protectorate, which is not administered directly, is controlled for the Colonial Office by the Resident and Commander-in-Chief of Aden. Chief Commissioner and Resident and Commander-in-Chief in 1933, Lieut.-Col. B. R. Reilly.

ADJAR AUTONOMOUS REPUBLIC. See TRANSCAUCASIAN SOCIALIST FEDERATED SOVIET REPUBLIC.

ADLER, FELIX. An American educator and reformer, died in New York City, Apr. 24, 1933. He was born at Alzey, Germany, Aug. 13, 1851, and at the age of six was brought to the United States, his father, Dr. Samuel Adler, having been called to the ministry of Temple Emanu-El in New York City. After graduating from Columbia College in 1870, he studied philosophy and economics at the Universities of Berlin and Heidelberg, receiving the Ph.D. degree from the latter in 1873. On his return to the United States, however, he forewent the opportunity to succeed his father in the rabbinate, accepting instead the professorship of Hebrew and Oriental literature at Cornell University. During this period he was formulating the tenets of the Society for Ethical Culture, which he founded on his return to New York City in 1876 and with which his name was thereafter identified as senior leader. The purpose of this non-sectarian movement was to promote the moral development of the individual and society by teaching that the ethical factor is supreme above all other factors of life, that the authority of the moral law, while fundamental to, is not dependent upon religious beliefs or philosophical theories, and that all human beings are morally equal in their responsibility for the creation of an ideal society. The movement later spread throughout the United States, societies being established in Chicago, Philadelphia, St. Louis, San Francisco, and other leading cities. It also met with special response in England, Germany, Austria, Italy, and Japan.

In 1902 Dr. Adler was called to the chair of social and political ethics, created especially for him at Columbia University. He was also Roosevelt exchange professor at the University of Berlin for the year 1908-09. Setting forth by personal example his belief in the individual's responsibility to society, he took a conspicuous part in the agitation against child labor, white slavery, tenement congestion, and other evils, and in 1904 became first chairman of the National Child Labor Committee. His principal works were *Creed and Deed* (1877); *The Ethics of the Political Situation* (1884); *The Moral Instruction of Children* (1892); *Marriage and Divorce* (1905); *Life and Destiny* (1905); *Essentials of Spirituality* (1905); *Religion of Duty* (1905); *The World Crisis and Its Meaning* (1915); and *An Ethical Philosophy of Life* (1918). In 1923 he delivered the Hibbert lectures at Oxford, published later in that year as *The Reconstruction of the Spiritual Ideal*. He also served as a mem-

ber of the editorial board of the *International Journal of Ethics*.

ADMIRALTY ISLANDS. See NEW GUINEA.

ADULT EDUCATION, AMERICAN ASSOCIATION FOR. An organization founded in 1926 to serve as a national clearing house of information concerning adult education activities. See THE NEW INTERNATIONAL YEAR BOOK, 1932, for further details of aims and objects.

Discussions initiated by the Association in 1930 led to the conclusion that many central problems of adult education revolved about some solution of occupational difficulties. During 1933, two major enterprises were addressed toward this end. The first was the Adjustment Service of New York, sponsored by the Association and financed by a grant made by the Carnegie Corporation of New York, through allocation, to the Emergency Unemployment Relief Committee with supplementary services provided by the Committee's Emergency Work Bureau. The primary purpose of the Adjustment Service was to assist the individual in discovering his peculiar abilities and limitations, to point out reasons for failure to the maladjusted, and to assist in the formulation of sound programmes for re-education and recreation. Each individual was assigned to a counselor, who might requisition the assistance of experts for medical and psychiatric examination and for administering psychological tests. The more complex and puzzling cases were considered by a board of experts. It was estimated that about 14,000 individuals would have received the benefit of the Service before its termination in the spring of 1934.

A second attack on the problem of occupational difficulties led to the formation of the National Occupational Conference, financed by grants made to the Association for this purpose by the Carnegie Corporation of New York. The National Occupational Conference was intended to serve as a clearing house for occupational information, its central programme being threefold: to gather information, to distribute information, and to stimulate research. A programme of publication was undertaken with the issuance of *Occupations*, merged at the outset with the *Vocational Guidance Magazine*, the official organ of the National Vocational Guidance Association. The membership of the conference consisted of 67 men and women engaged in central fields of general and vocational education, personnel administration in government and industry, etc. Franklin J. Keller was appointed director. Headquarters offices are at 522 Fifth Avenue, New York City.

The first attempt at a community-wide experiment in adult education, based upon an entire school system and conducted by school authorities, was inaugurated in 1933 at Des Moines, Iowa. The plan contemplated the establishment of public forums for a five-year period. Grants were made by the Carnegie Corporation of New York upon recommendation of the Association. Forums were provided in all sections of the city for the discussion of current social, political, and economic problems. There were no textbooks, fees, enrollments, assignments, tests. The leaders were men of recognized scholarship, with a record of active participation in public affairs. They were expected to present information on all sides of a question, define the issues as clearly as possible, and guide the discussion so that opposing points of view might be accorded free expression.

Two studies were completed and published by

the Association in 1933: *Rural Adult Education* by Benson Y. Landis and John D. Willard, the first attempt to analyze and to set down in cross section those educational activities open to rural residents of this country; and *University Teaching by Mail* by W. S. Bittner and H. F. Mallory, a careful review and analysis of correspondence instruction as conducted by American universities.

The Association's eighth annual meeting was held at Amherst, Mass., in May, 1933. The following officers were elected: Dorothy Canfield Fisher, president; James E. Russell, chairman; Charles A. Beard, W. W. Bishop, Harvey N. Davis, John Hope, James A. Moyer, William A. Neilson, and George E. Vincent, vice-presidents; Jennie M. Flexner, secretary; Chauncey J. Hamlin, Treasurer. Headquarters are at 60 East Forty-Second Street, New York City.

ADVANCEMENT OF SCIENCE, AMERICAN ASSOCIATION FOR THE. An organization founded in 1848 to advance science, to give a stronger and more general impulse and systematic direction to scientific research, and to procure for the labors of scientific men increased facilities and a wider usefulness. On Sept. 30, 1933, its membership included 18,549 cooperating individuals. As a general association of the numerous American societies for the advancement of the special sciences, it consisted of 140 autonomous and independent associated scientific societies, of which 102 were officially affiliated with the association, 28 being local academies of science.

By invitation of Harvard University and the Massachusetts Institute of Technology the association's ninety-third meeting was held in Boston, Dec. 27, 1933, to Jan. 2, 1934, with an attendance of about 3000 scientists from all parts of the United States and Canada. The address of the retiring president, Dr. John Jacob Abel, professor of pharmacology at the Johns Hopkins University, was entitled "Poisons and Disease." William Morris Davis delivered the second Hector Maiben lecture on "The Faith of Reverent Science," while Henry Fairfield Osborn as Sedgwick Memorial lecturer spoke on "Aristogenesis, the Creative Principle in the Origin of Species." At the general sessions the Rumford Medal for distinguished research in physics was presented jointly by the association and the American Academy of Arts and Sciences to Harlow Shapley, director of the Harvard Observatory. Dr. Shapley addressed the meeting on "The Anatomy of a Disordered Universe."

More than 1500 papers were presented at the meetings of the association's various sections which represent the main current subdivisions of science: mathematics, physics, chemistry, astronomy, geology and geography, zoological sciences, botanical sciences, anthropology, psychology, social and economic sciences, historical and philological sciences, engineering, medical sciences, agriculture, and education. The eleventh prize of \$1000 for a paper read at the meeting describing a noteworthy contribution to science was awarded to R. L. Kahn of the University of Michigan for "Tissue Reactions in Immunity." There was also held a special conference of the Committee on the Place of Science in Education, at which the relations between teaching and the advancement of science were discussed.

Meeting with the association were 33 scientific organizations, of which the more important were the American Society of Zoologists, Botanical Society of America, American Society of Natural-

ists, American Society of Agronomy, Entomological Society of America, American Physical Society, American Astronomical Society, American Mathematical Society. The science exhibition was well developed, with exhibits by commercial firms, individuals, scientific organizations, educational institutions, and government bureaus.

The national summer meeting in 1933 was held in Chicago June 19 to 30. The next winter meeting was to be held in Pittsburgh, Pa., Dec. 27, 1934, to Jan. 2, 1935. There were also held under the auspices of the association the usual annual and other meetings of the Pacific division, which includes the Pacific States, Alaska, and the Hawaiian Islands, and the Southwestern division, which includes Arizona, New Mexico, Colorado, western Texas, and northern Mexico.

The official organ of the association is a weekly journal, *Science*. In addition the association issues the *Scientific Monthly*, an illustrated magazine of timely articles of general interest by eminent men of science, and publishes at four-year intervals a volume of *Summarized Proceedings*, including a directory of members. The permanent endowment of the association, the income from which is employed to advance scientific research, amounted on Sept. 30, 1933, to about \$203,000.

The president of the association for 1933 was Henry Norris Russell, director of the Princeton University observatory, who assumed office at the opening session of the Boston meeting. The president-elect for 1934 was Edward L. Thorndike, professor of educational psychology at Teachers College, Columbia University. The other officers were: Permanent secretary, Henry B. Ward; general secretary, Burton E. Livingston; and treasurer, John L. Wirt. Headquarters are in the Smithsonian Institution Building, Washington, D. C.

ADVENT CHRISTIAN CHURCH. See ADVENTISTS.

ADVENTISTS. In America the Advent Movement owed its origin to William Miller (1782-1849), a religious leader (q.v. *NEW INTERNATIONAL ENCYCLOPEDIA*, vol. xv), who from 1831 taught not only in the coming of Christ in person, power, and glory, but that such an advent was at hand and that the date might be fixed with some definiteness. In England it began under the leadership of the Rev. Hugh McNeile and the Rev. Edward Irving. For the early history of the Advent Movement see *THE NEW INTERNATIONAL YEAR BOOK* for 1932 and *THE NEW INTERNATIONAL ENCYCLOPEDIA*, vol. i, p. 158 ff.

ADVENT CHRISTIAN CHURCH. This church holds simply to the general imminence of Christ's return but takes the position that the day cannot be determined. Statistics reported at the biennial general conference held at Plainville, Conn., in June, 1932, showed 43 conferences, 469 churches, 485 ordained ministers, 81 licensed ministers, and 27,490 church members. There were also 332 Sunday schools with 19,102 members, 93 senior Young People's Societies of Loyal Workers with 2181 members, and 19 junior Young People's Societies with 325 members. The denomination maintains Aurora College at Aurora, Ill., and the New England School of Theology in Boston. Among its philanthropic institutions are the American Advent Christian Home and Orphanage at Dowling Park, Fla., and the Vernon Home for ministers and missionaries at South Vernon, Mass. Periodicals include *The World's Crisis* (Boston), *Messiah's Advocate* (Oakland, Calif.), and *Present*

Truth Messenger (Live Oak, Fla.). The officers in 1933 were Irving F. Barnes, D.D., president; T. P. Stevens, Burr A. L. Bixler, Lee E. Baker, H. J. Wilson, vice-presidents; C. H. Hewitt, secretary, and F. C. Webster, treasurer. Headquarters of the general conference are at 160 Warren Street, Boston, Mass.

SEVENTH-DAY ADVENTISTS. This denomination, which is the largest of the Adventist group, embraces nine union conferences in the United States and Canada. It believes that the seventh day of the week, from sunset on Friday to sunset on Saturday, is the Sabbath established by God's law and that immersion is the only proper form of baptism. The local church is congregational in government, although under the general supervision of the conference. The statistical report of the denomination for 1932 indicated 2285 churches in the North American division, 981 ordained ministers, and 135,837 church members; Sabbath schools which numbered 2857 had a membership of 134,278.

The foreign divisions, including the Australasian, Central European, Chinese, Far Eastern, Inter-American, Northern European, Southern African, South American, Southern Asia, Southern European, and Union of Soviet Socialist Republics divisions, consisted of 5037 churches, 1194 ordained ministers, 226,264 church members, and 8283 Sabbath schools with an enrollment of 296,840. Throughout the world there was an increase in membership of 26,055 over 1931. The work was conducted in 275 countries and islands by 70 union conferences, 144 local conferences, and 289 mission field organizations, employing 20,715 evangelistic and institutional laborers.

The movement maintains in the United States and Canada 107 educational institutions, which in 1932 had an enrollment of 13,537 students. There are also maintained in foreign countries 97 educational institutions with an enrollment of 10,019 students. The denomination has 17 publishing houses in North America and 51 in other countries. During 1932 denominational literature was issued in 157 languages, and evangelistic work was conducted in 275 countries and islands where there were used, both printed and orally, 485 languages and dialects. Total contributions from all sources amounted to \$5,876,962 for the North American division, and \$3,380,

074 for the other divisions. The headquarters of the General Conference of Seventh-day Adventists are at Takoma Park, Washington, D. C.

AERIAL PHOTOGRAPHY. See **PHOTOGRAPHY**.

AERONAUTICS. The year 1933 witnessed a further approach to the stabilization of aeronautics upon a commercial basis. Whereas heretofore the average man has generally regarded all aircraft as a valuable ally in times of war or as playthings for the foolhardy in times of peace, it has been gradually forced upon his conservatism that transport by air is now scarcely more risky than transport upon the highway. Just as the automobile eventually emerged from the hectic days of "stunt" performance and death-dealing speed contests of thirty years ago, so is aviation taking a place as a normal agency of transportation. The outstanding spectacular flights of the year—the armada of Italian planes from Rome to Chicago and return, Wiley Post's circumnavigation of the globe, the Lindbergh reconnaissance circle of the Atlantic, the U. S. Navy squadron flight from Norfolk, Va., to Panama, thence to San Diego, Calif.—all practically without discordant incident, contributed heavily toward increased confidence in the reliability of aerial navigation.

The first six months of the year showed several rays of encouragement to American transport officials. Despite a falling off in the number of passengers and a 16 per cent reduction in the volume of mail, as compared with the first six months of the previous year, in combined domestic and foreign operation, the volume of express business climbed about 60 per cent for the same comparative period, or from 712,638 lb., January-June, 1932, to 1,055,876 lb., January-June, 1933. Furthermore, though the number of passengers decreased in these comparative periods from 248,954 in 1932 to 235,139 in 1933, the length of the average journey was increased by more than 27 per cent, and by more than 14 per cent over the period July-December, 1932. In both domestic and foreign air-mail carried by American operators the volume in the comparative first six months of each year showed a great reduction in 1933, dropping from a grand total of 4,342,507 lb. during the period January-June, 1932, to 3,648,217 lb., January-June, 1933, and

SCHEDULED AMERICAN AIR-TRANSPORT OPERATIONS STATISTICS FOR 1932 AND 1933

	DOMESTIC			
	January-June 1933	July-December 1932	January-June 1933	July-December 1933
Miles flown	22,204,295	23,402,059	23,012,748	25,758,810
Passengers carried	217,588	256,691	196,895	296,806
Express	441,192	592,778	660,042	850,183
Mail	4,081,270	8,311,987	8,429,801	3,982,379
Mail payments ..	\$9,198,060.82	\$10,096,271.78	\$9,308,914.00	\$7,163,301.66
Passenger-miles flown	54,534,746	72,504,052	64,502,479	108,989,640
FOREIGN				
Miles flown	2,464,119	2,862,494	2,849,377	3,021,615
Passengers carried	31,366	85,086	38,804	37,495
Express	271,446	295,405	895,794	546,803
Mail	261,237	254,229	218,416	235,936
Mail payments ..	\$3,445,643.95	\$3,494,845.16	\$3,454,159.21	\$3,492,315.55
Passenger-miles flown	8,994,792	10,518,997	12,139,914	13,168,046
DOMESTIC AND FOREIGN				
Miles flown	24,668,414	26,264,553	25,862,120	28,780,425
Passengers carried	248,954	291,727	235,139	333,801
Express	712,638	888,188	1,055,876	1,396,936
Mail	4,342,507	8,566,216	3,648,217	4,168,315
Mail payments ..	\$12,643,704.27	\$18,590,616.89	\$12,758,073.21	\$10,655,617.21
Passenger-miles flown	63,529,588	83,023,049	76,642,393	122,157,686

only a slight improvement over the volume, 3,566,216 lb. carried in the period July-December, 1932.

Although air-travel is necessarily seasonal to a large extent in the United States, and the summer and autumn months can be expected to show heavier travel than in the early months, the closing six months of the year were beyond the expectations of careful prognostications. Travel to the Century of Progress Exposition at Chicago by air was greater than anticipated. This in turn encouraged greater use of this medium of transportation. The number of passengers carried by scheduled operators in continental United States during June reached 59,048 as compared with 38,543 in May, and was increased to 65,181 during August, beginning to show a seasonal decline during September. Detailed results of American-operated airlines with domestic and foreign extensions by six-month periods for the year 1933 as compared with the preceding year, according to the survey made by the Aëronautics Branch of the U. S. Department of Commerce, are shown in the table on page 5.

An important factor that tended toward an increase in passenger travel during the year was the attention given to physical comfort. Planes and engines had been so improved as to permit cruising speeds of greater than 150 m.p.h., and by the middle of the year scheduled trans-continental flights in twenty-one hours had been regularly achieved. The new planes operated by the leading transport companies indicated that speed was not the only desideratum. A liberal use of sound-deadening insulation, the adoption of three-blade propellers, and scientific arrangement of exhaust stacks, each contributed to reducing noise so successfully that conversation between passengers did not require raising the voice. The problems of temperature and ventilation were also solved. Safety in operation was maintained at a high level, fatalities among passengers during the year amounting to less than one in each 70,000 passengers carried.

A feature of interest in commercial transport during the year was the consolidation of groups of independent companies. Whereas at the beginning of the year, thirty-seven companies were operating scheduled services with domestic or foreign routes, by the end of the year, mergers had reduced the total of such companies to twenty-eight; although the mileage of American-operated routes, reduced by the elimination of competition, showed little loss by the end of the year. The following summary from *Air Commerce Bulletin*, covers the status of this transportation industry on Jan. 1, 1934.

EUROPEAN AIR COMMERCE. Competing with American mail, passenger, and express services to South American points, the most outstanding development of the year has been the preparation by Germany for direct service, especially to Rio de Janeiro. During the year the dirigible *Graf Zeppelin* continued its scheduled flights from Friedrichshafen to Pernambuco, with one side trip thence to Chicago; but to supplement this service, the *S.S. Westfalen* was equipped with landing and catapult facilities and was anchored in the South Atlantic at a point midway between the African and South American coasts. Experiments were conducted in the practical use of the steamer as an airdrome, but no regular service had been inaugurated by the close of the year. In a trial flight in November, the flying

boat *Monsoon* of the Lufthansa Lines, starting from British Gambia reached the steamship in 6 hr. 15 minutes. Alighting on the water it was attached to the canvas "train" which is dragged behind the steamer, and was hauled on deck. On the following day the *Monsoon* was shot by catapult from the deck of the steamer and completed its flight to Natal, Brazil. The total flying time was 15 hr. and five minutes. The announced intention by officials of the company is that service is to be limited to the carrying of mail. By this route Berlin is about 6700 miles from Rio de Janeiro, and mail service is reduced to five days.

British enterprise during the year has resulted in the extension of scheduled lines to Calcutta, India, incidental to an anticipated service in 1934 to Australia by way of Singapore. Reconnaissance surveys were made during the year for a new route extending from Lake Victoria down the east coast of Africa to Cape Town to supplement

SUMMARY OF UNITED STATES AIR TRANSPORT OPERATIONS

Miles of American-operated air transport routes.	
Domestic	27,812
Foreign	19,875
Total	47,687
Miles in operation with United States mail—	
Domestic	24,804
Foreign	19,861
Total	44,665
Miles in operation with passengers—	
Domestic	27,526
Foreign	19,795
Total	47,321
Miles in operation with express—	
Domestic	26,339
Foreign	19,781
Total	46,120
Airplane-miles scheduled daily (average):	
Domestic	138,358
Foreign	11,731
Total	150,089
With United States mail—	
Domestic	107,342
Foreign	11,675
Total	119,017
With passengers—	
Domestic	125,904
Foreign	11,371
Total	137,475
With express—	
Domestic	130,288
Foreign	11,515
Total	141,783
Number of air transport services in operation	
Mail	83
Passenger	101
Express	99
Domestic routes	95
Mail	67
Passenger	85
Express	84
Foreign routes	17
Mail	16
Passenger	16
Express	15
Number of scheduled air transport operators *	
Domestic	24
Foreign	6

* Two companies operated both domestic and foreign services.

the present direct route from Cairo. Within the empire and on the Continent, the handling of mail, express, and passengers showed great increase. In mid-year the announcement was made that the total of such business had almost doubled in 1932 over the previous year.

CONSTRUCTION. The Collier Trophy for 1932 was presented to Glenn L. Martin by President Roosevelt on May 31, "for the development of an outstanding bi-engined, highspeed, weight-carrying airplane." The citation accompanying the award read further: "This airplane by reason of its high speed and ability to carry heavy loads, together with its rugged construction, high performance and ease of control establishes a new standard for airplanes of this class."

The first notable development for the year, in the field of transport planes, was the multi-engined Boeing low-winged monoplane. Twenty-one of a fleet of sixty were placed in transcontinental service about the middle of the year. The cruising speed of these 10-passenger planes is 165 m.p.h., with a top speed of 182 miles and a low landing speed of 55 m.p.h. Each plane is driven by two Wasp engines of 550 hp., each mounted in the leading edges of the wings. Sound-proofing, air-conditioning, and other conveniences for passengers were further features. The Curtiss-Wright *Condor*, a biplane carrying two 700-horse power Wright engines, was another type of transport placed in service during the year. These planes, accommodating fifteen passengers and built to provide for their comfort, have cruising ranges of 145 m.p.h., with a top speed of 170 miles. A third transport plane placed in service during the year was the Douglas *Airliner*, a low-wing cantilever monoplane, powered with two Wright Cyclone engines each developing 710 h.p. Cruising speed at 8000 ft., using 62.5 per cent power, is 177 m.p.h., and maximum speed at that elevation is 210 m.p.h.; landing speed, 60 miles.

In Europe, the outstanding development in transport planes during the year was the Fokker *F.XX*, produced in Holland. It is a tri-motored cantilever monoplane, designed for twelve passengers. The three Wright Cyclone engines, each developing 640 hp., give the plane a maximum speed of 186 m.p.h., and a cruising speed of 154 miles.

PRIVATE FLYING. The use of the airplane in other than commercial fields progressed favorably during the year, despite depleted incomes. Aviation schools throughout the country steadily turned out a mounting list of pilots who were absorbed to a considerable extent in private operations. Statistics are not available covering the operation of private planes, but they have become permanent adjuncts in the transportation needs of many people of wealth; have found great utility in such industries as logging, gold mining, ranching, and are employed in all parts of the world as the ideal solution of immediate transportation where older methods were long, difficult, or otherwise impracticable.

NOTABLE FLIGHTS. It is encouraging that flights having no object other than spectacular feats were less numerous during the year than in previous years. Some there were, and if the participants reached their goals successfully, they were duly acclaimed as heroes of the moment; if not, their follies were usually buried with them. Probably the most soundly conceived of the outstanding flights of the year were those of the Italian armada, the U. S. Navy squadron flight to Panama,

the Lindbergh flight, the Kingsford-Smith and the Ulm flights from England to Australia, and the Wiley Post round-the-world flight. These, and other memorable flights are given in the following chronological summary.

January 12. Twenty-two planes carrying 59 men of the Second Brigade, U. S. Marine Corps, completed a 2500-mile flight from Managua, Nicaragua, to Anacostia, Md.

January 16 Jean Mermoz, French aviator, flew the South Atlantic from St. Louis, Senegal, Africa, to Natal, Brazil, with a load of 31,305 lbs., including six passengers, in 14 hours. His trip, begun on January 12 at Istres, France, and concluded on January 22, at Buenos Aires, occupied a flying time of 54 hours, 33 minutes, and was made in a Coudinet tri-motored monoplane. (See entry for May 15)

February 8. O. R. Gayford and G. E. Nicholetts, of the British Air Force, completed a non-stop flight of 5341 miles from Cranwell, England, to Walvis Bay, South West Africa, in 57 hours, 25 minutes, beating the distance record previously held by Russell Boardman and John Polando by 328 miles

February 9 Capt. James A. Mollison, British flier, flew his Puss Moth monoplane from Senegal, Africa, to Natal, Brazil. Later he flew to Buenos Aires, completing a flight from England in seven days elapsed time.

April 3. Two planes carrying the Marquess of Douglas and Clydesdale, Col L. V. S. Blacker, D. F. McIntyre, and S. R. Bonnett flew over Mt. Everest, taking photographs and studying its impressive height. A similar trip over Mt. Kanchenjunga was made on the following day.

April 10. Fernando Rein Loring, Spanish aviator, completed a solo flight from Madrid to the Philippine Islands, begun on March 18

April 16 Maryse Hiltze, French aviator, completed a flight from Paris to Tokio. On May 14 he returned to Paris, with a 25,000-mile round-trip to his credit, having made the solo flight in a Farman monoplane.

May 8 Stanislaus Skarzynski, of Poland, flew from San Luis, Senegal, to Maccio, Brazil, 2140 miles, in 17 hours, 50 minutes, in a Gipsy Moth monoplane

May 15. Jean Mermoz, with five passengers, flew from Natal, Brazil, to Dakar, French West Africa, in the Coudinet monoplane used in his westward flight of January 16, he completed the round trip, arriving in Paris, May 21.

June 3 James J. Mattern, American, made a record flight from Floyd Bennett Field, N. Y., to Moscow, a distance of 4920 miles in 31 hours, 49 minutes, in an attempted round-the-world solo flight, crashed on June 14 near Anadyr, Siberia. The aviator was found safe on July 5. He was later taken to Nome, Alaska, in a Russian plane, and was thence brought by stages to New York, arriving July 29. On his transatlantic flight he covered the first hop, New York to southern Norway, a distance of 3670 miles, in 24 hours.

June 11. Mariano Barberan and Joaquin Collar, of the Spanish Army, completed a forty-hour non-stop flight in a Breguet XIX from Seville, Spain, to Camaguey, Cuba, a distance of 4906 miles, about 4500 of which were over water.

June 12 In exactly 24 hours, J. Errol Boyd, Robert G. Lyon, and H. P. Davis, in the rebuilt Bellanca monoplane, *Columbia*, made a non-stop flight from Floyd Bennett Field, New York, to St. Marc, Haiti, a distance of 2470 miles. Boyd and Lyon made a return trip to Washington in 23 hours, arriving July 6.

July 1. General Italo Balbo, leading a command of 24 planes of the Italian Army, started from Orbetello, Italy, on a flight to Chicago, Ill., where they arrived on July 15. Fuller description of the flight is given later in this article

July 9. Col. and Mrs. C. A. Lindbergh started on a survey transatlantic expedition from College Point, N. Y. See separate heading below.

July 15. Wiley Post started from Floyd Bennett Field, on a round-the-world flight. See separate heading below.

July 17. Stephen Darius and Stanley Girenas, Lithuanians, started from Brooklyn on a non-stop flight to Lithuania. Presumably storm-harassed and out of fuel, they crashed and were killed 400 miles from their destination.

July 22. James A. Mollison, accompanied by his wife, Amy Johnson Mollison, started a west-bound transatlantic non-stop flight from Wales to New York. In attempting an emergency landing at Stratford, Conn., their de Havilland Dragon Moth was wrecked in a marsh, with slight injuries to the fliers.

August 5 Lieuts. Paul Codos and Maurice Rossi, French aviators, started from Floyd Bennett Field and made a non-stop flight in their Bleriot monoplane of 5656 miles, landing 56 hours later near Beirut, Syria.

September 8. Six twin-motored seaplanes comprising Squadron 6-F of the U. S. Navy completed a non-stop formation flight of 2059 miles from Norfolk, Va., to Coco Solo, Canal Zone. The flight, except for one trailing plane, was made in 24 hours, 55 minutes, and is the longest non-stop formation flight on record. On October 9, five of the planes arrived at San Diego, after a one-stop flight from the Canal Zone, the stop being at Acapulco, Mex., where the sixth plane had been forced to abandon the trip.

October 11. Wing-Commander Sir Charles Kingsford-Smith completed a record-breaking solo flight in a Percival Gull monoplane from Lympe Airfield, England, to Wyndham, Western Australia, in an elapsed time of 7 days, 4 hours, 50 minutes, lopping more than 40 hours from the previous record established by O. W. A. Scott in 1932.

October 20. Charles T. P. Ulm, Australian aviator, with two assistant pilots and a navigator, broke the record established a week earlier by Kingsford-Smith, flying from England to Derby, Western Australia, in six days, 17 hours, 56 minutes. They flew a triple-motored Avro-10, with Wright-Whirlwind motors.

November 8. A French military squadron of 30 planes started a mass flight under Gen. Victor Vuillemin to French Africa. After a 16,000-mile flight, visiting all of the French possessions in Africa, 28 of the planes returned to their base on December 18, having lost one plane in a crash and another by engine trouble.

ITALIAN ARMADA. On July 1 a peaceful armada of twenty-five Savoia Marchetti twin-motored seaplanes of the Italian army, carrying 96 men, under the command of General Italo Balbo, left Orbetello, Italy bound for Chicago. The first hop of 870 miles over the Alps was completed without incident, but on landing at Amsterdam one of the planes capsized. This was the only accident to mar the entire expedition, for the commander took no unnecessary chances. The balance of the journey was made in the following stages: Amsterdam to Londonderry, 630 miles; Londonderry to Reykjavik, 930 miles; Reykjavik to Labrador, a flight of 1500 miles in 12 hours, 28 minutes; Labrador to Shediak, N. B., 800 miles; Shediak to Montreal, 500 miles, and Montreal to Chicago, 870 miles, arriving on July 15, a total distance of 6100 miles in a flying time of 47 hours and 52 minutes. On July 19 the armada flew to New York, and six days later flew to Shediak, where they were delayed by bad weather. Changing plans for returning as they had come, on August 8 the armada took off for the Azores, 1200 miles; thence 760 miles to Lisbon, and 1160 miles to Rome, where they arrived August 14, after a total trip of about 12,000 miles in 45 days elapsed time.

GLOBE-CIRCLING FLIGHT. Wiley Post, who with Harold Gatty, had circled the globe in 8 days, 15 hours, 51 minutes in 1931, set off on July 15 for a solo trip over the same route and in the same plane, a Wasp-powered Lockheed Vega. Starting from Floyd Bennett Field, N. Y., his first stop was made 25 hours and 45 minutes later at Berlin, a distance of 3942 miles. His several hops thereafter were: Koenigsberg, 340 miles; Moscow, 651 miles; Novosibirsk, 1579 miles; Irkutsk, 1055 miles; Rukhlovo, 750 miles; Khabarovsk, 650 miles; Flat, Alaska, 2800 miles; Fairbanks, 375 miles; Edmonton, 1450 miles; New York, 2004 miles; a total distance of 15,596 miles, in a flying time of 115 hours, 36 minutes, 30 seconds. The elapsed time was 7 days, 18 hours, 49½ minutes, beating the record established by himself and Gatty by 21 hours, 1½ minutes. The flyer utilized to great advantage the automatic pilot, a gyroscopic stabilizer connected to ailerons and rudder, for holding the plane on a true course while he rested.

LINDBERGH SURVEY. Because of his dramatic and unheralded solo flight to Paris six years ago, because of his modest behavior in the acclaim

that followed, because of his romantic courtship of the daughter of one of America's wealthiest men prominent in public life, because of their joint interest and enthusiasm over aviation and their many joint expeditions, and because of the tragedy attending the death of their first son, any expedition embarked upon by Colonel Lindbergh and his wife, Anne Morrow Lindbergh, no matter how humdrum, is lifted into eminence. But when they embark upon an exploratory survey with the expressed object of determining a feasible route for scheduled transport operation between the United States and Europe, the importance of the survey lifts it into eminence, regardless of the actors engaged upon it. Furthermore, Colonel Lindbergh has an established reputation as a safe and sure pilot; taking his wife upon a survey goes tremendously far toward establishing public confidence in the safety of the route that may be determined.

From the viewpoint of peril, their expedition, a circumnavigation of the Atlantic Ocean, was without adventure. The journey itself, involving some five months in covering approximately 30,000 miles, was leisurely, affording ample time at every stop for studying possible sites for stations. Much time was spent in Greenland, and, as the accompanying map indicates, the exploratory trips showed great thoroughness. The expedition started from New York on July 9, with Mrs. Lindbergh operating the radio and acting as navigator. The map shows the successive stops and the distances between stops. The flight into Russia was not connected with the survey. The longest hop of the entire expedition was 1834 miles from Dakar, Senegal, to Natal, Brazil, on December 6. On the northward trip home, instead of following the mapped airway from Para, Brazil, the Colonel headed westward up the Amazon River to Manaus, thence over jungles north to Port of Spain, eventually reaching New York on December 19.

The plane, a Lockheed Sirius monoplane fitted with pontoons, and powered with a Wight Cyclone 715-horsepower engine, was the same plane used by Colonel and Mrs. Lindbergh in their expedition in 1931 from Washington to China, via Alaska, Siberia, and Japan. Shortly after the conclusion of Atlantic circumnavigation it was announced that the plane with every part of the equipment that the flyers had taken, except their personal apparel, had been presented to the American Museum of Natural History, New York, where, early in 1934, it had been placed on exhibition in the Hall of Ocean Life.

AIR RACES. The first of the air races of the season was the fifth annual All-American at Miami, Fla., January 5-7. The winners of the leading events were: Free-for-all race, James Wedell with a speed of 205.295 m.p.h.; Texaco Trophy free-for-all, Eric Wood; Curtiss Trophy, Alton Sherman; Colonel Green Cup, Roy Liggett; Florida Year-Round Clubs Handicap, J. H. Crossman; Women's Race, Betty Lund.

The first event of the National Air Races, held in Los Angeles, July 1-4, was the Bendix Transcontinental Speed Dash. In this event, flying east to west, Roscoe Turner in his Wedell-Williams racer, powered with a supercharged Wasp Senior engine lowered the record from New York to Los Angeles to 11 hours and 30 minutes, making an average speed of 214.78 m.p.h., and later (October 16) being awarded the Harmon Trophy. Second in the event was James Wedell, also in a Wedell-Williams racer, whose average speed was 209.23



Map showing 30,000-mile flight of Col. and Mrs. Charles A. Lindbergh during summer of 1933 to explore future trans-atlantic air routes.

m.p.h. In the Thompson Trophy, Roscoe Turner with an average speed over the 10-mile course of 241.05 m.p.h. was disqualified for first place by failure to round the fourth pylon. James Wedell, with 237.95 m.p.h. to his credit, was therefore awarded first place. Winners of the other events were: Aërol Trophy, Mae Haizlip; Shell Speed Dash, 550 cu. in., Roy Minor; Shell Speed Dash, unlimited, Roscoe Turner; 550 cu. in. Sweepstakes, Roy Minor; 375 cu. in. Sweepstakes, S. J. Wittman.

On the same dates, July 1-5, the American Air Race Association held its meet in Chicago. No records were broken. John Livingston, in his Cessna plane, Warner motored, captured the two main events—the Baby Ruth Trophy and the Aëro Digest trophy, both 500 cu. in., free-for-alls—with average speeds of 201.42 and 204.54 m.p.h. respectively over the five-mile course.

In the International Air Meet, held in Chicago, September 1-4, in the main events, Mae Haizlip flying a Wedell-Williams plane, won the Women's International Free-for-all with an average speed of 191.11 m.p.h. James R. Wedell, who entered a new plane of his own design, won both the Frank Phillips Trophy and the Shell Straightaway Speed Dash, with average speeds of 245.95 and 305 m.p.h., the latter a record in landplane speeds. The James Gordon Bennett Balloon Race, held at the same time, is described later.

The King's Cup race in England, a handicap event, on July 8, was won by Captain G. de Havilland in a Leopard Moth with Gypsy Major engine, who flew the course of 830 miles at an average speed of 139.5 m.p.h.

RECORDS. Non-Stop. The world's non-stop distance record previously held by John Polando and Russell Boardman, was broken on February 8 by O. R. Gayford and G. E. Nicholetts, English aviators, who started from Cranwell, England, and flew to Walvis Bay, Southwest Africa, a distance of 5341 miles in 57 hours and 25 minutes. The flight was made in a special Fairey monoplane, powered with a Napier Lion water-cooled engine. This record was broken on August 7 by the flight of Lieuts. Paul Codos and Maurice Rossi, French aviators, who flew from Floyd Bennett Field, Brooklyn to Rayak, near Beirut, Syria, a distance of 5656 miles in about 56 hours. They flew in a Bleriot 110 monoplane, powered with an Hispano-Suiza engine.

Speed. The greatest officially recorded speed yet attained by man was made on April 10 by Francisco Agello of the Royal Italian Air Force in a Macchi-Castoldi 72 seaplane with a 2800-horsepower Fiat motor. The official speed was 423.77 m.p.h. An unofficial record of 434 m.p.h. was claimed to have been made by Col. Mario Bernasconi using the same plane later in April, and in June Agello made an unofficial record of 440 m.p.h. On November 19, James R. Wedell, made a non-stop flight in his Wedell-Williams monoplane from New York to Miami in five hours maintaining an average speed of better than 300 m.p.h. for the trip.

Transcontinental. On June 2, Lieut.-Commdr. Frank Hawks made a non-stop record transcontinental flight from Los Angeles to Floyd Bennett Field in a little less than 13½ hours, using a De Beeson automatic pilot during the flight. His plane was a Northrop Gamma and was powered by a twin-row Wright Whirlwind engine. On July 25 Hawks made a non-stop flight of 1620 miles

from New York to Regina, Sask., in 10 hours and 42 minutes, and a month later, August 26, flew from Vancouver to Quebec, a distance of 2800 miles in 17 hours and 10 minutes, but encountering storms and fog was forced to land at Kingston for fuel on the trip.

On July 1, Col. Roscoe Turner established a westbound transcontinental record from New York to Los Angeles, making the trip inclusive of stops in 11 hours, 30 minutes, flying a Wasp-powered Wedell-Williams monoplane. On September 25 he established an eastbound record between the same points by flying the distance in 10 hours and 4 minutes.

Amelia Earhart Putnam in a Wasp-powered Lockheed Vega broke the eastbound transcontinental speed record for women by making the flight in 17 hours, 7½ minutes on July 8.

Altitude. Alfred K. Hall, Jr., a 17-year-old pilot, set a new junior altitude record of 16,371 ft. in a Bird biplane over Floyd Bennett Field on July 2.

The women's altitude record in light planes was broken on August 2 by Helene Boucher, French pilot, who established a new height of 19,364 ft. The weight of her plane, empty, was less than 1000 pounds.

Amphibians. Under new rules, established by the Federation Aéronautique Internationale, by which the take-off and landing must be from water before and after the runs over the land, Maj. Alexander P. de Seversky made a new record for amphibians, in a monoplane of his own design, by maintaining an average speed of 177.78 m.p.h. at the National Air Pageant held at Roosevelt Field, L. I., on October 8. On the following day Major de Seversky reached a speed of 187.8 m.p.h.

Gliders. In Austria, on January 27, Robert Kronfeld piloted a glider and 200 lb. of mail a distance of 81 miles between Vienna and Semmering, in an hour and 40 minutes. A duration record of 36 hours and 35 minutes was established by Kurt Schmidt on August 5 in a sailplane near Koenigsberg, East Prussia. The American distance record was broken on September 21 by Richard C. du Pont who flew from Rockfish Gap, Va., to Frederick, Md., a distance of 122½ miles, in a Bowlus sailplane. On October 7, Jack O'Meara established a new record for looping in a glider by making 46 consecutive loops at the National Air Pageant on Long Island.

BALLOONS. There was little activity during the year among balloonists. Beyond the annual James Gordon Bennett Cup race, this year scheduled to be held at Chicago, and several ascensions for scientific purposes into the isothermal layer, the year was uneventful. In March, the Polish balloon *Polonia*, a contestant in the 1932 Gordon Bennett Cup race, made an ascension from Warsaw and was reported to have reached an altitude of 32,808 ft. An extreme low temperature of 72 degrees below zero, Fahrenheit, was reported.

On September 2, the twenty-first running of the international James Gordon Bennett Cup Race was held at Chicago. The contestants, in order of their take-off, were: American, the *Goodyear IX*, piloted by Ward T. Van Orman, winner of three previous Bennett races, with Frank A. Trotter, aide; second, the Belgian entry, piloted by Marcelle van Schelle, with Philippe Quersin; third, the U. S. Navy entry, piloted by Lieut.-Commdr. T. G. W. Settle, with Lieut. Charles A. Kendall; fourth, the German entry *Deutschland*, piloted by Richard Schuetze, with Dr. Erich Koerner;

fifth, the Polish balloon *Kosiuszko*, piloted by Capt. Francizek Hynek, with Lieut. Zbigniew Burzynski; sixth, the French entry *Verdun*, piloted by Georges Ravaine, with Georges Blanchet. A seventh entry, from Germany, broke from its moorings before the race and was destroyed. After official calibration of barographs and checking of landing certificates the winners and places were awarded as follows: First, the Polish entry, Captain Hynek, pilot, distance 846 miles, landing near Launier, Quebec; second, U. S. Navy, Lieutenant-Commander Settle, pilot, distance 776 miles, landing near Branford, Conn.; third, United States, Ward T. Van Orman, pilot, distance 494 miles, landing near Thor Lake, Sudbury, Ont.; fourth, Germany, Richard Schuetze, pilot, distance 251 miles, landing near Kingston, Mich.; fifth, Belgium, Marcelle van Schelle, pilot, distance 229 miles, landing near Rosecommon, Mich.; sixth, France, Georges Ravaine, pilot, distance 155 miles, landing in Homer Township, Mich. The aeronauts Van Orman and Trotter, carried into Canadian wilds were lost for more than a week after their balloon was grounded and destroyed by storm.

Stratosphere. Two expeditions into the isothermal layer were safely accomplished during the year. The first ascension was made at Moscow, Russia, on September 30 under the command of Georgi Prokofief in the U.S.S.R. army balloon *Stratosfat*. A height of 62,304 ft. (11.8 miles) was claimed, but as Russia is not a member of the Federation Aéronautique Internationale the height is not officially recognized. Scientific observations were taken, and a temperature of 89 below zero, Fahrenheit, was recorded.

On November 20, Lieut.-Commdr. T. G. W. Settle and Maj. Chester L. Fordney of the U. S. Marine Corps ascended from Akron, O., after an earlier and unsuccessful attempt to take off from Chicago. Their instruments after calibration recorded an altitude of 61,237 ft. (11.5 miles). The expedition was solely for scientific purposes and the various sealed instruments were turned over to the physicists Millikan and Compton for study, after the balloon was safely grounded in a marsh near Bridgeton, N. J.

DIRIGIBLES. The reliability and success attending another season of the *Graf Zeppelin* as a passenger-carrier and mail-liner between Germany and South American points gave greater assurance to the financial feasibility of the LZ-129 which, laid down in Friedrichshafen in 1932, was nearing completion at the end of 1933. It was announced that the new dirigible will be ready for service in the summer of 1934. It will be the largest airship yet constructed, 813 ft. long, with a maximum diameter of 134 ft.

The *Graf Zeppelin* continued its scheduled flights between Friedrichshafen, Germany, and Pernambuco, Brazil, making nine round trips during the year, as in the previous year. On May 11 it completed its fastest south-bound trip, making the run in 4½ days, but bettered this record in October by making the run in 72 hours, 40 minutes. Following its concluding run of the season, the *Graf* flew northward to Chicago, before returning to its winter base in Germany.

On April 21, the U. S. Naval dirigible *Macon* made its test flight at Akron, and was subsequently accepted. The airship is a sister ship of the *U. S. Akron* (see 1931 YEAR BOOK), and was christened on March 11 by the wife of Rear Admiral William A. Moffett, chief of the U. S. Navy Bureau of Aeronautics. Because of weight-

saving improvements, however, the constructors were able to cut down the overall weight of the *Macon* by about 8000 pounds under that of the *Akron*. The airship was formally placed in commission on June 23, and on October 12 left Lakehurst for her permanent base at Sunnyvale, Calif.

The U. S. dirigible *Akron*, after returning in March from a successful flight of twelve days to the Panama Canal Zone, left its hangar on the evening of April 3 for a two-day practice flight which was to have included a cruise along the coast of New England. In addition to its full complement of seventy-six officers and men, under the command of Commander Frank C. McCord, the ship was carrying Rear Admiral William A. Moffett, Chief of the Navy's Bureau of Aeronautics. While cruising off the New Jersey coast the airship encountered a violent storm and, a little after midnight, according to subsequent findings of the Naval Board of Inquiry, was struck by a down current of wind of such magnitude that the lower fin struck the water before the descent could be checked. The airship was broken up by the sea, and with the exception of Lieut.-Commdr. Herbert V. Wiley, and three men, one later dying from exposure, who were picked up by the German oil tanker *Phocbus*, all on board, including Admiral Moffett, were lost. Immediate search of the area by boat, planes, and the Navy non-rigid blimp J-3 was instigated for other possible survivors. In the search the blimp was blown into the water and two of its crew of seven were lost.

BIBLIOGRAPHY. Among the books published during the year may be mentioned the following: *Aeronautical Ground Engineers' A and B Licenses*, by S. L. Collins (London); *Simplified Aerial Navigation by Dead Reckoning*, by J. A. McMullen (Phila.); *Flying*, by Maj. Gen. J. E. Fechet (Balti.); *Mechanics of Flight*, by A. C. Kermock (London); *Book of the Sky*, revised edition, by M. Luckiesh (New York); *Flying*, by R. Mahachek (New York); *How to Become an Air Pilot*, by R. L. Preston (London); *Liability in the Law of Aviation*, by L. H. Cha (Univ. of Ill.); *Aircraft and the Law*, by H. L. Brown (New York); *Aeronautical Law*, with 1933 supplement, by W. J. Davis (Los Angeles); *Guide to Air Force Law*, by A. G. Somerhough (London); *Financial Policies in the Aviation Industry*, by P. A. Dodd (Phila.); *Aircraft Performance Testing*, by S. S. Hall and T. H. England (New York); *Stresses in Aeroplane Structures*, by H. B. Howard (New York); *Acro Engines*, by J. Frier (London); *Properties and Strength of Materials*, by J. D. Haddon (New York); *Airports and Established Landing Fields in the U. S.*, Airport Directory Co., (Hackensack, N. J.); *Airways of America*, by A. K. Lobeck (Columbia Univ.); *Aircraft Year Book for 1933* (New York).

AÉROPLANES. See AERONAUTICS.

AFGHANISTAN, af-gān'-stān'. A country of Asia between India and the Soviet Union. The area is estimated at 245,000 square miles and the population at 11,000,000; Kabul, the capital, had 80,000 inhabitants; Kandahar, with suburbs, 60,000; Herat 30,000; Mazar-i-Sharif 46,200. Persian and Pushtoo are the chief languages spoken but Turkish is spoken in Turkistan and parts of Badakhshan. There are eight primary and secondary schools in Kabul and all the elementary and secondary schools existing throughout the country are free.

The irrigated fertile plains and valleys of the country yield extensive crops of fruit, vegetables,

and cereals. Fruits, both fresh and preserved, form the staple food of a large part of the population and enormous quantities of preserved fruits are exported. The castor-oil plant, madder, and the asafetida plant grow abundantly. The principal domestic animal is the native fat-tailed sheep which forms the chief meat diet of the inhabitants, the grease from the tail is a substitute for butter. Coal, copper, lead, iron, lapis lazuli, and some gold, are found but there is little mining activity. In Kabul there are factories, owned and supervised by the state, for the manufacture of matches, buttons, leather, and boots; a factory where arms and ammunition, clothing and boots, are made for the army; and a mint.

The imports from India include cotton goods, indigo and other dyeing materials, sugar, leather, and silver treasure. No accurate registration of trade for Afghanistan has yet been made. Considerable trading is done with the Soviet Union. The two main trade routes to India are: Kabul to Peshawar by way of the Khyber Pass, and Kandahar to the railroad terminal at Chaman, India. Afghanistan has no railroads and merchandise is transported chiefly by camels and pony back. Many of the roads are open to motor traffic in dry weather. Kabul is in wireless communication with India and Eastern Europe.

GOVERNMENT. The new Constitution promulgated by King Nadir Shah and made public to the outside world in 1932 provided for an independent constitutional monarchy, with Islam as the state religion. It contained a bill of rights, made primary education compulsory, and forbade slavery and forced labor or the confiscation of personal property, except that of refugees from the country. Provision was made for a Council of State, composed of representatives elected for three years, and for a Chamber of Nobles appointed by the King. King Nadir Shah was assassinated in Kabul on Nov. 8, 1933 and his son Mohammed Zahir Shah (19 years of age) succeeded him to the throne.

HISTORY. The assassination of King Nadir Shah in 1933 eliminated a ruler who in his four-year reign had eradicated rebellion and disorder with a firm hand and started his country on the path of progress. He followed a neutral policy toward both India and Soviet Russia and secured the financial and material aid of Britain in the pacification of his unruly subjects, who were prone to make frequent raids across the Indian border. New automobile highways were constructed and telephone and telegraph communications extended. A Constitution abolishing slavery and making elementary education compulsory was proclaimed in 1932. In August, 1933, through the government's financial aid, Afghanistan's first bank was opened at Kabul.

Nadir's assassin was Abdul Khaliq, a member of the household of Ghulam Nabi Khan, a leading supporter of former King Amanullah. Ghulam had been executed for conspiring against King Nadir a year earlier. The youthful Mohammed Zahir Shah received the support of King Nadir's brothers, Premier Hashim Khan and Shah Wali Khan, the Afghan Minister to Paris, as well as that of the Moslem clergy. On December 16, the murderer and an accomplice were executed, along with 14 others accused of sedition. Two other conspirators were sentenced to life imprisonment.

The Afghan government on July 3, 1933, signed a convention for the definition of aggression pro-

posed on behalf of the Soviet government by Maxim Litvinov, Soviet representative to the World Economic Conference at London. This pact supplemented the non-aggression pact signed between the Soviet Union and Afghanistan in 1926.

AFRICA. The various divisions of Africa in this volume are discussed under their own heads. See articles on the respective countries and territories, including Ethiopia; Kenya; Egypt; Morocco; Tunis; South Africa, Union of; etc. See also the articles **ANTHROPOLOGY**; **ARCHAEOLOGY**; **PHILOLOGY, MODERN**; and **EXPLORATION**.

AGNES SCOTT COLLEGE. An institution for the higher education of women in Decatur (Atlanta), Georgia. The enrollment for 1933-1934 was 450. The faculty numbered 48 members, and the officers of administration, 15. The endowment was \$1,350,000, and the gross income for the year was approximately \$270,000. There were 28,600 volumes in the library. During 1933 there has been steady progress made on collecting funds for the carrying out of a development programme of \$1,500,000. President, James Ross McCain, Ph.D., LL.D.

AGRICULTURAL ADJUSTMENT ACT. See **AGRICULTURE**; **AGRICULTURE, U. S. DEPT. OF**; **AGRICULTURAL EXTENSION WORK**; **SOILS**; **LIVESTOCK**; **TOBACCO**.

AGRICULTURAL EXPERIMENT STATIONS. The experiment stations in the United States, its territories and insular possessions, continued to function actively and efficiently in spite of many unfavorable conditions due to the prolonged depression. The income of the stations for the fiscal year ended June 30, 1933, approximately \$15,576,600, was 9.6 per cent below that of 1932 and 13.7 per cent below 1931 when the station revenues were the highest of record. Of the total, the Federal government furnished \$4,359,000, which comprised \$90,000 for each State, \$15,000 for Alaska, and \$24,000 for Hawaii. The Federal station in Hawaii, coordinated with that of the University of Hawaii, received a special Federal appropriation of \$40,000, and the Puerto Rico station, the status of which remained the same as in previous years, had a total income of \$63,560.

Active research projects at the stations totaled approximately 7000, of which the Adams fund supported about 430 dealing primarily with fundamental research, and the Purnell fund nearly 1440 projects, somewhat broader in plan and purpose. About 1000 of the projects were in cooperation with the United States Department of Agriculture and dealt with national, regional, and special problems. Much attention was given during the year to revising research programmes and projects and adjusting them to reduced financial support and to emergency needs.

Many stations were faced with actual or prospective cuts in financial support from State and local sources and with increased demands for aid in dealing with local problems. Reduction in financial support ranged from 0.4 to 80 per cent, necessitating in some cases drastic cuts in salaries and maintenance, with loss of seasoned and experienced staff members, abandonment of important investigations and useful service, and curtailment of publications, but on the whole, more intensive work on major problems that were pressing for immediate attention.

The building programme of the stations was restricted to the more urgent needs of the work

in progress or called for under prevailing conditions. New structures erected in 1933 included a genetics research laboratory at the Iowa Station; a dairy barn and experimental laboratory at the Kansas Station and a crops and soils laboratory at its Fort Hays substation; a cold storage plant at the Highmoor, Maine, farm; and greenhouses at the Maine Station and at the Arkansas fruit and track substation. The new forest products laboratory, erected by the United States Department of Agriculture at the University of Wisconsin at a cost of \$800,000, provided numerous facilities for forestry research. The Florida Station established at Sanford a field laboratory for celery investigations. The University of Idaho was given 3646 acres of forest land to be known as the Moscow Mountain Experimental Forest.

The United States Department of Agriculture was building at the Alabama Station a farm tillage laboratory to determine the most economical implements for the soils of southeastern United States at a cost of \$110,000 obtained from Public Works Administration funds. One of the largest and best-equipped agricultural experiment stations in the world was being established at Beltsville, Maryland, with an allotment of \$1,145,000 from the Public Works Administration. Under the approved plan, the present department station at Beltsville was to be expanded greatly, new laboratories constructed and additional land purchased, and the Bethesda (Md.) Livestock Station, much of the experimental work of the Bureau of Entomology and ultimately other research units were to be transferred to Beltsville.

Recent contributions by the State stations were made toward the solution of certain major and more urgent practical problems in such fields as conserving and increasing soil fertility, introducing new and better crops and methods of farm management, reducing losses from plant and animal diseases and insect pests, improving methods of breeding and feeding animals, and otherwise reducing production costs; aiding marketing and increasing financial returns by improving quality of product; finding profitable means of utilizing surpluses, waste products, and by-products; and aiding rural people to make better use of their resources in improving living conditions. The *Experiment Station Record*, long an important agency in the promotion of agricultural research, continued in monthly issues, completing its sixty-ninth volume.

The Alabama and Wisconsin Stations celebrated their fiftieth anniversaries during the year. Reorganization to promote unity and to reduce costs of administration and to coordinate the work of the station with extension and teaching services variously affected the set-up and staffs of the Iowa, Pennsylvania, Rhode Island, South Carolina, West Virginia, and Puerto Rico (Insular) Stations, and was prospective at other stations. The Institute of Animal Nutrition of Pennsylvania State College was given the status of a department of the school of agriculture and the Pennsylvania Station. Changes occurred in the directorships of the Iowa and Rhode Island stations. C. P. Gillette, head of the entomology department for 43 years and director of the Colorado station, 1910-1932, ended active connection with the college and station July 1.

BRITISH EMPIRE. Because of governmental decision to limit the Empire Marketing Board's net

vote for the year 1932-33 to £300,000, the work of the Board during the year under review had to be restricted almost entirely to maintenance and consolidation of pre-existing activities. The most promising development in its research activities during the year was its part in the initiation of a programme of parasitological research at the newly-established Institute of Helminthology at Macdonald College in Montreal. The Institute started its work under a special associate committee on parasitology of the National Research Council of Canada and a director appointed from Scotland.

Agricultural research in progress under substantial allotments comprised cold storage and food preservation research in England, Scotland, and New Zealand; study of the mineral content of pastures in Scotland, South Australia, and New Zealand; veterinary research in Canada, Australia, and South Africa; wool studies in England; dairy research in British Columbia, New Zealand, England, and Scotland; poultry investigations in England, Scotland, Northern Ireland, and Ontario; processing of pelts in New Zealand; entomological research in Great Britain, West Indies, Mauritius, East and West Africa, and Australia; plant disease investigations in England, Scotland, and Irish Free State; plant breeding in Wales, New Zealand, and Australia; horticultural research in England, New Zealand, Malta, Cyprus, and Palestine; and economic botany and dietetics in England. A grant of £14,400 was made for maintenance to the Imperial College of Tropical Agriculture at Trinidad for the year ended Aug. 31, 1933. This college also received £32,000 from the Carnegie Corporation as an endowment. Financial aid was also extended the tropical research station at Amani, East Africa, and to sugarcane experiment stations in Barbados, British Guiana, and Mauritius. Pineapple research also was subsidized in Mauritius, and a central quarantine station was supported at Trinidad. Other enterprises aided by the Board included a tea research laboratory in India, a tobacco research station at Marandellas, Southern Rhodesia, research with copra in the Federated Malay States, and studies with lac in India and flax in Northern Ireland. The Board was dissolved Sept. 30, 1933.

CANADA. Research in the various fields of agriculture continued to go forward at the several Provincial colleges of agriculture and on the Dominion experimental farms, notwithstanding the necessity for rigid economy and retrenchment. The Canadian Society of Technical Agriculturists, headed by President G. I. Christie of Ontario Agricultural College, former director of the Indiana Station, held its thirteenth annual convention at Regina, Saskatchewan in July, joining with its affiliated groups and the World's Grain Exhibition and Conference in its technical sessions.

CEYLON. The opening of the Coconut Research Scheme at Lunuwila during the year was an additional application of scientific methods to the island's principal industries. The research institutes devoted to tea, rubber, and coconuts, financed largely by their respective industries, allows the Ceylon Department of Agriculture more freedom to deal with general problems, especially village cultivation and new economic products.

CHINA. The Chinese Ministry of Education de-

cided to establish at Tsinghua University at Peiping a modern agricultural school and experiment station, the latter to be located outside the city and to devote special attention to the improvement of wheat and cotton. A gift of \$20,000 to the college of agriculture and forestry of Nanking University was made by Gen. Chiang Kai-shek for the strengthening of its crop improvement programme, especially in Shensi, where a new experiment station was to be established.

U.S.S.R. (RUSSIA). A scientific institute recently established in Moscow to carry on research on the circumstances of formation of cloud, fog, and rainfall has branches in Leningrad, Odessa, Saratov, Tashkent, and Ashkhabad. The Leningrad branch installed apparatus for investigating the effect on the atmosphere of high-tension currents, X-ray, ultra-violet rays, and radioactive radiations. The apparatus was to be tested in experiments carried on in the drought regions of the U.S.S.R.

NECROLOGY. Experiment station workers dying during 1933 included Clarence H. Eckles, head of the dairy husbandry division, Minnesota Station; Roscoe W. Thatcher, research chemist of the Massachusetts Station, ex-president of Massachusetts State College, and former director of the New York State Station; John Belling, research associate in genetics, W. F. Holst, associate poultry husbandman, and Elizabeth H. Smith, assistant plant pathologist, all of the California Station; Clarence R. Phipps, entomologist of the Maine Station; Richard C. Munkwitz, associate dairy husbandman of the Maryland Station; Robert E. Wall and Fred W. Walker, assistant entomologists of the Montana and Florida Stations, respectively; and S. W. Phillips, in charge of the Zanesville (Ohio) soil erosion station. Charles L. Beach, president emeritus of Connecticut Agricultural College, once dairy husbandman at the Vermont and Connecticut (Storrs) Stations, died September 15. Luther Foster, former director of the South Dakota, Utah, Wyoming, and New Mexico Stations, ex-president and dean of the New Mexico College, and associated with the development of agricultural college and station work in the Rocky Mountain area from 1885 to 1921, died June 17. William E. Boyd, specialist in agricultural botany and plant pathology for *Experiment Station Record* since 1911, died August 25. Among Canadian agriculturists, W. T. Macoun, eminent Dominion horticulturist, who rendered much pioneer service in Canada, died August 13; and Frank E. McMillan, professor of apiculture in Ontario Agricultural College and provincial apiarist, died July 14. Dr. O. M. Malte, former botanist of the Dominion Department of Agriculture also died during the year.

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1933 (London, 1933); *Empire Journal of Experimental Agriculture* (quarterly, London, 1933); *Register of Agricultural Research in Progress in Australia* (Melbourne, 1933).

AGRICULTURAL EXTENSION WORK.

The work of acquainting farmers with the purpose and opportunities afforded by various governmental agencies organized for the benefit of farmers was the most important responsibility assigned in 1933 to the field agents of the cooperative extension service of the United States Department of Agriculture and the State agricultural colleges. When the Agricultural Adjustment Act was passed in 1933, county agricultural and home demonstration agents, Federal and State extension specialists, and the administrative staffs of the State extension divisions were called on by the Department to carry on the necessary educational work in support of the campaigns to control production of the various commodities. In carrying forward this responsibility in 1933, farmers were given, first, the fullest possible information on the current economic situation with reference to agriculture as a whole and to such basic products as wheat, cotton, corn, hogs, tobacco, and rice.

This was followed by intensive campaigns to lay before farmers the provisions of the emergency plans which had been worked out to enable farmers to adjust their production in line with effective demand. Cotton was the first product to be considered. With only a few weeks in which to put the plan into effect for the 1933 crop, the extension staff in the South, supported by a volunteer staff of more than 20,000 workers, led the six-weeks campaign which made it possible for more than a million growers to sign contracts to reduce their 1933 crop acreage.

Similar methods in the wheat-growing areas resulted in voluntary applications for contracts to bring more than 50 million acres of wheat under the agreements calling for a 15 per cent reduction in acreage for the 1934 crop. Likewise, the extension staffs were utilized for field activities in connection with production-control campaigns for the various tobacco districts and in carrying out a short emergency hog-control plan.

Toward the close of the year, the attention of extension workers was concentrated on preparing for intensive production adjustment campaigns in the Corn and Cotton Belts, looking to a marked reduction in the existing surpluses of cotton, corn, and pork products and aimed at obtaining a balanced production of these commodities.

Under each of these commodity adjustment programmes, following the sign-up of growers to reduce acreage in the commodity, extension workers turned next to the task of helping them in the organization of their own production control associations, through which much of the local administration of the control programmes is handled. These control associations, with their committees and boards, make up a great volunteer staff to carry out the production control work in each community, the county agricultural agent being in most cases the connecting link between the associations and the Agricultural Adjustment Administration. In obtaining the required local aid in setting up these organizations and manning community and county committees, extension agents found the local leadership developed in previous years of invaluable help in facilitating the organization and operation of these associations. There were over 163,000 men and 147,000 women voluntarily cooperating with extension

agents in presenting the extension programme in their respective communities at the beginning of the emergency period. These men and women rendered a signal service as the new adjustment programme developed in explaining its purpose to their neighbors and in inducing their participation in it.

Extension agents, also, provided farmers with complete information regarding the credit and loan facilities available through the Farm Credit Administration and the Commodity Credit Corporation, and farmers in the region concerned are being kept advised about the development of natural resources being undertaken by the Tennessee Valley Authority. Other emergency activities which have demanded the attention of extension workers include the subsistence gardens and food preservation work undertaken for the relief of unemployed.

While the details for the emergency work were growing more clearly defined and the various emergency production phases were being woven into a strongly united agricultural plan, extension agents adjusted their programmes to carry on at full speed both the emergency work and their responsibilities to aid in the solution of those ever-present problems that face the American farm family—reduction of expensive loss and waste in farm operations, better utilization of labor and facilities, economical improvement of quality of products, the provision of a satisfactory standard of living and maintenance of the morale of the family.

Attack on the problem of farm loss was carried steadily ahead by all extension agents. Farmers in every State sought the best information on soil saving. Terracing was a growing activity in 22 States. In Texas about one million acres were terraced during the year. About 24 per cent of the Texas land which would profit by it had already been terraced. Eleven counties now have more than half of the crop acres terraced or contoured. Such wide acceptance of this method of soil and moisture conservation is the result of persistent demonstration for the past 23 years. Use of winter legumes for cover crops and soil improvement was increased greatly in many States.

Iowa farmers who previously suffered a loss of from three to six bushels of corn per acre have largely eliminated this loss by following the seed-treatment method shown in demonstrations supervised by the Extension Service. About 40 per cent of the acreage is now planted to treated seed. With the drought conditions of this season, the prevention of loss was of increased importance. Progress in the adoption of loss-preventing methods for other crops increased.

Preventable loss in crop or livestock production was reduced to increasing extent by the continued effort of extension agents and cooperating farmers. Many counties after some years' effort to move farmers to action in sufficient number practically to control infestation, have prevented much serious loss. Notable examples are Brown County, South Dakota, which has wiped out a yearly loss of approximately \$76,000 from grain smut; Sussex County, Delaware, where sweet potato growers have reduced their stem rot loss from 31 per cent of their plants to only 2 per cent; Pennsylvania poultrymen who sold their products at egg auctions have raised the percentage of their eggs selling in the two highest grades by better production methods from 51 per cent to 84 per cent. Scott County, Virginia, tobacco grow-

ers have learned how to reduce to harmless proportions their annual loss of \$10,000 or more from black fire.

Progress in adjusting farm output to meet changing conditions has been made in many sections of the country. That of Pope County, Arkansas, is typical of what has been done in many counties. Formerly practically a single-crop county, it now receives one-third of its income from its livestock.

One of the outstanding activities of extension workers in all parts of the country has been to aid farmers to achieve their goal in a "live-at-home" programme. Farm resources for production of feed for livestock and food for the family have been developed in many instances to approach the pioneer's self-sufficiency, and in all States there has been a substantial gain in utilization of farm resources.

Home demonstration agents were employed in more than one-third of the counties in the United States. Farm women in many other counties were aided in their problem of homemaking by members of the State extension staff, the county agricultural extension agent, if one was employed, making the necessary plans and arrangements for local meetings. Chief among the problems that the farm woman brought to the home demonstration agent were those of maintaining the family's standard of living, safeguarding the welfare of the children of the home, and augmenting the farm income.

Use of farm resources to provide a good living for the farm family has depended to a great extent on the farm homemaker. Home demonstration agents, who have counseled with them in their clubs and individually, know how well the farm women have measured up to the country's ideal of the pioneer woman in this difficult year. Extension workers have found an increased demand for help in the study of home accounts, in the study of wise expenditure, and in the production and preservation of fruits, vegetables, meats, and other foods. Modern methods of preservation in the home have been put into practice the country over. The amount of equipment used is an indication of the extent of home canning, Texas alone reporting that one hundred million cans have been filled.

Home demonstration agents and specialists have been especially helpful in assisting farm women who wished to sell home products to prepare a standardized quality product, to display it attractively, and, in perfecting their sales organizations so that they would function smoothly and efficiently. Farm women's markets in a number of States have grown to be a considerable factor in adding to the farm income. Sales in North Carolina farm women's markets now total well above \$300,000.

Farm women have been alert to the developments of research in child feeding and, as a result of their cooperative study in home demonstration clubs, have in many instances secured the home production of necessary foods in the face of great difficulties. Clothing for children has occupied an important place in the clothing budget work in many home demonstration groups. In the field of home management the studies have centred about equipment and routines.

In the midst of efforts to solve great economic and social problems, the interest of the entire country, both rural and urban, in the 4-H clubs has not been lessened. Four-H club membership

and work have maintained their excellent records. Keenest interest, perhaps, on the part of the young people has been in ways to assist in the family's problems and in projects which promised some profit.

The regular field force employed to carry on extension work in November, 1933, totaled 5632 persons, 345 fewer than last year. Engaged in agricultural work in the counties were 2232 county agents, 191 assistant agents, and 169 negro agents. The home-economics staff included 1120 county home demonstration agents, 33 assistant agents, 9 urban agents, and 124 negro agents. One hundred and seventy-four county club agents and 19 assistants devoted full time to 4-H clubs, while practically all county extension agents gave a substantial part of their time to boys' and girls' club members. To reinforce the efforts of county extension agents and to assist with more highly specialized problems, were 1084 extension specialists, most of them stationed at the State agricultural colleges. The administrative and supervisory staff in the States numbered 477.

In counties not employing agents included in the territory to which the various commodity adjustment programmes were applicable, it was necessary, to insure proper organization of growers, to place temporary extension agents, the number required being 497. Adding these emergency agents to the number of the regular staff gives a total of 6129 workers in the cooperative extension service for 1933.

The total funds allotted for cooperative extension work in the States and Territories during the fiscal year 1933-34 amount to \$19,896,232; a reduction of three and a half million dollars, or 15 per cent from the amount available during the previous year. Of the total funds allotted \$9,376,177 is from Federal sources, and \$10,520,054 from sources within the States and Territories. The reduction in Federal funds amounted to \$276,823 while funds available from sources within the States were reduced by about \$3,231,946.

Exact figures on extension results for 1933 were not available when this statement was prepared but in every extension activity a greater volume of results was indicated as compared with the previous year. The figures for 1932 show that 1,226,082 demonstrations in improved methods of farming and homemaking were conducted by farmers and farm women with the assistance of extension agents. The number of demonstrations carried on by boys and girls in the 4-H clubs was even larger, being 1,205,108. Supplementing contacts made with farm families through these demonstrations, extension workers made many farm and home visits, held meetings, supplied news items to the local press, gave radio talks, sent out circular letters, displayed exhibits, conducted tours and used every possible means of bringing extension information to public attention. The number of meetings held to demonstrate improved methods was 491,060, with a total attendance of 8,591,266 people. There were 962,158 farms and 387,601 homes visited by extension agents to enable them to discuss their individual problems at first hand with farmers and farm women. These figures afford some indication of the variety of ways in which the Extension Service was brought in touch with farm people and was enabled to serve them.

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partment of Agriculture; *History of Agricultural Extension Work, 1785-1923*, by A. C. True (United States Department of Agriculture, Miscellaneous Publication 15, 1928); *History of Agricultural Education, 1785-1925*, by A. C. True (U. S. Department of Agriculture, Miscellaneous Publication 36, 1929).

AGRICULTURE. Marked general improvement in the status of American agriculture featured the year 1933. Prices of farm crops rose in response to the epochal programmes for readjusting productive acreage to market requirements, set in motion by the farm relief act approved May 12, 1933, weather conditions, and better consumer buying power due to improved economic conditions. The increased prices plus government cash benefits for acreage reduction combined to lift the national gross farm income by about \$1,250,000,000. Other favorable factors were reduced production costs, lower taxes, and the provision of a complete and coordinated credit system for agriculture. These and other factors in the agricultural industry are discussed in greater detail in the following pages.

AGRICULTURAL SITUATION. The situation confronting agriculture and the Nation early in March, 1933, was epitomized by Secretary of Agriculture Wallace in his report to the President on Nov. 15, 1933. In his words, "Agriculture, in short, was very sick, and the disease from which it suffered threatened also the entire community. Ruinously low farm earnings tended to separate farm operation from farm ownership and to degrade farmers into virtual serfdom. The collapse of farm prices caused a heavy loss in farm valuations, in which farmers' equities were destroyed. All the capital employed in agriculture had a value in January, 1933, of only \$38,000,000,000, as compared with \$58,000,000,000 in January, 1929, and \$79,000,000,000 in January, 1919. Farmers bore the brunt of this terrific decline, because farm debt remained virtually unchanged. Average mortgage debt per acre was nearly three times greater than in the pre-war years. Farm land values had fallen, for the country as a whole, to about three-fourths of their pre-war value. Forced sales of farms had risen to new high levels. . . . Creditors could not collect their claims and became involved themselves. City people could not sell their products to farmers. The stability not merely of agriculture but also of business hung in the balance. . . . The depression robbed farmers of their independence, formerly the chief attraction of country life, and thereby weakened the foundations of our whole economic system. It tended, through foreclosures and bankruptcies, to shift farm ownership from the country to the town, but under conditions that made the shift a peril rather than an advantage to the new owners." During the last six months, however, the Secretary pointed out, agricultural conditions improved greatly, partly because something had been done to balance production with demand and partly because government action had improved the economic situation generally. Farmers of the United States were beginning to plan together under Federal guidance. Rising farm prices and farm incomes and the return of hope and confidence to the agricultural community were evident, although important problems awaited solution.

The total gross income from the farm production of 1933 was expected to approximate \$6,100,000,000 compared with \$5,143,000,000 in 1932.

The 1933 income was augmented by at least \$260,000,000 in rentals and benefit payments from the Agricultural Adjustment Administration. The major factor in the prospective increase was a sharp advance in the prices of nearly all farm products; part was a response to decrease in crop production and in the volume of surpluses, and part reflected an increase in consumer purchasing power and greater utilization of farm products by industry. Increased marketing of livestock and increases in supply of meats were accompanied by only a moderate supply in consumer demand and restricted the income from livestock.

The general level of prices paid to farmers at local farm markets for agricultural products was 68 per cent of the 5-year pre-war average on Dec. 15, 1933, 16 points higher than a year earlier. The advance was led by grains, cotton and cottonseed, and fruits and vegetables in order; meat animal prices averaged the same as on Dec. 15, 1932, while chicken and egg prices were down 26 points. Average prices received by producers, Dec. 15, 1933, based on reports to the United States Department of Agriculture Crop Reporting Board, were estimated for corn 42 cents per bushel, wheat 67.3, oats 31.4, barley 40.6, rye 51.9, flaxseed 151.1, potatoes 69.4, and apples 80 cents per bushel; cotton 9.6 cents per pound, cottonseed \$15.35, and hay \$7.69 per ton. Hogs brought \$2.92 per 100 pounds, beef cattle \$3.12, veal calves \$4.20, lambs \$4.92, and sheep \$2.48. Eggs were 21.6 cents per dozen, butter 21 cents per pound, and whole milk wholesaled at \$1.49 per 100 pounds and retailed at 9.2 cents per quart. Wool brought 24.2 cents per pound and live chickens 8.6 cents; both averaged 9.2 cents a year ago. Milk cows sold for \$31 each, horses \$70, and mules \$84. The corn-hog ratio (number of bushels needed to buy 100 pounds of hogs) was 7 versus 9.2 in November and 14.5 in December, 1932.

Farm real estate values, reflecting the extremely depressed condition of agriculture occasioned by a third consecutive year of declining prices of farm products, falling farm incomes, and further curtailed purchasing power, registered new low levels. The total value of farm real estate in the United States fell from \$37,027,000,000 March, 1932, to \$30,515,000,000 March, 1933, versus \$47,880,000,000 in 1930, and \$66,310,000,000 in 1920. The acre value for all farm lands with improvements, averaged for the country as a whole, decreased from 89 per cent of the pre-war value to 73 per cent during the year ended Mar. 1, 1933, compared with a 17 per cent drop in the previous year. The index mounted to 170 at the 1920 peak. Declines during the year were widespread, and were reasonably uniform over a considerable part of the country, reflecting the continued declines in farm income.

A certain amount of unrest was evident during the year. Thousands of Corn Belt farmers joined the National Farm Holiday Association whose original aim was to curtail the production and sale of farm products. This developed into a movement to halt foreclosures, stop tax sales, prevent deficiency judgments, advance prices, reduce taxes, and declare moratoria on debts for various periods. Farm strikes were ordered. The picketing of highways in several Corn Belt States was accompanied by considerable disorder and property damage. Serious milk strikes occurred in New York, Illinois, and Wisconsin. Reports of efforts of groups of farmers to prevent foreclosure sales were numerous. Governor William Langer of

North Dakota declared on October 16 a wheat embargo prohibiting the shipment of wheat from North Dakota, higher prices being the objective. On November 5, President Roosevelt rejected a proposal of five governors of midwestern States to raise farm prices through compulsion—at the same time the Agricultural Adjustment Administration was making special efforts to expedite the existing farm relief programme.

Credit. Facilities for short-term credit, like mortgage facilities, were badly disrupted by the depression. Country bank failures increased and deposits dropped in banks that did not fail. Failure or restriction of production credit may reduce farm production but it prevents many farmers from adequately carrying on their farming operations. The Federal government had attempted since the war to improve the inadequate credit facilities in many rural areas through emergency measures and new permanent agencies, including agricultural loans by the War Finance Corporation in 1921, the Federal Intermediate Credit Banks in 1923, the financing of coöperatives through the Federal Farm Board in 1929, seed loans during nine years, the capitalizing of agricultural credit corporations and livestock-loan companies, and crop-production loans by the Reconstruction Finance Corporation. However, these several activities were not enough to cope with the critical situation which developed as the depression was prolonged. Therefore in 1933, Congress took additional action in Title II of the Agricultural Adjustment Act which contains provisions for the refinancing of farm indebtedness and also provides means for redeeming land taken from farmers by foreclosure. Congress, by strengthening the capital structure of the Federal land banks and furnishing substantial sums for mortgage loans to farmers, gave private lending agencies an opportunity to transfer loans which they could not hold, and thus to avoid foreclosing on farm borrowers; it relieved farmers materially by authorizing the Federal Farm Credit Administration (see below) to reduce the interest rate on Federal land bank bonds, and temporarily to waive payments on the principal; and it made direct loans available to farmers in districts where local farm-loan associations were not in a position to accept loan applications.

Mortgage Debt. The farm-debt situation continued to be one of the worst aspects of the farm problem. The total farm-mortgage debt in the United States declined from nearly \$9,500,000,000 in 1928 to about \$8,500,000,000 in 1932. Such reduction appeared to be largely a result, not of normal liquidation but of foreclosures, bankruptcies, and forced sales, and of the inability of local banks and of other credit agencies to lend. Forced sales in 1932 comprised 37 per cent of all transfers versus 27 per cent in 1928. The number of such sales during the year ended Mar. 15, 1933, exceeded those of any previous year of record, approximately 15.3 farms per 1000 being sold for taxes, and 38.8 involved in transfers in settlement of debt. Surveys by the United States Department of Agriculture indicated that on Jan. 1, 1933, about 38 per cent of mortgaged farms operated by owners were indebted for one half or more of their value, and 36.6 per cent between 25 and 50 per cent. The largest proportion of farms with high-debt ratios was in the west north central States. The plight of the farm, because of delinquency and lower land values was intensified

by increasing difficulty in renewing mortgages at their original amounts.

Farm mortgage loans during the year ended Jan. 1, 1933, were smaller in total volume and in average size of loans and there were lower ratios of loan to value of property than in the previous year, mortgage bankers in 16 western, north central, and southern States reported. Of the total, only 14 per cent in number and 9 per cent of the amount represented new loans. Life insurance companies took 61 per cent of the total versus 71 in 1932, savings banks 15 per cent, private investors 11, and the mortgage bankers retained 12.4 per cent. In October, 1933, farm mortgage loans by 39 life insurance companies totaled \$1,266,000,000 a progressive decline from \$1,606,000,000 in 1927; by Federal Land Banks \$1,125,000,000 versus \$1,197,000,000 in 1929; by Joint Stock Land Banks \$364,000,000 versus \$667,000,000 in 1927; by banks of Federal Reserve System \$308,000,000 June 30, 1933, versus \$489,000,000 June 30, 1926; by Federal Intermediate Credit banks to cooperate associations \$7,000,000 and to financing agencies \$126,000,000; outstanding seed and crop production loans \$101,000,000; and loans of regional agricultural credit corporations, \$147,000,000.

Taxes. Farm real estate taxes per acre declined an average of 22 per cent between 1929 and 1932, the United States Department of Agriculture reported late in 1933, but the average value of farm real estate against which the taxes were levied fell about 37 per cent, and gross farm income fell about 57 per cent from 1929 to 1932, and net farm income fell about 60 per cent, so that taxes in relation to value and to farm income rose nearly 24 and 100 per cent, respectively, from 1929 to 1932. The decline in average farm tax from 58 cents an acre in 1929 to 46 in 1932 was the first in twenty years. The north central and west south central States showed the largest regional declines in farm real estate taxes per acre, and New England the least. While information regarding farm taxes levied in 1933 was not available, it appeared that wherever farm incomes had improved over those of 1932, the farmers' tax burden had correspondingly lightened, this view being based on the assumption that on the average the 1933 levy probably was somewhat lower than that of 1932.

Exports. The value of exports of agricultural products from the United States, excluding forest products, dropped to \$588,169,000 in the year ended June 30, 1933, the lowest since 1895-96, and 22 per cent less than in 1932. The volume of exports also was less than in 1931-32. Agricultural products composed 42 per cent of all exports. Wheat, including flour, the largest single item contributing to the decline, totaled 41,225,000 bushels, the smallest export since 1872 and less than one-third the volume of the year before, whereas more barley, corn, and oats were exported than in 1931-32. Cotton, with 8,647,000 bales (fiscal year) made up 55 per cent of the total agricultural exports, tobacco and fruits each 11 per cent, meat and meat products, including animal fats and oils 9 per cent, and grain and grain products under 7 per cent. Cotton, fruits, and unmanufactured tobacco made the best showing in 1932-33 (annual volume index) with exports equaling or exceeding the pre-war level, but like other agricultural groups, declined compared with 1931-32.

Imports. During the fiscal year 1932-33, im-

ports of agricultural products (excluding forest products) declined sharply, in value more than in volume, totaling \$811,688,000, 27 per cent under 1931-32, and the lowest value since 1907-08. Agricultural imports made up more than 52 per cent of all imports. Coffee continued to lead the imports while raw sugar supplanted raw silk in the second place. The imports included raw sugar 2,951,000 tons worth \$101,840,000, about 10 per cent decrease in volume and 5 per cent in value under 1931-32 and fruit \$30,492,000, 20 per cent below 1931-32. Substantial declines were recorded in volume and value of imports of nuts, vegetables, wool, butter, milk, hides and skins, olive oil, flaxseed, silk, rubber, and coffee, while imports of meat, palm, and tung oil, and copra gained in volume but at a reduction in value.

Population. The farm population of the United States was estimated from United States Department of Agriculture surveys to be the highest in history, 32,242,000 on Jan. 1, 1933, as compared with 31,241,000 on Jan. 1, 1932, and the previous high census estimate of 32,076,960 in 1910. The movement from towns and cities to farms totaled 1,544,000 while 1,011,000 left farms for urban centres. Balancing these movements and births and deaths resulted in a net gain of 1,001,000 persons in farm population. Increasing unemployment in cities forced many farm young folks to remain on the farm or to return from cities for refuge on farms of parents or relatives. A larger proportion of the farm-to-city movement in 1932 consisted of people leaving foreclosed or tax-delinquent farms and tenants or croppers unable to obtain credit for farm operations.

AGRICULTURE. CROP PRODUCTION IN 1933. The area of all crops harvested in the United States in 1933, exclusive of fruits and nuts, was estimated to be 327,324,230 acres, about 9 per cent less than was harvested in 1932. Causes of the decrease in acreage from 1932 included failure of about 14,000,000 acres of winter wheat fall-sown in 1932, very unfavorable weather at planting in many parts of the country, very heavy loss of spring grains, largely due to drought and particularly in the Northern Great Plains, and the plowing under of 10,384,000 acres of cotton. Combining all crops, yields per harvested acre averaged 5.5 per cent below 1932 and 5 per cent below the average of the previous decade, although 2.9 per cent above those of the drought year 1930. Yields were particularly low in an area extending from northern Texas to central Montana into western Minnesota. The reduced acreage harvested and very low average yields combined to produce an unusually low total volume of crops, the composite production of the ten principal field crops, in proportion to population, being markedly lower than in any season for at least 40 years. The wheat, oats, and rye crops were each the smallest recorded in 35 years, and corn, flax, buckwheat, and hay were unusually short crops.

The farm value of the 1933 crops in the United States was estimated to be \$4,076,537,000 compared with \$2,879,517,000 in 1932 and \$4,102,354,000 in 1931. The increases in value over 1932 were particularly marked in corn, cotton, wheat, and tobacco, which were appraised at a total of \$2,153,025,000, an increase of 62 per cent over last year. The increase in value was attributed to the higher prices which farmers were receiving.

The wheat crop of the United States was esti-

mated at 527,413,000 bushels from 47,493,000 acres, a decrease of 29 per cent in production from 9,711,000 fewer acres than in 1932. The acreage harvested and the total production were for winter wheat 28,420,000 acres, 351,030,000 bushels; durum 2,310,000 acres, 16,109,000 bushels; and other spring wheat 16,763,000 acres, 160,274,000 bushels. The 1933 wheat production of 45 countries which produced the greater part of the 1932 world wheat crop, exclusive of Russia and China, was officially estimated to total 3,542,706,000 bushels compared with 3,719,735,000 in 1932. The Canadian crop amounted to 269,729,000 bushels versus 443,061,000 in 1932. The 1933 production in 29 European countries was reported at 1,699,494,000 bushels versus 1,490,490,000 in 1932. The Soviet Union crop was estimated at 1,018,893,000 bushels. See WHEAT.

The 1933 corn crop, estimated at 2,330,237,000 bushels, was 19.8 per cent smaller than the 1932 crop and 10 per cent below that of 1931. Yields in 1933 were considerably below average yet corn matured well, due to the unusually favorable autumn. The total acreage, 102,239,000, was 5.2 per cent less than in 1932, and the yield per acre averaged 22.8 bushels, compared with 26.8 in 1932. Production of corn for grain was estimated at 2,025,015,000 bushels, and the remainder of the corn crop was used for silage, fodder, hogging, and grazing. Corn production in 18 foreign countries amounted to 825,194,000 bushels, about 16 per cent less than from the same countries last year. Eleven European countries reported a total of 588,884,000 bushels versus 741,279,000 in 1932. The Soviet Union crop was estimated at 188,966,000 bushels. See CORN.

The oats crop of 1933 was estimated to be 722,485,000 bushels, and harvested from 36,541,000 acres, compared with 1,246,658,000 bushels in 1932 from 41,425,000 acres. The yield per acre averaged 19.8 bushels, 10.3 bushels less than in 1932. Oats production in 32 countries accounting in 1932 for nearly all of the world total, excluding Russia and China, amounted to 2,922,037,000 bushels, 15.8 per cent less than in the previous year, and that of 25 European countries 1,785,863,000 bushels versus 1,715,863,000 in 1932. The Canadian crop was estimated at 326,695,000 bushels and the Soviet Union crop at 1,061,653,000 bushels. See OATS.

Barley production in 1933 was estimated to total 156,104,000 bushels raised on 10,052,000 acres averaging 15.5 bushels per acre compared with 302,042,000 bushels on 13,346,000 acres averaging 22.6 bushels in 1932. The barley crop in 41 countries was reported to be 1,298,871,000 bushels, about 12.2 per cent below their 1932 production. The crop in 26 European countries reporting showed a total of 721,499,000 bushels; in the Soviet Union, 360,544,000 bushels, and in Canada 63,737,000 bushels. See BARLEY.

The rye crop in 1933 fell to 21,184,000 bushels on 2,352,000 acres from 40,639,000 bushels on 3,344,000 acres in 1932. It averaged 9 bushels per acre in 1933 and 12.2 in 1932. The rye crop in 1933 in 30 countries reporting, accounting for the greater part of the world production, except the U.S.S.R. and China, was estimated to total 1,031,814,000 bushels against 1,003,197,000 bushels in 1932. The Soviet Union produced about 952,308,000 bushels in 1933.

Buckwheat production totaled 7,844,000 bushels from 462,000 acres versus 6,727,000 bushels from 454,000 acres in 1932. Rice made 35,619,000

bushels on 760,000 acres, compared with 40,408,000 bushels harvested from 868,000 acres in 1932. See RYE, RICE.

Flaxseed production in 1933 totaled 6,785,000 bushels from 1,283,000 acres as compared with 11,671,000 bushels and 1,975,000 acres in 1932. Kafir, milo, feterita, and other grain sorghums produced an estimated equivalent of 87,884,000 bushels from 8,143,000 acres, 17 per cent below the year before but on a 4 per cent larger acreage. The portion of the acreage harvested for grain produced 57,282,000 bushels versus 65,339,000 bushels in 1932. The broomcorn crop, 32,900 tons from 296,000 acres, was 4000 tons less than in 1932.

The production of sorghum (sorgo) sirup in 1933 amounted to 14,961,000 gallons; sugar cane sirup, 19,106,000 gallons; maple sugar, 1,322,000 pounds; and maple sirup, 2,175,000 gallons. The sugar beet crop of 1933 was estimated at 11,085,000 tons of beets from a record acreage of 984,000 acres, expected to produce about 1,629,000 tons of sugar, versus 9,070,000 tons of beets from 764,000 acres in 1932. The area of 213,000 acres of sugar cane in Louisiana was expected to produce 202,000 tons of sugar, 21,000 tons less than in 1932.

The fourth successive short hay crop, 9.6 per cent below that in 1932 and 1.1 per cent above 1931, was estimated to total 74,485,000 tons, of which tame hay made up 65,852,000 tons and native or wild grasses 8,633,000 tons. The production of important kinds of hay included alfalfa, 24,899,000 tons; clover and timothy, 25,159,000 tons; sweet clover, 690,000 tons; lespedeza, 527,000 tons; annual legume hay, 3,974,000 tons; grain hay, 4,531,000 tons; sweet sorghum forage, 4,800,000 tons and other hay crops, 6,072,000 tons. Larger yields of lespedeza and alfalfa seed and smaller crops of seed of timothy, clover, and sweet clover were reported in 1933. See HAY.

The potato crop was estimated at 317,143,000 bushels compared with 358,009,000 bushels in 1932 and the average acre yield 99.6 bushels versus 105.9 in 1932. The sweet potato crop was estimated to be 65,073,000 bushels, the peanuts harvested for picking or threshing at 920,505,000 pounds, cowpeas harvested for peas, 5,846,000 bushels, and soy beans harvested for beans, 11,177,000 bushels. See POTATOES.

Tobacco production in 1933 was 1,396,174,000 pounds, 37 per cent larger than the 1932 crop, from 1,753,700 acres. The acreage of all types other than sugar was increased 31 per cent over the 1932 acreage but the acreage of cigar types was reduced about 40 per cent. The flue-cured class was estimated to comprise 708,488,000 pounds compared with 376,157,000 pounds in 1932; fire-cured 138,455,000 pounds; Burley, 416,252,000 pounds; Southern Maryland, 17,710,000 pounds; dark air-cured, 41,801,000 pounds; cigar filler, 35,010,000 pounds; cigar binder, 31,987,000 pounds; and cigar wrapper 6,153,000 pounds. See TOBACCO.

The 1933 cotton crop of the United States, according to December 1 estimates, was 13,177,000 bales, about 1.3 per cent greater than the 1932 crop, but 1,489,000 bales, or about 10 per cent below average production for the period 1928-1932, and the cotton was harvested from 30,144,000 acres, about 16 per cent less than in 1932. The yield of lint per acre averaged 209.4 pounds in 1933 and 173.3 in 1932. The lint was valued at \$617,716,000, and the 5,858,000 tons of

seed at \$79,532,000. Exports of cotton during the cotton year ended July 31, 1933, totaled 8,419,399 bales compared with 8,707,548 in the previous year. Germany, United Kingdom, France, and Italy were the major consuming countries that greatly increased their imports while China took more than 811,000 fewer bales than in 1932. See COTTON and articles on other individual crops.

AGRICULTURAL ADJUSTMENT ACT. Part I of the Agricultural Adjustment Act, approved May 12, 1933, declared the policy of Congress to be to raise the purchasing power of American farmers to the level which it occupied in the five years 1909 to 1914, when agricultural and industrial production and prices were well balanced and the national income was equitably distributed. Since the World War agricultural production had not been contracted as effective export and domestic demand for farm goods had contracted. Over-supply of agricultural commodities resulted and reduced farm prices; and agricultural purchasing power fell far below parity with the purchasing power of other industries. The Act in order to remedy these conditions, empowered the President, through the Secretary of Agriculture and the Agricultural Adjustment Administration set up within the United States Department of Agriculture, to assist farmers in adjusting their production of certain basic commodities to meet effective demand without sacrificing income and to put into effect marketing agreements on agricultural commodities, designed to insure fair prices to producers, efficient and equitable distribution of the products, and protection for consumers of the finished goods.

Benefit payments and rentals made it possible for a farmer cooperating with other farmers and the government to reduce his production without also reducing his already inadequate income. In connection with certain basic agricultural commodities, i.e. wheat, cotton, corn, hogs, tobacco, rice, and milk and its products, the Secretary of Agriculture was authorized to make compensatory payments to producers in return for agreements to curtail their acreage or their production for the market, and to levy taxes on the first domestic processing of any of the basic commodities, in order to raise funds for such payments. The act also appropriated \$100,000,000 under title I for administrative expenses and compensatory payments, and authorized the Treasury to advance funds to the Secretary of Agriculture in anticipation of the proceeds of processing taxes. In addition, the National Industrial Recovery Act, approved June 16, 1933, authorized the President to allocate not more than \$100,000,000 of the \$3,300,000,000 appropriated by that act for expenditures in carrying out the Agricultural Adjustment Act and for the Farm Credit Administration.

Organization and Operation. The Agricultural Adjustment Administration, headed by an Administrator, was organized in four operating divisions including production; processing and marketing; finance; and information and publicity divisions. Operations designed to balance production with demand were centred in commodity sections under the production division which operated in close relationship with the processing and marketing division. The dairying, tobacco, rice, special crops, and food products sections conducted both production and processing and marketing activities. The interests of the consumer

were safeguarded by the consumer's counsel, and there also was a section to analyze codes and marketing agreements. At the outset, George N. Peek of Moline, Ill., and Charles J. Brand of Washington, D. C., were appointed, respectively, administrator and co-administrator. Mr. Brand relinquished his position October 1, and Mr. Peek, appointed special assistant to the President on American foreign trade policies, was succeeded Dec. 15, 1933, by Chester C. Davis, director of production. The Administration's activities were coordinated closely with those of the rest of the Department of Agriculture. It utilized the Extension services of the Department and the States and the Department's information service in basic production reduction programmes and in educational and organization work and drew heavily on the Bureau of Agricultural Economics for special information and services.

The Adjustment Administration followed two main lines of attack—adjustment of production to demand, and the establishment of marketing agreements. In addition under the President's executive order of June 26, 1933, codes of fair competition for industries engaged mainly in handling milk and its products, tobacco and its products, all food and foodstuffs, and alcoholic beverages were filed with the Adjustment Administration.

Wheat and cotton, the outstanding cash crops, were among the major products which were in the most desperate situation in the spring of 1933, and tobacco and rice had some of the same difficulties. Each had been sharply affected by the decline in foreign outlets, production had exceeded consumption for several years, and surplus stocks had been built up to record levels. Production control efforts for the 1933 crops were centred primarily on cotton (see COTTON for details) as the extreme drought during the year made such control unnecessary for wheat in 1933. For other basic crops, arrangements were made for production control in 1934.

Wheat and Cotton. A control plan for wheat planted and harvested in subsequent years was developed which provided for cash benefit payments to be made on account of wheat grown in 1933, 1934, and 1935 to cooperating farmers agreeing to reduce acreage for harvest in 1934 and 1935. Negotiations simultaneously carried forward with foreign countries to secure their cooperation in readjusting international wheat supplies were concluded successfully in the signing of the International Wheat Agreement in August, 1933, and as a consequence, the other important wheat producing countries of the world were taking steps to cooperate with the United States in removing the excess supplies. Due to various causes, the cut in acreage did not quite attain the reduction called for, 15 per cent below average seedings in the base period, 1930 to 1932, and supplementary plans to remove additional acreage from production were to be put into effect before spring planting ended, so as to bring the acreage for 1934 harvest within the agreed limits. The approximately 52 million acres under contract with more than 500,000 wheat farmers, in 1700 counties of 37 States who agreed to reduce their 1934 plantings 15 per cent under their average past acreage, meant about eight million acres out of 1934 production. These farmers, guaranteed adjustment payments of 28 cents a bushel on their domestic allotments, expected to receive approximately \$102,000,000, funds being provided by a

processing tax of 30 cents a bushel estimated to yield \$108,000,000. The North Pacific Emergency Export Association, formed under a marketing agreement with producers, millers, and exporters in Washington, Oregon, and Northern Idaho to relieve a price-depressing surplus, was exporting wheat and flour purchased at domestic prices and sold at world prices, the average difference of about 21 cents a bushel being met from processing tax receipts.

In wheat, as in cotton, farmers' income was materially increased by benefit payments besides the increase in farm prices; including benefit payments, cooperating farmers received almost the full parity income on that part of their crop for domestic consumption. The progress in wheat and cotton control was shown in prospective reduced world carryover of American cotton and in a sharply-reduced domestic-wheat carryover.

Estimates were that collections of processing taxes on cotton in the current year beginning Aug. 1, 1933, would reach \$120,000,000, and compensating taxes on imports about \$1,000,000, netting about \$116,000,000 with compensatory taxes between \$10,000,000 and \$12,000,000 on jute, and about \$3,000,000 on paper. The processing tax on wheat was expected to yield \$108,000,000. In both cotton and wheat, the quantities processed were increased greatly prior to the imposition of the processing tax and fell off for a while thereafter. While the exact effect of the tax on consumption was currently uncertain, it seemed evident in both cases that practically the full amount of the tax had been passed on to the consumers and that its application had little or no effect on prices paid to producers.

Other Crops. Tobacco and rice presented problems somewhat similar to those of wheat and cotton, although complicated by specific technical conditions. Adjustment programmes seeking to bring production more nearly into line with consumption requirements were underway for cigar-leaf, flue-cured, Burley, fire-cured, dark air-cured and Maryland tobacco. (See TOBACCO.) These programmes and marketing agreements with domestic buyers were expected to give growers greatly increased returns for several kinds for the 1933 crop as compared with returns from the 1932 and 1931 crops.

Despite the virtual collapse of their export market, United States rice growers were receiving approximately "fair exchange value" for their product, and prevailing farm prices were about double those of a year ago, and furthermore, the spread between producer and consumer prices was substantially less than that prevailing during the base period. This result was achieved through a comprehensive industry plan which was incorporated in marketing agreements signed by nearly every operating rice mill in the United States. All existing growers' organizations participated in drawing up these agreements.

With perishable fruits and vegetables, only marketing agreements were available under the Act. Material progress was made in developing agreements to regulate marketing of such products and to prevent excessive pressure of production upon the available markets. Special crop industries operating under agreements included California cling peaches; citrus fruits in California, Arizona, Texas, and Florida; California deciduous fruits, Tokay grapes, canned ripe olives, and walnuts; and northwest deciduous tree fruits; and other agreements were under consideration.

A satisfactory marketing agreement for sugar cane and sugar beets was not concluded.

Livestock and Livestock Products. The problems presented by livestock and livestock products differed decidedly from that presented by cash crops. The Adjustment Administration sought to develop a programme which would correct the low-price situation more rapidly than possible if it were left solely to the usual development of competitive changes. Hogs were the only livestock for which a complete production control programme was developed during the year. The fact that cattle were not a basic commodity under the Act precluded an attempt to develop such a programme for them. Desire of dairy farmers to exhaust the possibilities of stabilizing prices through marketing agreements or operations in the butter market caused the Adjustment Administration to defer efforts to control production of dairy products until application of those methods had demonstrated that they alone were not enough to cope with the real problem.

The first portion of the hog programme was an emergency plan designed to reduce the supply of hog products in the 1933-34 winter and to relieve pressure of current receipts at the market. The emergency pig slaughter programme in the fall of 1933 served to reduce the number of hogs in the winter, while purchases of hogs for relief purposes removed a substantial portion to be marketed of the heavy runs from market supplies. The second part of the hog plan covered production control of corn and hogs for next year and was being presented to hog farmers. As this production control became effective, it was expected to reduce materially the size of the coming pig crops and reduce the pressure of supplies beginning with the winter season of 1934. (For details see DAIRYING, LIVESTOCK.)

Surplus Relief. The Federal Surplus Relief Corporation, organized in September, 1933, under the joint control of the Agricultural Adjustment Administration and Federal Emergency Relief Administration, with funds from Congressional appropriations, loans from the Reconstruction Finance Corporation, and part of the proceeds from processing taxes, by purchase removed from commercial channels of trade apparently existing surpluses of various commodities for distribution to the unemployed and their families. Such distribution was intended to provide for consumption of these commodities without decreasing ordinary purchases. Cooperation with the Surplus Relief Corporation so far had been limited to such basic products as hogs, wheat, and dairy products for which processing tax funds could be made available. Expenditure for pork, butter, and cheese was expected to bring the total from the Agricultural Adjustment Administration's fund to \$30,000,000.

FARM CREDIT ADMINISTRATION. Pursuant to the provisions of an Act approved Mar. 20, 1933, President Roosevelt on March 27 transmitted to Congress an executive order, effective May 27, reorganizing the agricultural credit agencies of the Federal government. The order consolidated in the Farm Credit Administration, the functions of the Federal Farm Board, the Federal Farm Loan Board, and the functions of the Secretary of Agriculture as to loans in aid of agriculture, and those of the Reconstruction Finance Corporation in the management of regional agricultural credit corporations, and abolished the functions of the Federal Farm Board with regard to fur-

ther stabilization operations. Henry Morgenthau, Jr., appointed chairman of the Farm Board Mar. 6, 1933, was designated Governor of the new organization. William I. Myers, succeeded Governor Morgenthau November 17 when the latter was appointed Acting Secretary of the Treasury.

The Farm Credit Administration is headed by a governor and deputy governors under whom are the land bank commissioner in charge of farm loans and supervising the 12 Federal land banks, the national farm loan associations, and the joint-stock land banks; the cooperative bank commissioner who supervises the central bank for cooperatives and the 12 regional banks for cooperatives and also directs other special services for cooperatives; the production credit commissioner who supervises the 12 production credit corporations and the various production credit associations; and the intermediate credit commissioner who supervises the 12 Federal intermediate credit banks. The United States is divided into 12 districts, each containing a regional land bank, a regional bank for cooperatives, a regional production credit corporation and a regional intermediate credit bank, which four institutions have the same board of directors and comprise the Farm Credit Administration of the district. A general agent is responsible for coordinating their operations and activities.

Loans. The 12 Federal land banks, possessing a total capital of \$188,514,499 on June 30, 1933, lend only upon first mortgages on farms with funds obtained primarily from the sale of farm loan bonds to investors. The current interest rates were 5 and 4½ per cent. Farm loan bonds outstanding on June 30, 1933, amounted to \$1,147,897,220 and outstanding loans to \$1,118,434,268. The Federal land banks were authorized to issue and sell to investors within two years beginning May 12, 1933, a special issue of 4 per cent, tax-exempt, farm loan bonds in the amount of \$2,000,000,000, with interest to maturity guaranteed by the United States government, to make new loans, purchase mortgages or exchange farm loan bonds for mortgages. Besides regular long-term farm loans, each land bank, acting for the land bank commissioner, lends to farmers in its district upon the security of first or second mortgages on farm real or personal property from a \$200,000,000 fund made available by the Emergency Farm Mortgage Act of 1933. Practically all commissioners' loans were made on the security of second mortgages on farms. The current interest rate was 5 per cent.

In each land bank district, production credit was made available through local production credit associations, cooperative organizations of farmer borrowers serving a territory generally consisting of several counties, which make loans for general agricultural purposes including crop production, breeding, raising, and fattening of livestock, and production of poultry and livestock products. Money to lend for agricultural production purposes is obtained by endorsing farmers' notes and discounting them with the Federal intermediate credit bank in the district. The production credit association is assisted and supervised by the district production credit corporation which also helps to organize associations and provides most of their capital. Each production credit corporation has an initial capital of \$7,500,000 provided by the Farm Credit Administration. The interest rate charged the farmer varied from 6 to 6½ per cent. As production

credit corporations and associations were organized in the different land bank districts, they were expected to take over from the regional agricultural credit corporations (created by the Reconstruction Finance Corporation as authorized by the Emergency Relief and Reconstruction Act of 1932, with an aggregate capital of \$44,500,000) the function of furnishing production credit and the latter to make no new loans. Similarly, seed loans and crop production loans made through the Department of Agriculture were to be liquidated gradually and this function assumed by local production credit associations.

The banks for cooperatives and the Federal intermediate credit banks in the 12 Federal land bank districts were making loans to cooperative purchasing and cooperative marketing associations. The banks for cooperatives were lending working capital (interest rate Dec. 1, 1933, 4 per cent) and facility loans (currently at 4½ per cent) to buy, build, lease or refinance the cost of acquiring physical facilities needed by cooperatives for preparation, handling, storing, processing or merchandising of agricultural commodities or products derived therefrom. The central cooperative bank was capitalized initially at \$50,000,000; the capital stock of regional banks for cooperatives vary to meet credit needs of eligible borrowers in their districts. Loans to the associations generally were made by the Federal intermediate credit banks against the warehousable products they handled to enable associations to make advances to their members between the times of delivery and of sale of the products, or where it was necessary to finance the transportation, storage and handling of such products. The interest rate Dec. 1, 1933, was about 3 per cent.

During the period May 1-Dec 31, 1933, 35,300 loans totaling \$140,138,663 by Federal land banks and 44,029 loans totaling \$70,812,112 by the land bank commissioner were closed in the United States and Puerto Rico. The same agencies reported that the 458,065 farm mortgage loans outstanding in the United States Dec. 23, 1933, aggregated \$1,248,233,586. The largest proportion of the proceeds of the land bank and commissioner's loans were used for refinancing indebtedness. Loans and discounts outstanding Nov. 30, 1933, amounted to: Federal land banks \$1,172,400,140; land bank commissioner to farmers \$34,098,555, and to joint stock land banks \$1,097,413; Federal intermediate credit banks \$136,861,440; regional agricultural credit corporations \$142,504,048; crop production loan offices \$91,824,563; Agricultural Marketing Act loans to cooperatives \$141,107,605; central bank for cooperatives \$10,629,900; and regional bank for cooperatives \$350,014.

Federal Farm Board and Related Activities. The Farm Credit Act and the President's order resulted in abolishment of stabilization operations, eliminated provisions for crop insurance and loans for purely promotional purposes, and put loans to cooperatives on a business basis by fixing limits of 3 and 6 per cent interest. In taking final steps to close up the Farm Board's stabilization activities in wheat, which began in 1930, Governor Morgenthau announced that these operations, plus donations of wheat to the American National Red Cross had resulted in a net loss to the Board's revolving fund estimated at more than \$184,153,232, i.e. loss on stabilization operations \$160,334,489, and on Red Cross donations \$23,818,743. The purchases of the Grain

Stabilization Corporation, May, 1930, to Mar. 3, 1933, announced to 370,278,449 bushels of cash wheat and 538,337,000 bushels of wheat futures. The corporation sold 237,204,468 bushels through regular domestic and foreign markets channels, and a total of 47,500,000 bushels was sold to foreign governments or exchanged for coffee. On Mar. 7, 1933, the corporation had disposed of all of its cash wheat, had sold all of its futures on April 29, and on September 28 all transactions involving the donation of stabilization wheat and cotton to the Red Cross were completed. Under Congressional authorizations of March 7 and July 5, 1932 and Feb. 8, 1933, a total of 85,000,000 bushels of wheat and 844,063 bales of cotton was delivered to the Red Cross.

The chairman of the Farm Board announced Mar. 21, 1933, that the Red Cross had 548,043 bales and the Cotton Stabilization Corporation 28,875 bales, while the American Cotton Cooperative Association had 1,352,619 bales and the Staple Cotton Cooperative Association 214,800 bales, both of cotton of the 1930-31 season, or a total of 2,144,937 bales. As of Feb. 28, 1933, the American Cotton Cooperative Association owed the Farm Board \$71,015,748, the Staple Cotton Cooperative Association owed \$11,511,258, and the Cotton Stabilization Corporation owed \$97,530,235. The remainder of the Stabilization Corporation's cotton, 19,306 bales, was offered for sale May 16, 1933. The loss to the Farm Board's revolving fund through the operation of the Stabilization Corporation was estimated at about \$94,000,000.

The American Cotton Cooperative Association voluntarily surrendered (August, 1933) a commitment of \$10,000,000 of government funds for handling cotton for the 1933-34 season at $\frac{3}{4}$ of 1 per cent interest and accepted a 4 per cent rate for the same financing and also agreed to subscribe to capital stock of the Central Bank for Cooperatives up to 5 per cent of its borrowings. It also acted as agent for the Agricultural Adjustment Administration in marketing actual cotton when growers cooperating in reduction programmes called their options.

On May 27, 1933, the Farm Credit Administration had liens on about 797,000 bales of cotton, security for loans made prior to 1933 crop production, and between May 27 and September 1 this was reduced to about 588,000 bales through sales by farmers. This cotton was being sold in pursuance of a liquidation plan announced September 10 by Governor Morgenthau. Sales were evenly distributed throughout the period ended November 30, but for every bale of spot cotton sold, one bale of long futures was bought for the use of the Secretary of Agriculture in carrying out the acreage reduction programme under the Agricultural Adjustment Act.

WORLD AGRICULTURE. At the London Wheat Conference in August and September, 1933, importing countries agreed not to encourage further extensions of their wheat area and to adopt measures to increase wheat consumption. They agreed to reduce wheat tariffs after the world price of wheat had been maintained for 16 weeks as high as 63.02 gold cents per bushel. Beginning in the season 1934-35, after the present season's large crop was consumed, they were to gradually relax other restrictions on wheat imports to restore more normal conditions in the wheat trade. Argentina, Australia, Canada, and the United States were to limit exports during the 1934-35 crop year to a quantity not exceeding the exportable

surplus resulting in case each country had average yields and made a 15 per cent reduction in the area sown. The four exporting countries of the Danube Basin would export not more than 54,000,000 bushels during 1933-34 and not more than 50,000,000 bushels in 1934-35. In a supplementary exporters' agreement export quotas for the respective crop years (August-July) 1933-34 and 1934-35 were tentatively fixed; Argentina, 110,000,000 and 148,000,000 bushels; Australia 105,000,000 and 150,000,000 bushels; Canada 200,000,000 and 263,000,000 bushels; and the United States 47,000,000 bushels for 1933-34 and 90,000,000 for 1934-35. Quotas allotted Canada and the United States were minimum quotas, to be increased if import demand warrants, to reduce surplus stocks in these countries.

Other movements variously affecting the world-trade relations of American agriculture included plans for aiding the hog industry in Great Britain, Denmark, and The Netherlands; The Netherlands' dairy relief scheme; the animal fat protection programme and the new Federal hereditary homestead law in Germany; the crop price-fixing plan in Argentina; the Soviet Agrarian policy; the French programme to protect domestic wheat, and various other world trade barriers handicapping American agriculture. These several movements; the world situation in bread and feed grains, sugar, oil and oil seeds, cattle and beef, hogs and pork, and sheep and wool; and the agricultural exports, imports, and reexports of the United States and its agricultural trade with the territories were discussed in detail during the year in *Foreign Crops and Markets* and in special publications of the U. S. Department of Agriculture. See the respective countries under *Agriculture or Production*.

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Europe: G. Acerbo, *La Cooperazione Agraria in Italia* (Piacenza, 1932); Commission Internationale d'Agriculture, *Die Deutsche Landwirtschaft* (Berlin, 1933); Deutscher Landwirtschaftsrat, *Die Regierung der Nationalen Erhebung und die Landwirtschaft* (Berlin, 1933); L. Federzoni, *I Problemi Attuali dell'Agricoltura Italiana* (Bologna, 1933); International Labor Office, *Collective Agreements in Agriculture* (Geneva, 1933); E. Le Plae, *Traité d'Agriculture Générale et de Cultures Spéciales de Pays Tempérés, Subtropicaux et Tropicaux* 2 vols. 3 ed. (Louvain, 1933); J. Krickščiūnus, *Die Litauische Landwirtschaft* (Kaunas, 1933); W. Seedorf and P. Hesse, *Grundriss der Landwirtschaftlichen Marktlehre* (Berlin, 1932); VI^e Congrès International d'Agriculture Tropicale et Subtropicale. 3 vols. (Paris, 1932); Unión Nacional Económica, *La Reforma Agraria* (Madrid, 1932).

The Bureau of Agricultural Economics of the United States Department of Agriculture issued bibliographies on the domestic allotment plans for the relief of agriculture; measures taken in foreign countries to relieve agricultural indebtedness; state measures for the relief of agricultural indebtedness in the United States, 1932 and 1933; price analysis; farmers' response to price; barter and scrip in the United States; group and chain farming in the United States, January, 1930-March, 1933; part-time farming; agricultural college publications relating to farm population and rural life; and Greece and Rumania: guides to official statistics of agriculture, population, and food supply; and *Foreign Crops and Markets* (weekly).

See BUSINESS REVIEW.

AGRICULTURE, U. S. DEPARTMENT OF. On Mar. 4, 1933, Henry A. Wallace of Iowa, editor of *Wallaces' Farmer* and *Iowa Homestead*, became Secretary of Agriculture, and on March 6 Rexford G. Tugwell, professor of economics at Columbia University, New York, assumed the office of Assistant Secretary of Agriculture. The retiring officers were Arthur M. Hyde of Missouri and Renick W. Dunlap of Ohio. Other important changes in the personnel of the Department during the calendar year included the retirement on January 31 of Walter H. Evans for 41 years active in the Office of Experiment Stations of the Department and among other duties in charge of the organization and administration of the agricultural experiment stations in Alaska, Hawaii, Puerto Rico, Guam, and the Virgin Islands; on September 30 of Charles L. Marlatt, connected with the work of the Department in economic entomology since 1889 and Chief of the Bureau of Entomology since 1927; on October 31 of Beverly T. Galloway, with the exception of two years

connected with the Department since 1887 in different capacities including Chief of the Bureau of Plant Industry and Assistant Secretary of Agriculture, and on December 31 of William A. Taylor in the Department's service since 1891, mainly in pomological work, and since 1913 Chief of the Bureau of Plant Industry. On October 23 occurred the death of Robert Y. Stuart, head of the Forest Service of the Department since 1928 and in that branch of the service since 1906. Lee A. Strong, Chief of the Plant Quarantine and Control Administration of the Department, was appointed Chief of the Bureau of Entomology effective October 1, F. A. Silcox, of New York, Forester, or head of the Forest Service, effective November 15 and Knowles K. Ryerson, in charge of the Division of Foreign Plant Introduction of the Bureau of Plant Industry, chief of that bureau effective Jan. 1, 1934. On April 1 Seth Thomas of Iowa replaced Elton L. Marshall as solicitor of the Department.

The Agricultural Adjustment Act (see AGRICULTURE) approved May 12, 1933, imposed many new and important duties upon the Department. To meet these requirements a separate organization with a special corps of workers was established under the title of the Agricultural Adjustment Administration. The following officers were included among the appointees to the more responsible positions: George N. Peek of Illinois, administrator, Charles J. Brand of Washington, D. C., coadministrator, Chester C. Davis, of Illinois, production administrator, M. L. Wilson, of Montana, wheat production administrator, Cully A. Cobb, of Georgia, cotton production administrator, Guy C. Shepard, of Illinois, administrator in charge of trade agreements in processing and distribution, A. G. Black, of Iowa, chief in corn and hog production, Gen. W. I. Westervelt, of Illinois, director of marketing and processing, H. R. Tolley, of California, chief of the Section of Specialty crops, J. B. Hutson of the Department, acting chief of the Tobacco Section of the Production Division, Jerome N. Frank, of New York, general counsel, and Oscar Johnston, of Mississippi, finance administrator. Smith W. Brookhart, formerly United States senator from Iowa, was made special adviser for developing trade in agricultural products with eastern European countries. Charles J. Brand resigned from the position of coadministrator after about four months of incumbency and George N. Peek, the administrator, toward the close of the calendar year took charge of a government agency outside of the Department created for the promotion of foreign trade.

The Secretary of Agriculture in his report for the fiscal year ended June 30, 1933, reviewed the customary research, extension, and information work of the Department but dwelt more especially on the economic situation as it affects agriculture and the means and methods applied to achieve recovery. The subjects considered included the problem of surpluses, agricultural adjustment legislation, farm relief, scientific production, and distribution, control of agricultural production, reduction in the acreage of cotton and wheat, adjustments in the production of hogs, dairy products, fruit, and vegetables and the relation of farm real estate values, debts, and taxes to the agricultural situation.

Expenditures from appropriations administered by the Department of Agriculture for the fiscal year amounted to \$252,861,396 of which \$70,134,-

656 was for the general work of the Department and \$182,726,740 for emergency activities including \$177,977,564 for road construction (see *Roads and Streets*). In addition unpaid obligations for road work totaling \$454,832,059 were incurred under emergency highway funds. Of the amount for the general work of the Department over \$15,000,000 represented payments to the States for support of agricultural experiment stations, extension work, and other activities. Only 5.7 per cent of the Department's total expenditures were used for research.

The employees of the Department during the fiscal year numbered 26,544 comprising 5521 in the departmental service and 21,023 in the field service including 80 stationed in foreign countries. The total number of books and pamphlets in the Department library reached 242,075 during the fiscal year.

AGÜERO Y BETANCOURT, ARISTIDES DR. A Cuban diplomat, died in Geneva, Switzerland, June 21, 1933. Born in 1865, he was educated for the bar but turned to education and taught for several years (1890-95, 1899-1904) at the University of Havana. In 1898 he took part in the Spanish-American War, serving as a colonel in the Cuban rebel army. Dr. Agüero began his diplomatic career in 1904 when he was appointed chargé d'affaires at the Cuban embassies in Berlin and Vienna. He was Minister to Argentina from 1910 to 1912, to Norway from 1912 to 1914, and from 1914 to 1917 to Germany. When Cuba entered the World War he was transferred to Brussels, where during the next three years he served as Minister to Belgium and Switzerland. He resumed his post in Berlin in 1920 and after 1924 was Minister to both Germany and Austria. For several years he was also acting Minister to the Netherlands.

Dr. Agüero was Cuba's representative to the First Assembly of the League of Nations in 1920 and served thereafter in that capacity. Elected vice-president of the Fourth International Labor Conference in 1922, he filled the same office at the International Opium Conference in 1924, and in 1927 was president of the Third International Conference on Freedom of Communications and Transit. During 1927-30 he represented Cuba on the Council of the League of Nations, and in June, 1928, presided over the fiftieth session of that body. He was a delegate in 1931-32 to the General Conference for the Reduction and Limitation of Armaments.

AIR CONDITIONING. See ELECTRICAL INDUSTRIES; ELECTRIC TRANSPORTATION; PHYSICS; RAILWAYS.

AIRPLANES. AIR RECORDS, AIRSHIPS, ETC. See AERONAUTICS.

AKRON, U.S.S. See AERONAUTICS.

AKRON, THE UNIVERSITY OF. A coeducational institution of higher learning in Akron, O., founded in 1870 as Buchtel College and taken over by the city and renamed in 1914. The enrollment for the summer session of 1933 was 254 students, and for the autumn day session, 1227 students, distributed as follows: College of liberal arts, 600; home economics department of liberal arts, 62; teachers college, 224; college of engineering and commerce, 341; 1007 students were enrolled in the autumn evening session. There were 82 faculty members. The amount of endowment was \$141,517 and the income for the year, including tax levy from the city, \$297,518.

There were 34,000 volumes in the library. President, Hezzleton E. Simmons, M.S.

ALABAMA. POPULATION. The population of the State on Apr. 1, 1930, according to the Fifteenth Census, was 2,646,248; in 1920 it was 2,348,174; in 1933, by Federal estimate, it was 2,697,000. Montgomery, the capital, had in 1930, 66,079 inhabitants; Birmingham, 259,678.

AGRICULTURE. The following table gives the acreage, production, and value of the principal crops for 1933 and 1932:

Crop	Year	Acreage	Prod. Bu.	Value
Cotton . . .	1933	2,417,000	980,000 ^a	\$46,060,000
	1932	2,021,000	947,000 ^a	28,990,000
Corn	1933	3,031,000	35,978,000	24,036,000
	1932	3,224,000	37,076,000	13,718,000
Hay (tame)	1933	516,000	346,000 ^b	3,495,000
	1932	626,000	424,000 ^b	3,010,000
Sweet potatoes .	1933	76,000	5,396,000	3,507,000
	1932	101,000	8,585,000	3,091,000
Peanuts . .	1933	377,000	213,005,000 ^c	5,325,000
	1932	466,000	242,320,000 ^c	2,423,000
Potatoes . .	1933	32,000	2,304,000	1,705,000
	1932	36,000	2,484,000	1,664,000

^a Bales. ^b Tons. ^c Pounds.

MINERAL PRODUCTION. The production of coal, normally providing the chief part of the revenue derived from the State's raw minerals, fell again, to 7,850,000 tons (preliminary estimate) for 1932; this total was 34.6 per cent less in quantity than the 11,998,771 tons of 1931 and was 56.2 per cent less than the total for 1929. The estimated shrinkage of production for 1932, as compared with 1931 was as heavy proportionately as in any other State. There were produced (1932) 1,400,597 net tons of coke, as against 2,943,143 for 1931; by value, \$3,770,988 (1932) and \$8,023,595 (1931). The coke production of 1932 came entirely from by-product ovens; it consumed 2,025,710 net tons of coal, equivalent to somewhat more than one-fourth of the year's output of coal.

The mines' shipments of iron ore were even more sharply reduced, to 1,470,445 gross tons (1932), from 3,629,997 (1931); in value, to \$2,428,227, from \$6,155,995. The quantity of pig iron produced (1932) was 652,898 gross tons, as against 1,640,851 for 1931. Only 3 of the 25 blast furnaces in the State were in blast at the end of 1932.

EDUCATION. The inauguration of a budgetary system for the State, while favorable in some respects to the finances of the public schools, produced some complaint among school people on the ground that the State's arrangements for financial control attributed to education more than its just proportion of the deficiency in revenues. Under the terms of an enactment of 1933 the diversion of educational funds to uses other than those prescribed was made a criminal offense.

Figures for the operation of the public schools as a whole were not available for the year 1933. For 1932, the number of pupils enrolled was stated as 639,836. Of this total, 503,977 were in grades from the first to the sixth, inclusive; in higher grades, through the twelfth, 135,859. The year's expenditures for public school education totaled \$18,542,177 and thus ran by some 14 per cent below those of 1931. Salaries of teachers averaged, for 1932, \$571 among holders of elementary positions, \$961 in the high schools, and \$682 for both groups together.

LEGISLATION. A special session, necessitated partly by the popular rejection, in November, 1932, of required amendments to financial and fiscal provisions of the Constitution, was convened in January, 1933, and concluded on April 15. It again submitted amendments to provide a State income tax and to validate some \$17,000,000 in outstanding unpaid State warrants, largely held by teachers. It also offered, for ratification by popular vote, an amendment to prohibit the reduction of State and county officers' salaries during terms for which they had been elected. The warrant-validating amendment contained a provision against State expenditure in excess of income. The Legislature passed and, over Governor Miller's veto, repassed a measure calling for a State convention of delegates elected by the people, to act on the repeal of the Federal Eighteenth Amendment. A bill was passed to permit counties and cities to build and operate electric distributing units, in order that they might avail themselves of current that the Federal development at Muscle Shoals was expected to provide. The extension of the National forest system beyond the existing boundaries of the Alabama National Forest was authorized. A bill to permit the traffic in 3.2 per cent beer and another to provide a sale tax failed.

POLITICAL AND OTHER EVENTS. Banks in the State were closed for 10 days on March 1 by proclamation of Governor Miller. Question as to the validity of the State's floating debt of some \$20,000,000 was admitted in an opinion of the State Supreme Court relative to a suit to enjoin a payment to the Chase National Bank. The greater part of the public schools closed before the end of April for lack of money to continue paying teachers. At an election on July 18 voters elected a State convention of delegates favoring repeal of the Eighteenth Amendment; adopted amendments to the State constitution validating some \$17,000,000 of State floating debt in the form of warrants and providing for an income tax; and suspended for 2 years the State constitution's prohibition of reductions in State and county officers' salaries by Legislative act applicable to terms of office to which holders had already been elected. The State convention on the Eighteenth Federal Amendment was held on August 8 and declared the State for repeal of that amendment by the superseding amendment proposed by Congress. The prosecution of the "Scottsboro case," against members of a band of negro minors accused of the rape of two white women, was resumed and led in April to the conviction of Haywood Patterson, one of the accused, despite one of the women's having testified in recantation of her former testimony. Judge Horton passed sentence of death on April 17, but on June 22 he voided the conviction as against the evidence and transferred the cases against the defendants for subsequent retrial outside of the Scottsboro area. At Decatur, Patterson was retried and, on December 1, found guilty and condemned to death. Sentence was stayed by motion for appeal.

Birmingham, at a local election in the autumn, voted against a proposal for a municipally owned system of electric distribution needed in order to bring the electric energy from Muscle Shoals to the urban consumers.

OFFICERS. The chief officers of the State, serving in 1933, were: Governor, B. M. Miller; Lieutenant-Governor, Hugh D. Merrill; Secre-

tary of State, Peter B. Jarman, Jr.; Treasurer, Sidney H. Blan; Auditor, John Brandon; State Superintendent of Education, A. F. Harman.

Judiciary. Supreme Court: Chief Justice, John C. Anderson; Associate Justices, William H. Thomas, Thomas E. Knight, A. B. Foster, Lucien D. Gardner, Virgil Bouldin, and Joel B. Brown.

ALABAMA, UNIVERSITY OF. A coeducational State institution for higher learning at University, Ala., founded in 1831. For the autumn term of 1933 the enrollment was 4225; the summer school registration was 1765. The faculty for 1933-34 numbered 200. The productive funds of the university amounted to \$4,126,445, and the income for the year was \$1,107,475. The library contained about 85,000 volumes, of which 20,000 were government documents. President, George H. Denny, Ph.D., LL.D.

ALASKA. A territory of the United States, the most extensive of the noncontiguous territories and possessions under the American flag. It forms a peninsula at the northwestern extremity of the North American Continent. Its total area is 586,400 square miles. The capital is Juneau. The population, according to the Fifteenth Census, was 59,278 in 1930; in 1920 it was 55,036. Of the population of 1930, 28,640 were whites, 29,983 were Indians (Eskimos not being separately totaled), and the small remainder were largely Japanese. The enumerated members of the so-called Indian group had increased from 26,558 for 1920 and had thus become more numerous than the whites, formerly the greater element (27,883 in 1920). The proportion of individuals under the age of 20 years was notably high, their number (1930) being 23,598 and having risen by about 15 per cent in the decade. By contrast, the proportion of females in the population was low, hardly (1930) attaining two-thirds of the number of males.

MINERAL PRODUCTION. Continued increase in the production of gold, coupled with further recession in other mineral production, brought the gold production of 1932 to somewhat more than seven-eighths of the entire mineral output, by value, of the Territory for that year. Thus was indicated a radical alteration in the relative ranks of mineral products, since for 1927 gold had furnished much less than half of the value of mineral production and had indeed been surpassed by copper.

The value of the output of gold for 1932 rose to \$10,209,000, in the gold-standard dollars then still in use, from \$9,507,000 for 1931. By reason of the depreciation of the dollar in the course of 1933 a much higher dollar valuation of the gold product of this year was indicated. The production of copper fell, for 1932, to 8,738,000 pounds, which was some 14,000,000 less than the quantity produced in 1931; the value of the copper output fell more sharply, to \$550,500 (1932), from \$1,877,000 (1931). The production of silver (1932) was valued at \$66,000; that of lead, at \$75,600. With regard to silver this reduced production did not reflect depressed activity due to a decline in the silver market; for silver was not mined in the territory for its own sake, but only in ores sought primarily for content in gold or in copper.

The yield of coal attained (1932) the quantity of 102,700 tons, and was moderately less than that for 1931; in value, it attained \$513,500, as against \$556,000 for 1931. The Territory exported no coal; in addition to consuming its

native product it imported, in 1932, some 28,422 tons from the State of Washington and other domestic sources and 13,959 from foreign sources, chiefly British Columbia. The year's total production of minor minerals, mainly marble, limestone (for cement), petroleum, platinum (and kindred metals), and quick-silver reached the value of \$223,400. The value of the entire yearly mineral product fell to \$11,038,000 (1932) from \$12,278,000 (1931).

With regard to the high-grade semianthracite coal of Anthracite Ridge in the Matanuska Valley, data from the Geological Survey, published in June, confirmed the report of 1932 that the deposits did not justify development. The verdict of the Geological survey dashed the hope that coal could here be dug for the Pacific Coast markets, bringing needed traffic to the Alaska Railroad.

A Federal estimate for 1933 put the value of the gold produced in that year at \$10,758,000; of silver, at \$64,500; of coal, \$500,000; and of all other minerals, copper included, at \$134,500. But the gold in these figures was reckoned at the obsolete statutory price of \$20.67 an ounce; it actually fetched considerably more over the latter part of the year, and the dollar value of the entire year's gold product tended therefore to run materially above the estimate.

REINDEER HUSBANDRY. A general reindeer supervisor was appointed for the territory early in 1933; a Montana cattleman, Lyman J. Brewster, was chosen for the position. At the same time it was announced that the Secretary of the Interior would cause a round-up of reindeer to be held in the Territory in the course of the year. Plans for such a round-up had been studied for two years by a committee headed by Senator Kendrick of Wyoming and Representative Scott Leavitt of Montana. The intention was to mark the beasts and distribute them among owners, so as to prevent subsequent depredation and dispute. The practice had been adopted of marking the reindeer, in token of ownership, by characteristic cuts on the ear, and of marking females only, attributing other, unmarked individuals to herds of the several owners in proportion to each herd's number of marked females. According to the estimate of the Department of the Interior the reindeer in Alaska in 1933 numbered from 600,000 to 800,000. They were naturally restricted to the moss-covered areas for winter feed, but so extensive was this area that further increase of the number was regarded as a certainty. The policy of the government was to have natives, chiefly Eskimo, form reindeer associations which should obtain joint grazing rights and exercise common protective interests. Also, to endeavor to furnish reindeer to all qualified Eskimos desiring to become herders.

FISHERIES. Commercial fisheries employed 20,122 persons in 1932 for more or less of the year; these were 2455 fewer than for 1931. The output of canned salmon for 1932 attained 5,254,483 cases; in value, \$21,715,801. It fell slightly below that of 1931 in quantity and about \$7,380,000 below in value. The value of the product of all fisheries (save furs), \$25,028,920 for 1932, was \$8,565,832 below 1931.

SEALING AND FURS. At the Pribilof Islands were taken, in 1932, 49,336 skins of fur seals, slightly less than the take for 1931. The herd remaining were computed in August, 1932, to number 1,219,961, or 92,879 more than a year

before. Fur-bearing land animals were shipped from the territory in 1932 to the value of \$1,144,841, a decreased total due to lower prices for furs. The issue of permits and licenses for fur capture, fur farming, and hunting declined sharply.

FORESTRY. The Chugach and Tongass forests were reckoned great enough to furnish 1,000,000,000 board feet of commercial timber a year without impairment, but were reported in 1933 to have yielded not over 18,000,000 board feet, for 1932.

TRANSPORTATION. Train service on the Alaska Railroad was considerably curtailed late in 1932, but the usual summer passenger schedule was put on in 1933. The *Nenana*, a new steamboat for the river service connecting the northern end of the railroad with Yukon River points, built at Nenana, went into service in 1933. She was to replace two old boats and to make a round trip to Marshall fortnightly. Freight traffic on the rail and water lines declined only slightly for the year ended June 30, 1932; all revenues amounted to \$1,215,828 and cost of maintenance and operation to \$1,403,478. Reduced costs lowered the yearly deficit, in the face of reduced revenue. Efforts to promote settlement along the railroad lines, however, were balked by bad economic conditions.

BANKING AND FINANCES. Banks doing business on June 30, 1933, numbered 11 Territorial and four National institutions. Deposits in Territorial banks totaled \$5,957,328, or some \$332,000 less than a year before; capital, \$615,000. The National banks had deposits of \$3,911,008; their capital, surplus, and profits totaled \$528,075. The total valuation of assessed property in the 17 incorporated towns of the Territory, for the fiscal year 1933, was \$25,556,441.

EDUCATION. The Bureau of Indian Affairs maintained, in the academic year 1932-33, 99 day schools for the sparse and scattered Eskimo and Indian population. These schools had 4229 pupils, who constituted not quite one-seventh of the indigenous population. The bureau operated, also for indigenous pupils, three vocational boarding schools, an orphanage, and a school for the blind; the orphanage, however, was closed at the end of the fiscal year.

POLITICAL AND OTHER EVENTS. John W. Troy of Juneau, appointed Governor of the Territory, assumed office in April. The Territorial Legislature of 1933 appropriated \$484,060 for divers measures of relief for specified classes of the population, with some allowance for relief of destitute in general. Bills were introduced in Congress to transfer to Territorial authority the control over fisheries and game, and to repeal the law prohibiting alcoholic drinks in Alaska.

ALBANIA, al-ba'nia. The smallest kingdom in the Balkans, having an area of 10,629 square miles and a population at the census of May 25, 1930, of 1,003,068 (828,593 in 1927). Capital, Tirana (population 30,806 in 1930). Other chief towns are Scutari (Shkodër), 29,209; Coriza (Korça), 22,787; and Elbasan, 13,796. Reigning sovereign in 1933, King Zog I, who assumed the throne Sept. 1, 1928.

PRODUCTION AND COMMERCE. Agriculture and cattle raising are the chief occupations in this largely rugged and mountainous country. The principal products are timber, wool, hides, furs, tobacco, dairy products, olive oil, grain, bitumen, and livestock. The extensive forests and the considerable mineral resources are largely undeveloped. Some copper, salt, and bitumen are

produced. The principal industries are those connected with agriculture. The trade balance has been unfavorable for some years, due to Italian loans and expenditures in Albania. In 1931 imports totaled 29,513,000 gold francs (1 gold franc equals \$0.1929 at par), compared with exports of 7,509,000 francs. The 1932 imports were 22,814,500 francs; exports, 4,500,360 francs. Italy supplied imports valued at 13,840,000 gold francs in 1931 and took exports worth 4,966,000 francs.

FINANCE. Budget estimates for the fiscal year ended Mar. 31, 1932, placed revenue at 29,097,000 gold francs and expenditure at 31,533,422 francs. Albania received an Italian loan of 50,000,000 gold francs in May, 1925. In June, 1931, the Italian government signed an agreement to lend the Albanian Treasury not more than 10,000,000 gold francs annually for a period of ten years. The agreement provided for control of these expenditures by a commission of two Italians and two Albanians.

COMMUNICATIONS, ETC. Communication is chiefly by highways except in the north, where pack animals are in use. In 1930 there were 857 miles of completed roads and 350 miles under construction. Five air lines, under Italian control, connect the principal towns. The only railway, 22 miles in length, connected Tirana and the port of Durrës, which has been improved.

The constitution, amended in 1928, vests executive power in the King, assisted by a council of ministers appointed by him and by a one-chambered parliament of 59 members elected indirectly for four years. Premier in 1933, Pandeli Evangjeli.

HISTORY. A reaction against Italian influence in Albania was indicated during 1933. In June King Zog ordered the closing of all private schools in Albania, the great majority of which were run by Italian religious orders. Government schools, with Albanian teachers, were established in place of those closed. With the return of several hundred Italian teachers to Italy, the Italian government brought pressure upon Albania to meet the unpaid interest on the 1925 loan. When no interest was forthcoming, Italy recalled its military adviser in Tirana, General Pariani, and stopped installments on the 1931 loan. King Zog's apparent rebellion against Italian tutelage was induced by the growing discontent among the educated classes of his subjects, who resented his acquiescence in Italy's domination. He had failed to check this unrest by the summary arrest of some 200 opponents in 1932, despite the severe penalties inflicted. In September, 1932, the special emergency court at Tirana had sentenced 7 to death, 14 to life imprisonment, 13 to 15 years' imprisonment, and 1 to three years' imprisonment.

In retaliation for King Zog's rejection of a customs union proposal, Italy in 1933 placed a tariff on Albania goods which practically strangled the foreign trade of its small neighbor and caused a deficit in the Albanian budget.

ALBERT, FRANÇOIS. A French statesman, died in Paris, Nov. 23, 1933. Born in Bordeaux, Apr. 4, 1877, he attended the Higher Normal School and upon his graduation entered upon a teaching career, later becoming a member of the faculty of the University of Bordeaux. As a radical journalist he edited during the World War Clémenceau's paper, *L'Homme Enchaîné*. He became a member of the Senate in 1920, and four years later was appointed Minister of Education in Herriot's

cabinet. On his election in 1928 to the Chamber of Deputies he distinguished himself as an orator for the cause of the Radical Socialist party.

Appointed Minister of Labor by Edouard Deladier in January, 1933, M. Albert succeeded during his brief administration in settling several labor disputes, including a general strike at Strasbourg, but he was not asked to retain this portfolio when the Sarraut cabinet was formed in October on account of criticism of his approval of social insurance. Among his political works were *Les Unifiés et le Gouvernement de M. Clémenceau* (1919) and *Le Procès Malvy* (1920). He was a Chevalier of the Legion of Honor.

ALBERTA, ăl-bŭr'tă. One of the Prairie Provinces of Canada between British Columbia on the west and Saskatchewan on the east. Area, 255,285 square miles; population (1931 census), 731,605 as compared with 588,454 in 1921. Edmonton, the capital, had 79,197 inhabitants in 1931; Calgary had 83,761; Lethbridge, 13,489; Medicine Hat, 10,300. There were 17,252 births, 5302 deaths, and 5142 marriages, during the year 1931. In the same year there were 3762 schools, including 64 consolidated schools and 16 rural high schools, with 168,730 pupils; three normal schools (Calgary, Edmonton, and Camrose) for the training of teachers with 1250 students; the University of Alberta had 1938 students in 1931-32.

Farming is the chief occupation, but coal mining and the extraction of natural gas and petroleum are important secondary industries. The total acreage sown to field crops was 14,019,000 in 1932 compared with 13,455,936 in 1931. Estimated gross agricultural revenue for 1932 was \$114,976,000 of which \$83,331,000 represented field crops. Production of the chief crops in bushels for 1932 was: Wheat, 104,000,000; oats, 101,500,000; barley, 19,700,000; rye, 1,988,000. The potato crop amounted to 2,102,000 cwt.; hay, 495,000 tons; grain hay, 3,238,000 tons. Mineral production in 1932 was valued at \$21,163,727 (\$23,580,727 in 1931) of which coal accounted for \$13,517,860; petroleum production was 912,506 barrels valued at \$2,739,095; the natural gas output was valued at \$3,820,722. The fur industry produced 1,145,888 pelts in 1932. In 1931 the gross value of manufacturing production from 886 factories was \$107,427,003; number of employees averaged 11,798; salaries and wages, \$14,213,753; and cost of materials, \$36,090,169.

For the fiscal year ended Mar. 31, 1932, ordinary revenue and expenditure was \$13,492,430 and \$18,645,481 respectively. On the same date, net general debenture debt was \$91,450,000. In 1931 there were 5709 miles of railroad lines in the Province. A modern telephone system is owned by the Province, except for the city of Edmonton and the town of Banff, with 220,938 miles of wire, 320 exchanges, and 274 toll stations. For currency problems see CANADA under *History*.

Executive power rests nominally with a lieutenant-governor appointed by the Dominion government, but actually with the Executive Council of the Provincial Legislature. Of 63 members of the Legislature (1933), 37 were United Farmers of Alberta, 11 Liberals, 7 Conservatives, 4 Labor, 3 Independents, and 1 (Camrose) was vacant. The Province sends 6 members to the Senate and 16 to the House of Commons at Ottawa. Lieutenant-Governor in 1933, William L.

Walsh; Premier and Provincial Secretary, John E. Brownlee. See CANADA.

ALFALFA. The production of alfalfa hay in the United States in 1933 was estimated by the Department of Agriculture at approximately 24,899,000 tons as compared with 26,207,000 tons in 1932, and 23,800,000 tons, the average production for the 5 years 1926-30. The average yield per acre, in 1933 was 1.94 tons, in 1932, 2.08 tons, and for the 5-year period mentioned 2.04 tons. The area in alfalfa placed at 12,775,000 acres was 1.8 per cent above the area in 1932 and about 14 per cent above the average annual acreage for the 5-year period. Canada reported a yield of 1,770,000 tons of alfalfa hay from an area of 694,000 acres. The yield was slightly above that of the preceding year and 2 per cent below the average production for the 5 years 1927-31, and the acreage was 4.2 per cent above that of 1932 but 10.2 per cent below the 5-year average.

Reports from almost every alfalfa seed growing State indicated a larger yield than in 1932. The 1933 crop was estimated at 55,000,000 to 60,000,000 pounds compared with the low yield of 32,300,000 pounds the preceding year and with 56,700,000 pounds, the average for the 5 years 1926-30. For the year ended June 30, 1933, the United States imported only 41,200 pounds of alfalfa seed of which 33,000 pounds came from Belgium and the remainder from France, Argentina, and Canada. Imports of alfalfa seed during the last 5 years have averaged only about 422,000 pounds. The exports during the calendar year 1932 amounted to 1,564,600 pounds and were the largest on record. The larger portion of the exports went to France, a country usually producing a surplus. The European alfalfa seed production in 1933 was again reported below the average. Since 1925 alfalfa seed production has undergone a marked reduction in Utah where annual yields as high as 22,000,000 pounds or approximately 40 per cent of the country's crop have been produced and where in 1932 the yield was under 2,000,000 pounds. This decline in yield is attributed to several factors, the more important being a rising water table, high temperatures during the growing season, and drought conditions during a series of years.

In the fall of 1933 growers received an average price of \$7.75 per hundred pounds for common alfalfa seed as compared with \$7.50 in 1932, \$8.50 in 1931, and \$16 the 5-year average. The prices for Grimm alfalfa seed of the 1933 crop ranged from \$9 to \$12.

ALGERIA. A French colony in North Africa, divided into Northern Algeria (area, 80,117 square miles; population in 1931, 5,978,833) and Southern Algeria (area, 767,435 square miles; population in 1931, 574,618). All except 222,206 square miles is desert. The chief cities (1931) were: Algiers, the capital, 257,122; Oran, 163,743; Constantine, 104,902; Bône, 68,778. The total European population in 1931 was 920,788 (762,852 French). The native population is entirely Mohammedan. There were 214,066 pupils in elementary and secondary schools in 1932 and 2200 in the university at Algiers.

PRODUCTION. Agriculture and stock raising are the main occupations. In 1931 there were 15,172,000 acres of cultivated land in the coastal valleys and plains, 11,522,000 acres of meadow and pasture, 1,223,000 acres of trees and shrubs, and 9,478,000 acres of forests. Livestock (1932) included 893,000 cattle, 5,269,000 sheep, 2,743,000

goats, 86,000 swine, 168,000 horses, 489,000 mules and asses, and 201,000 camels. Agricultural production in 1932 (1000 units, bushels except as specified) was: Wheat, 29,236; barley, 30,902; oats, 8707; potatoes 3307; wine (gallons), 483,826; olive oil (gallons, 1932-33 season), 5042; tobacco (pounds) 40,663; dates (pounds), 340,481 in 1931. The mineral output (1932), in metric tons, was: Iron ore, 467,000; iron pyrites, 21,660; zinc ore, 3675; lead ore, 4149; coal, 22,310; petroleum, 891; phosphates, 572,000.

COMMERCE. Algerian imports in 1932 were valued at 4,253,200,000 francs (\$166,726,000 converted at par of \$0.0392), compared with 4,871,500,000 francs (\$190,964,000) in 1931. Exports totaled 3,766,500,000 francs (\$147,645,000), as against 3,402,300,000 francs (\$133,369,000) in 1931. Leading imports (1931) were: Machinery, \$15,609,000; cotton fabrics, \$14,475,000; metal manufactures, \$13,175,000. The principal export items (1931) were: Wine, \$71,761,000; wheat, \$7,210,000; eggs, \$5,576,000; fruits and nuts (excluding dates), \$4,075,000. France took 82.9 per cent of all Algerian exports by value in 1931 and supplied 77.4 per cent of the imports.

FINANCE. The normal expenditure, including military and extraordinary expenses, exceeds Algerian revenue by about 75,000,000 francs. The budget estimates for the calendar year 1933 (excluding military and naval expenditures, provided for revenue of 1,865,326,643 francs and expenditure of 1,864,535,716 francs. The public debt on Dec. 31, 1930, amounted to 1,094,000,000 francs (\$42,885,000).

COMMUNICATIONS. Railway lines open to traffic during 1931 totaled 3023 miles and receipts were 314,200,000 francs. Highways in 1932 included: National roads, 4037 miles; mail roads, 7592 miles; secondary roads, 19,740 miles. An air-mail service connected Algiers and Marseilles, France. The net tonnage of vessels in overseas trade entering the ports in 1932 was 7,485,000 tons (8,051,000 in 1931); vessels cleared, 7,176,000 tons (7,610,000 tons in 1931).

GOVERNMENT. The central executive authority is the Governor-General. He directs all the services with the exception of the non-Moslem departments of public instruction, justice, worship, and the treasury, which are controlled by the appropriate Ministries in Paris. There is a Superior Council of elected members and high government officials and a consultative council, both of which advise the Governor-General. Southern Algeria is under military government. Governor-General in 1933, M. Jules Carde, appointed Oct. 3, 1930.

ALIENS. See IMMIGRATION.

ALL AMERICAN CANAL. See RECLAMATION.

ALLEGHENY COLLEGE. A coeducational institution of higher learning in Meadville, Pa., nonsectarian in policy but under the patronage of the Methodist Episcopal Church; founded in 1815. The enrollment for the autumn of 1933 was 574, and for the summer session 115. The faculty numbered 44 members. The productive funds of the college amounted to \$1,500,000, and the income for the year 1932-33 was \$433,982. The Reis Library contained 95,000 volumes. The library contained 225,000 volumes. President, William P. Tolley, Ph.D., DD., LL.D.

ALLEN, PERCY STAFFORD. A British educator, died at Oxford, England, June 16, 1933. Born July 7, 1869, he received his education at Clifton College and Corpus Christi College, Oxford, and

in 1896 was appointed assistant master at Magdalen College school. In 1897 he was called to the Government College at Lahore, India, as professor of history, remaining there until 1901. Elected a fellow of Merton College, Oxford, in 1908, he also served as librarian (1915-24), as sub-warden (1919-21), and as dean (1920-22). In 1913 he was curator of the Bodleian Library and from 1914 to 1925 of the Indian Institute. After 1924 he was president of Corpus Christi College. Dr. Allen distinguished himself through his studies of the Renaissance which he treated in *Selections from Erasmus* (1908, 1918) and *The Age of Erasmus* (1914). His greatest work was the letters of Erasmus (*Opus Epistolarum des. Erasmi Roterdami*, vols. i-viii) which he examined and edited during 1906-32. In recognition he received the Ph.D. degree from the Universities of Leyden and Louvain and the LL.D. degree from the Universities of Birmingham and Durham. He also published *Selections from Sir Thomas More* (1924) and *Letters of Richard Fox* (1929).

ALLIANCE FRANÇAISE, FÉDÉRATION DE L'. An association of clubs and groups, formed in 1902 for the purpose of encouraging and furthering the study and cultivation of the French language, literature, art, and history in the United States and Canada. By 1933 it comprised more than 290 local branches, including alliances, affiliated societies, and clubs in universities, colleges, and schools, 10 new groups having been added during the year.

Each year the Alliance Française brings from France one or more lecturers who are prepared to speak before all the affiliated societies and clubs wishing to hear them. The official lecturers for the season 1932-33 were Louis Réau, professor of the history of sculpture at the École du Louvre, Paris, and André Allix, professor at the University of Lyons and director of the Institut des Études Rhodaniennes. The Fédération organizes all lecture tours for distinguished French travelers and French lecturers who live in America, assists in organizing courses in the French language and literature in coöperation with the leading universities, and encourages its groups to engage in dramatic performances and debates in French. Its Assemblée Générale, attended by representatives of the various groups, was held in New York City, Apr. 22, 1933. The official periodicals are *L'Echo de la Fédération* and *Bulletin Officiel*.

The officers in 1933 were: President, Frank D. Pavey; general vice-president, William Nelson Cromwell; president of the executive committee, Albert Blum; treasurer, John F. Daniell; general secretary, Roger Sherman; and general lecturer, Léon Vallas. Headquarters are at 43 Cedar Street, New York City.

ALLOYS. See CHEMISTRY, INDUSTRIAL OR APPLIED under *Metals and Alloys*.

ALSACE-LORRAINE, al'zās'lôr'an'. Under German rule since the end of the Franco-Prussian War of 1870-71 these provinces were returned to France by the Versailles Treaty (June 28, 1919) to date from the Armistice of Nov. 11, 1918. Alsace-Lorraine constitutes at present the three French departments of Bas-Rhin (formerly Lower Alsace), 1848 square miles and 688,242 inhabitants; Haut-Rhin (formerly Upper Alsace) 1364 square miles and 516,726 inhabitants; Moselle (formerly Lorraine), 2403 square miles and 693,408 inhabitants. Total area, 5605 square

miles; total population, 1931 census, 1,898,376. The only petroleum fields of commercial importance in France are in Alsace-Lorraine and there are also large iron-ore, and potash deposits.

ALTITUDE RECORDS. See AERONAUTICS.

ALUMINUM. New aluminum produced in the United States during 1933 amounted to 85,126,000 pounds valued at \$16,174,000, compared with 104,885,000 pounds valued at \$20,453,000 in 1932, according to an advance summary of the U. S. Bureau of Mines. The principal producing plant was that at Massena, N. Y., where approximately 51 per cent of the metal made in the United States in 1933 was produced. Other works are at Niagara Falls, N. Y., Alcoa, Tenn., and Badin, N. D. However, the plant at Niagara Falls was not operated in 1933.

World production of aluminum (exclusive of U.S.S.R.) in 1933 was estimated at 134,000 long tons, a decline of about 10 per cent from that of 1932 (149,000 long tons). There was a substantial reduction in production in Austria, Germany, Norway, and the United States, as shown by the accompanying table. The production in Switzerland and England, however, was about 53 and 14 per cent, respectively, greater than in 1932.

WORLD PRODUCTION OF ALUMINUM, 1932-1933, BY COUNTRIES (EXCLUSIVE OF U. S. S. R.), IN LONG TONS

Country	1932	1933 *
Austria	2,000	900
Canada	17,500	15,900
England	10,000	11,400
France	14,800	14,100
Germany	18,700	13,500
Italy	13,201	11,800
Norway	17,506	14,700
Spain	1,000	1,000
Switzerland	8,000	12,200
United States	46,824	38,003
Total	149,000	134,000

* Preliminary.

According to published quotations, the domestic price of Alcoa commercial and mill ingot, 99 per cent plus, was 23.3 cents per pound, delivered, during the entire year 1933. The price of metallurgical ingot, 98-99 per cent, was 22.9 cents a pound during the entire year 1933.

The use of aluminum in buildings and constructions of diverse kinds was reported in 1933. Aluminum alloy shapes and plates were used in the floor system of an old bridge to reduce the dead-weight 750 tons so that the present supports would remain serviceable. The legalization of beer in 1933 created considerable demand for aluminum in brewing equipment, consisting of such items as tanks, cooler kettles, coils, and barrels, and also has increased the demand for aluminum bottle caps and labels.

In 1931 experiments were made in building Pullman cars in which aluminum was used as extensively as possible, and in the following year a light, stream-lined railway car constructed almost entirely of light, strong aluminum alloys was developed. These experiments led to the construction of a three-car, stream-lined all-aluminum train in 1933. The train weighs 80 tons, accommodates 116 passengers, and has mail and baggage compartments and a self-contained power plant. Also, a light-weight, multi-section, stream-lined train, the car bodies of which will be aluminum, is being built for elevated structures.

In the automobile industry an increasing use of aluminum in busses and trucks is reported. Aluminum corrugated sheet for the top plate floor of truck bodies and cast aluminum cylinder heads are recent developments. Aluminum beds made their appearance for the first time in 1933. Aluminum furniture has been used to some extent in semi-public buildings. Many miscellaneous articles in which aluminum was used included lawn mowers, shovels, rowboats, ice crushers, screen doors, electrical recording instruments, duck pins, snow plows, windlasses, dragline booms, lift trucks, radio towers, telescopes, pipe couplings, lettering pens, and harness hames.

AMENDMENTS. See **LAW.**

AMERICAN AIR RACE ASSOCIATION. See **AERONAUTICS.**

AMERICAN ART, NATIONAL COMMITTEE TO ADVANCE. See **PAINTING.**

AMERICAN ART ASSOCIATION. See **ART SALES.**

AMERICAN ASSOCIATION FOR OLD AGE SECURITY. See **OLD AGE PENSIONS.**

AMERICAN ASSOCIATIONS AND SOCIETIES. For various scientific and other organizations, whose official titles begin with the word American, see under the important descriptive word of the title.

AMERICAN BAR ASSOCIATION. See **BAR ASSOCIATION, AMERICAN; CRIME.**

AMERICAN CHEMICAL SOCIETY. See **CHEMISTRY.**

AMERICAN FEDERATION OF LABOR. See **LABOR, AMERICAN FEDERATION OF.**

AMERICAN INTER-PARLIAMENTARY GROUPS. See **INTER-PARLIAMENTARY UNION.**

AMERICAN LEGION. An organization of World War veterans, chartered by Congress in 1919. Its purpose is "to uphold and defend the Constitution of the United States; to maintain law and order; to foster and perpetuate a 100 per cent Americanism; to preserve the memories and incidents of our association in the Great War; to inculcate a sense of individual obligation to the community, State, and nation; to combat the autocracy of both the classes and the masses; to make right the master of might; to promote peace and good will on earth; to safeguard and transmit to posterity the principles of justice, freedom, and democracy; to consecrate and sanctify our comradeship by our devotion to mutual helpfulness."

The Legion's fifteenth national convention was held in Chicago, Ill., Oct. 2-5, 1933. There was an accredited delegate attendance of 1130, representing every State, the District of Columbia, nine other departments outside the continental limits of the United States, and four foreign posts not attached to a department—Havana (Cuba), Greece, Guam, and London. Unusual public interest was attached to the convention because of the widespread results in reduction and elimination of benefits to disabled veterans under the National Economy Act of Mar. 20, 1933, followed by the policy announced by the Legion upholding the President's effort to bring the nation out of the depths of the depression.

The most distinguished guest of the convention was President Roosevelt, whose visit received great publicity because he first announced he could not attend, then suddenly decided to do so and address the veterans. His address received national attention because he dealt with vital issues regarding the disabled. He said in part:

"There are many veterans of our wars to whom disability and sickness unconnected with war service has come. To them the Federal government owes the application of the same rule which it has laid down for the relief of other cases of involuntary want or destitution. In other words, if the individual affected can afford to pay for his own treatment he cannot call on any form of government aid. If he has not the wherewithal to take care of himself, it is first of all the duty of his community to take care of him and next the duty of his State. Only if under this circumstances his own community and his own State are unable, after reasonable effort, to care for him, then, and then only, should the Federal government offer him hospitalization and care." The national convention adopted a four-point programme on rehabilitation, and later, November 21, the national executive committee decreed that it be the first and paramount major objective of the Legion for 1933-34. The four points declared that the service-connected disabled veterans be restored to the status that existed prior to Mar. 20, 1933; that the government hospitalize veterans who are reasonably unable to hospitalize themselves; that presumptive service connected cases be restored to their status existing prior to Mar. 20, 1933; and that the government give protection to the widows and orphans of veterans.

Other outstanding mandates of the convention, and which the national executive committee included in the major legislative programme, called for the navy to be built up to the provisions allowed by the London Naval Treaty; the army to be built up from seventeenth place to a strength recommended by the War Department and consistent with the National Defense Act of 1920 as amended; and the passage of the universal draft law which would freeze prices upon declaration of war and would seek to prevent profiteering. In child welfare the major mandate called for increased aid to dependent children of veterans, declared to be necessary because of reductions of compensation and the general economic conditions.

The accomplishments for the year 1933 up to the time of the national convention were reviewed in the report of Louis Johnson, of Clarksburg, W. Va., the retiring national commander:

Rehabilitation: The passage of the National Economy Act virtually wiped out all existing legislation pertaining to veterans and threw the whole situation into a chaotic condition. The load of cases in the Washington office increased to some one hundred thousand. While the committee continued to function as an agent for the disabled veterans and dependents, there was an almost complete cessation of adjudication of claims. The committee joined with the Legion's national legislation committee in seeking to obtain regulations under the new act that would insure the best treatment possible for those affected. They were able to restore \$96,000,000 in benefits and compensation which the first regulations issued, but renounced before they became effective, had eliminated. The total money recoveries for veterans from the Washington and the field offices on claims amounted to \$3,647,765, as compared with \$7,509,126 the year before.

Child Welfare: The educational phase ranked first in the child welfare endeavors because of the limited resources of direct Legion emergency aid and with the objective of obtaining additional financial help of other agencies. The Legion child

welfare workers in the various departments worked diligently for the child labor amendment and also constituted a force on guard to prevent undue reductions in appropriations necessary to uphold existing legislation affecting the welfare of all children.

Americanism: The promotion of education through coöperation with school officials throughout the nation was the first major activity. It took a number of forms, some of which were the American Legion School Award medal, citizenship schools for foreign born, vocational guidance for boys, Flag history and etiquette, observance of patriotic days, and coöperation with the National Education Association in the observance of national education week.

The membership of the American Legion on Nov. 25, 1933, was 763,089. The national officers elected for 1933-34 were: National commander, Edward A. Hayes, Decatur, Ill.; vice-commanders, Charles R. Mabey, Salt Lake City, Utah; R. L. Gordon, Dermott, Ark.; Miguel Munoz, Puerto Rico; Edward Carruth, Herington, Kans.; and Charles F. Woolley, Providence, R. I.; chaplain, Fr. Robert J. White, Watertown, Mass.; national treasurer, Neal Grider, Indianapolis, Ind.; judge advocate, Remster Bingham, Indianapolis; national adjutant, Frank E. Samuel, Indianapolis. National headquarters are at 777 North Meridian Street, Indianapolis.

AMERICAN LITERATURE. See LITERATURE, ENGLISH AND AMERICAN.

AMERICAN PSYCHICAL INSTITUTE. See PSYCHICAL RESEARCH.

AMERICAN PSYCHOLOGICAL ASSOCIATION. See PSYCHOLOGY.

AMERICAN SAMOA. See SAMOA.

AMERICA'S CUP. See YACHTING.

AMES, ADELBERT. An American soldier and administrator, died at Ormund, Fla., Apr. 13, 1933. Born at Rockland, Me., Oct. 31, 1835, he was graduated from the United States Military Academy in 1861 and immediately enlisted with the 5th Artillery as first lieutenant to serve in the Civil War. Wounded at the first Battle of Bull Run, he served later, with distinction, at Malvern Hill, Antietam, Fredericksburg, Chancellorsville, Gettysburg, Petersburg, and Fort Fisher and on Mar. 13, 1865, was brevetted major-general of volunteers for gallantry and meritorious service throughout the war. In April, 1866, he was mustered out of the volunteer service and on July 28 of that year was commissioned lieutenant-colonel in the regular army, being assigned to the 24th Infantry.

General Ames was provisional governor of Mississippi during the Reconstruction period (1868-70) when the State was engaged in framing its new constitution and ratifying the Fourteenth and Fifteenth Amendments. He also served during 1869-70 as commandant of the Fourth Military District which included Mississippi. Elected United States Senator from Mississippi in 1870, he resigned his seat in 1873 to accept the office of governor, to which he had been elected by popular vote. His administration, while marked by the promotion of the State's welfare, soon antagonized the white Democrats who accused him of favoritism to the newly enfranchised Negro population. There ensued a bitter race war which culminated after numerous minor conflicts in the Vicksburg riot of Dec. 7, 1874, in which 29 Negroes and several whites were killed.

Finally in 1876, after the Democratic party had secured a majority in both branches of the Legislature as a result of the November election, Ames and the other Republican executive officers were threatened with impeachment. The charge against him of an unconstitutional exercise of power was withdrawn, however, when he voluntarily resigned the gubernatorial office. He then removed to New York City and later to Tewksbury, a suburb of Lowell, Mass. His last military service was as brigadier-general during the Spanish-American War.

AMHERST COLLEGE. An institution for the higher education of men in Amherst, Mass., founded in 1821. For the autumn term of 1933 approximately 780 students were enrolled. The active faculty, exclusive of administrative officers, emeriti professors, and those on leave, numbered 72. The productive assets of the college amounted to \$9,000,000, and the income for the year was \$863,000. The library contained 180,000 volumes. President, Stanley King, LL.D.

AMMONIATED PEAT. See CHEMISTRY, INDUSTRIAL OR APPLIED.

AMOEBC DYSENTERY. See MEDICINE AND SURGERY.

AMPHIBIA. See ZOOLOGY.

ANAPLASMOSIS IN CATTLE. See VETERINARY MEDICINE.

ANARCHY. See LAW.

ANATOLIA, an'ä-tō'li-ä. An early Byzantine district name in western Asia Minor, now indefinitely applied to all Turkey in Asia.

ANDERSON, REAR ADMIRAL EDWIN ALEXANDER, U.S.N., RET. An American naval officer, died Sept. 23, 1933, in Wilmington, N. C., where he was born July 16, 1860. Graduated from the United States Naval Academy in 1882, he entered the Navy as an ensign in 1884 and was thereafter promoted through the grades to the rank of rear admiral in 1918. After serving on the *Marblehead* and commanding the *Sandoval* during the Spanish-American War (at which time he was advanced five numbers in rank for extraordinary heroism), he successively commanded the *Callao* (1902-03), *Don Juan de Austria* (1903), and the *Isle de Cuba* (1903), all part of the Asiatic Fleet. During 1904-05 he had charge of the naval gun factory in Washington, D. C., and then returned to sea duty as commander of the *Pennsylvania*. He also commanded the Second Torpedo Flotilla during 1906-07 and in the latter year went to Cincinnati as director of the recruiting station there. In 1908 he was detailed to the Navy Yard at Mare Island, Calif., and in 1910 assumed command of the gunboat *Yorktown*. After being attached to the Philadelphia Navy Yard during 1911-13 he became commander of the *New Hampshire* and in April, 1914, led the 2nd Regiment of Bluejackets in the seizure of Vera Cruz, Mexico, receiving the Congressional medal of honor for heroism on that occasion.

In 1916 Admiral Anderson was made superintendent of the Naval Auxiliaries and on the entry of the United States into the World War became commander of Squadron 3 of the American patrol detachment, organizing as a coöperative unit the air, surface, and submarine craft of the Atlantic Fleet. For this service he received the Distinguished Service Medal. During 1919-22 he had charge of the Navy Yard in Charleston, S. C., and for a short while in 1922 directed the European Forces with the temporary rank of vice

admiral. Prior to his retirement in 1923 he was commander-in-chief of the Asiatic Fleet.

ANDERSON, MELVILLE BEST. An American educator, died at La Jolla, Calif., June 22, 1933. Born at Kalamazoo, Mich., Mar. 28, 1851, he was educated at Cornell University and also in Europe at the Universities of Göttingen and Paris. On his return to the United States in 1877 he was appointed professor of modern languages at Butler University and four years later was called to the chair of English literature at Knox College. He successively held the professorships of literature and history at Purdue University (1886-87) and English language and literature at the State University of Iowa (1887-91), and then accepted the chair of English literature at Leland Stanford Jr. University which he occupied until his retirement as professor emeritus in 1910. For 10 years Dr. Anderson was engaged in making a translation in *tersa rima* of Dante's *Divine Comedy* (1921), and published a *Study of Dante and His Florence* (1929). In addition, he edited a volume of Bacon's *Essays* (1890) and translated from the French such works as Hugo's *William Shakespeare*, Boissier's *Mme. de Sévigné*, Caro's *George Sand*, and Sorel's *Montesquieu*.

ANDORRA, ün-dör'ri. A small state on the south slope of the eastern Pyrenees having a semi-independent existence under the joint protection of the Bishop of Urgel and France. Area, 191 square miles; population, 5231 in 1924; capital, Andorra-la-Vieja a village of about 700 inhabitants. The Andorrans who speak Catalan are governed by a council of 24 elected members, acting through a First Syndic. France and the Bishop respectively appoint the two civil judges. There is a customs union and a postal union with France.

HISTORY. One of the major political upheavals experienced since Andorra was established as an independent state in 1278 occurred during 1933. The overturn was largely due to the completion of a new highway, traversing the country from the French to the Spanish borders and opening it up to foreign influences and politics. Desirous of making a tourist centre of Andorra, the Catalan state was reported to have loaned the Andorran council 16,000 pesetas to build a casino, modernize the hotels, and improve the highways. On Apr. 8, 1933, the youths of the country, incensed at the alleged misappropriation of these funds by the council, invaded the council chambers and forced it to grant universal male suffrage. Therefore only the heads of landowning families exercised the suffrage.

On June 17 the representatives of the French President and the Spanish Bishop of Urgel ordered the dissolution of the Council for its submission to the youths. Andres Masso, leader of the revolt, who had subsequently been named official representative of the Spanish government in Andorra, was ordered exiled. The Council, supported by the aroused Andorrans, refused to resign. The French government, interested in the country for strategic reasons, sought to restore the authority of its President by declaring an embargo. This proving fruitless, 60 French gendarmes violated the country's neutrality for the first time in six and one-half centuries, on August 20, and took possession of it in the name of the co-princes. They disarmed Andorra's seven constables, its 36 citizen police, arrested six officials, and established the authority of a French agent. Under French auspices, a new election—the first

in which universal male suffrage obtained—was held on August 31. The new Council assembled on September 18 and elected as First Syndic, or President, Pere Torres, candidate of those opposing the co-princes.

Under pressure from Spain, the French gendarmes left the country in the middle of October and steps toward the reconciliation of the co-princes and their subjects made progress. A new disturbance arose toward the end of November when 1400 Spanish workmen employed on a power plant struck and defied the Andorra militia. The strike was ended after the deportation of 40 anarchist agitators.

ANGLIN, FRANCIS ALEXANDER. A Canadian jurist, died in Ottawa, Mar. 2, 1933. He was born at St. John, N. B., Apr. 2, 1865, brother of the actress, Margaret Anglin, and was educated at St. Mary's College, Montreal, and at the University of Ottawa where he was graduated in 1885. Called to the Ontario bar in 1888, he was appointed King's Counsel in 1902 and two years later senior puisne judge of the Ontario High Court, Exchange Division. In 1906 he served as a member of the commission to revise the statutes of Ontario. Appointed a judge of the Supreme Court of Canada in 1909, he served in that capacity until 1924 when he became chief justice. In 1925 he was made a member of the Imperial Privy Council. His resignation as chief justice took effect the day before his death. Justice Anglin was decorated with the Order of St. Gregory the Great in 1924 and with the Grand Cross of the same order in 1930. In addition to many legal articles in periodicals, he wrote *Limitations of Actions Against Trustees*, etc. (1900).

ANGLO-EGYPTIAN SUDAN. A British-Egyptian condominium in the Upper Nile region of Africa, south of the 22nd parallel of latitude. Area, 1,008,100 square miles; total population, 5,605,848 (approximately), including 59,908 non-natives. The chief towns are Khartoum, the capital, with 50,463 inhabitants; Omdurman, 103,669; Khartoum North and Rural District, 107,720; Wadi Halfa; Port Sudan; Merowé; Suakin. In the northern provinces for 1932 there were 813 schools (chiefly government institutions) with a total of 38,809 students. In the southern provinces there were 40 schools with 3092 students and 263 "bush" schools with 7000 students.

Cotton production for 1931-32 amounted to 995,265 kantars (kantar equals 312 lb.) of seed-cotton from 323,563 feddans (feddan equals 1.038 acres). The principal grain crops are dura (great millet) and dukhn (bulrush millet); sesame, groundnuts, wheat, maize, and barley are also grown. Livestock (1931): 2,250,000 sheep; 1,200,000 cattle; 2,000,000 goats; 22,750 horses; 1000 mules; 5000 pigs. Most of the world's supply of gum arabic comes from the Sudan and 19,452 tons valued at £E461,904 were exported in 1932.

In 1932, exclusive of transit trade and specie, imports were valued at £E2,684,000; exports, £E4,054,000 including reexports. Revenue and expenditure for 1932 were balanced at £E3,853,798. The budget for 1933 estimated revenue and expenditure to balance at £E3,722,000 (£E. averaged \$3.58 in 1932). There were 1989 miles of railway and 2326 miles of river services in operation at the end of 1932. Ships calling at Port Sudan during 1932 numbered 808 and aggregated 3,098,307 tons.

The Sudan is administered by a governor-

general appointed by Egypt with the assent of Great Britain. A governor-general's council aids the Governor-General in executive and legislative matters. The British and Egyptian flags are flown together. There are 13 provinces in the Sudan each under a governor. Governor-General, Sir G. S. Symes who was appointed to office during the latter part of 1933.

ANGOLA, ăng-ô'la, or **PORTUGUESE WEST AFRICA**. A Portuguese dependency on the west coast of Africa with a coast line about 1000 miles long extending from the Belgian Congo on the north to British South Africa on the south. Area, 486,079 square miles; population (1931), 4,181,730 including 40,000 Europeans. The chief towns are Nova Lisboa, the capital, 2500 (white) inhabitants in 1929; Benguela, 6000; Loanda, 20,000; Novo Redondo, 6000; Mossamedes, 5000. There are 70 schools for primary education, 3 for secondary education, and 106 professional schools.

The chief products are coffee, wax, sugar, maize, vegetable oils, coconuts, ivory, oxen, and fish. Mineral products are gold, diamonds, malachite, copper, iron, petroleum, and salt. In 1931 the imports were valued at 146,966,123 angolares (80 angolares equal 100 Angolan escudos); exports, 204,310,014 angolares. The ordinary budget for 1932-33 balanced at 142,960,000 angolares and the extraordinary budget at 2,738,266 angolares. There were 1425 miles of railway open for traffic; 17,215 of good roads and 20,713 miles of second grade roads; 5790 miles of telegraph lines; 259 miles of telephone lines; and 19 wireless stations.

Angola is divided into 8 administrative districts and 1 Intendencia. It is governed by a high commissioner, assisted by a partly elective consultative council. The military force consists of 122 officers and 4497 other ranks. Governor and High Commissioner in 1933, Col. Eduardo F. Vianna.

ANHALT. See GERMANY under *Area and Population*.

ANIMAL COLORATION. See ZoöLOGY.

ANIMAL DISEASES. See VETERINARY MEDICINE.

ANNAM, ăn'năm'. A protectorate of France and a state of French Indo-China. King Bao-Dai is the nominal head of the government and is assisted by a Council of Ministers, but actual power rests with the French Resident-Superior. In 1926 a Chamber of Representatives with limited powers was established. Resident-Superior in 1933, A. E. LeFol. See FRENCH INDO-CHINA.

ANSCHLUSS. See GERMANY and AUSTRIA under *History*.

ANTARCTIC EXPLORATION. See POLAR RESEARCH.

ANTHROPOLOGY. The year 1933 has been relatively barren. There have been no pronouncements or discoveries of major importance, and the publication record was at low ebb. Research activities, expeditions, and publication has been drastically curtailed or wholly abandoned everywhere because of the economic depression. Some activity persisted in the United States, but that in Canada, South America, and European countries was minimal.

Fewer books and articles have been published this year than at any time in decades. This is doubly serious since the number of professional workers in anthropology has materially increased in recent years and their output available for publication correspondingly enlarged. Progress

necessarily depends on the early printing of researches, particularly in a field where so much of the record is primarily descriptive. Serious concern exists over the limited outlets for publication. For example, whereas a few years ago there were in the United States alone between forty and fifty series devoted to anthropology, to-day only sixteen are being issued and these with but a fraction of their former output. The four journals published in this country still appear regularly, but their condition is far from flourishing.

The disparity in publication possibilities in the several nations is reflected in the fields covered. Because of the relatively better position of American anthropology, contributions to North and Central American ethnography and archaeology were by far the most numerous. South America was practically without representation in the year's literature. A number of brief articles on Old World prehistory and on the tribes of Africa, Australia, and Oceania appeared, but few extended monographs. Most of this material was technical or dealt with special phases, and was, on the whole without wide significance.

The single substantial theoretical work of the year was P. Radin's *Method and Theory of Ethnology* (New York). This author attempted a critical examination of the various methods and theories underlying anthropology of the last thirty years, with particular reference to the United States. Radin insists that anthropology has no affinities with the methods or viewpoint of the natural or biological sciences. It must deal with descriptions of specific cultures, specific events, and specific individuals in the manner of the documentary historians. It has no more concern with the study of cultural processes as such than has the study of our own culture. This treatment is, however, far from objective, and a constant misapprehension of the aims of his colleagues makes the book unreliable as a history of the development of anthropological activity. While theoretical discussion may be stimulated by his work, it seems doubtful that it will itself stand as a significant contribution.

PREHISTORY AND PHYSICAL ANTHROPOLOGY. It was suggested many years ago by the late W. D. Matthew that if, as seemed probable, the mammals had evolved at a single centre, there should occur around it rings of successively differentiated genera with the least advanced types at the greatest radial distances. On the supposition that the centre lay in south central Asia, the presumption was that the whole developmental series for man might be found there. Several expeditions to inner Asia in recent years have, however, failed to find the evidence. Now A. Smith Woodward suggests on the same grounds that the early centre for man may have lain in east Africa (*Science*, Aug. 4, 39). He bases this view on the ground that both Piltown man (*Eoanthropus*) of England and Peking man (*Sinanthropus*) are archaic types of the same (Lower Pleistocene) age; that the Neanderthal races, occurring from central Europe to Palestine, represent end forms, not primitive; and that the Kanam and Kanjera remains from Kenya, East Africa, are modern types of very ancient times. *Eoanthropus* and *Sinanthropus* are looked on as the peripherally earliest forms; as for the last, it would appear that typically modern man ap-

peared much earlier in east Africa than in Europe and Asia.

This acceptance of the east African evidence is based on the report of a conference held at Cambridge, England, March 18-19. The finds made in Kenya by L. S. B. Leakey included fragments of human skeletons and crude stone implements, found in fossiliferous beds. At the conference committees were assigned to report separately on the geology, paleontology, anatomy, and archaeological problems. Their conclusions are that the human remains fall within the range of the present species of man (*Homo sapiens*); that the several types of stone implements with which they were found are equivalent in type, and hence probably in age, to the Chellean (earliest Paleolithic) culture of Europe; that the remains are an original component of the strata in which found; that the contemporary animals were of Lower Pleistocene age. The assembling of committees for the solution of such problems is becoming increasingly fashionable, but it is doubtful that the method adds to the validity of the findings.

A preliminary report on other skeletal remains of east Africa, which also have some claim to antiquity, was given in the form of a book, *Oldway* (Leipzig) by their discoverer, H. Reck.

The puzzling situation respecting the *Sinanthropus* finds in the Choukoutien caves near Peiping, China, was further complicated this year. According to a press dispatch of September 21, the upper cave, which is believed to be connected with the main cave containing *Sinanthropus*, yielded fragments of a human skull of a type quite dissimilar and more evolved than *Sinanthropus*. With these were a finely shaped flint implement and a bone needle, both of advanced type. The discoverer, W. C. Pei, suggests that the deposits of the upper cave represent a late Paleolithic culture. What is their relation to the remains of Peking man is obscure.

"Traces of prehistoric man in the form of knives, scrapers, and other implements and the remains of a mammoth, whose former existence in the Himalayas has been hitherto unsuspected," were reported by H. de Terra early in the year. "The paleolithic implements and the mammoth were found in formations that had been thrown into earth folds during the upheaval of the Himalayas and indicate that prior to that time the southern Himalayas were considerably lower in altitude. The rise of the Himalayan range must have continued into historical times" (*Science*, March 24, 301).

It has long been recognized that at least one of the racial types of Europe does not fit into the classic scheme of three-fold racial division for that continent: Nordic, Alpine, and Mediterranean. This is the tall, pseudo-Armenoid type of Montenegro, the so-called Dinaric race. Reporting on a reconnaissance of physical types in Montenegro, R. W. Ehrich offers a preliminary interpretation of its racial complexities. "The long-headed, slender Mediterraneans are the oldest people in the region. These seem to have been followed by the intrusive Dinaric strain . . . which seems to bear eastern relationships. These, in turn, were probably followed by the stocky 'Alpine' group which may have come in with the Slavs. The Nordic group which mixed with the Dinarics to form the tall Hercegovinian strain may, as has been suggested for the Dinarics also, have been brought by the Romans as colonists or

as garrisons" (*Bull. Amer. School Prehistoric Research*, no. 9, 57).

OLD WORLD ETHNOGRAPHY. The principal monograph on Africa this year is R. Linton's account of *The Tanala: a Hill Tribe of Madagascar* (*Field Mus. Publ., Anthro. Series*, 22). This, the first of a projected series descriptive of Madagascar tribes, deals with the southeastern interior. The Tanala comprise a number of autonomous triblets who fall into a northern and a southern division. To this writer Tanala culture appears in many respects to be archaic from the standpoint of the island as a whole. This is more clearly the case for the northern division, the southern having been markedly affected both in material existence and social structure by the politically organized peoples to the south and east.

From west Africa there is *An Outline of Dahomean Religious Belief* by M. J. and F. S. Herskovits (*Mem. Amer. Anthr. Assn.*, 41) which brings clarity to a very confused situation. By way of general concepts, these investigators point out first that hierarchical organization of the kingdom of Dahomey is paralleled among the gods. These are viewed as sons and heirs of the Sky-God, exercising rights over various powers, not however individually but as members of minor pantheons. Of much the same importance is the ancestral cult, comprising deified ancestors and the recent dead. They link with the gods in that the supernatural ancestors of the sibs are one with the gods. There is then a dispersal of power downward from gods to living representatives. Individuals therefore are concerned primarily with particular cults; their offerings and magical charms (fetishes) being directed on the whole only to that segment of the universal pantheon with which the family is affiliated. The continuity with the gods is marked, for it is the lot of every Dahomean to become identified with the gods, his ancestors, who work for mankind's good; his descendants in turn continuing on earth the practices he leaves behind at death.

Continuation of detailed studies of the distribution of culture elements in Africa appears in Leth and Lindblom's *Two Kinds of Fishing Implements* (Stockholm, 1933). A discussion of *The Ethnology of African Sound-Instruments* (*Africa*, London, 6, 129, 277) gives some insight into types, distribution, and possible antiquity of musical apparatus in this continent. A brief set of notes on the northern Kavirondo of Kenya Colony was published by G. Lindblom (*Revista Inst. de Etnologia, Universidad Nac. de Tucumán*, Argentina, 2, 395). This deals particularly with crisis periods (birth, death, etc.) among the Kitosh.

Polynesia, which of late years has been a prolific source of ethnographic studies, is represented this year only by P. H. Buck's *Ethnology of Manihiki and Rakahanga* (*Bull. Bishop Mus.*, 99) and Ian Hogbin's *Law and Order in Polynesia* (New York). The former is primarily a description of technology in these isolated atolls of the central Pacific; the latter is a study of life of the islanders of Ontong Java (northern Solomon Islands), usually considered a Polynesian colony in Melanesia. But, while the culture is definitely Polynesian, H. L. Shapiro finds that *The Physical Characteristics of the Ontong Javanese* are neither Polynesian nor Melanesian, but approximate those of the Caroline Islanders

in western Micronesia (*Anthr. Paprs. Amer. Mus. Nat. Hist.*, 33, pt. 3).

The surprisingly rich *Archæology of the Marianas Islands* in the western Pacific was briefly described by L. M. Thompson (*Bull. Bishop Mus.*, 100).

From New Ireland in western Melanesia comes a picture of *Life in Lesu* (New York) by H. Powdermaker. Following the pattern established by the English anthropologists working in this field, only a partial ethnography was attempted; material culture and religion being ignored relatively to the treatment of social institutions. Like other Melanesian societies, this one accentuates prestige based on wealth. Wealth is important not as mere accumulation but for its utility when so distributed as to produce prestige values. This account stresses the rôle of the individual in social and economic organization, and in the minor round of life activities.

Material on the Siberian tribes appears sporadically. W. Jochelson's account of *The Yakut* (*Anth. Paprs., Amer. Mus. Nat. Hist.*, 33, pt. 2), covering field investigations made between 1884 and 1902, is a belated report of the great Jesup North Pacific Expedition. It is established that in the thirteenth century this Turkic group was in the vicinity of Lake Baikal, being forced northward by the Mongolian Buryat into the Lena and Kolyma valleys which they occupied at the period of Russian contact (seventeenth century). A set of brief notes on *The Gold Tribe, "Fishskin Tartars," of the Lower Sungari* in northern Manchuria was published by O. Latimore (*Mem., Amer. Anth. Assn.*, 40). This Tungusic tribe, historically and linguistically close to the Manchu, represents an intermediate culture group toward the level of the northeast Siberian natives. Progressive Chinafication of both tribes has gone forward for a long time: it is therefore surprising that shamanistic practices of the Gold remain nearly in pristine form.

NEW WORLD ETHNOGRAPHY. The year had its usual quota of finds purporting to relate to early man in North America. Implements were found in association with fossil animals (mammoth, musk-ox, horse, camel, bison) which became extinct in late glacial (Pleistocene) times or soon after. These were reported from Dent, Colorado, and Clovis and Carlsbad, New Mexico. Other artifacts were found in a deep sand stratum near Dalton, Nebraska. Further evidence is needed in all cases.

A case of more than ordinary consequence seems to be presented by M. R. Harrington for finds made in Gypsum cave, southern Nevada (*Southwest Museum Papers*, 8). Here in a deep, sharply descending, debris-filled cavern were found cultural remains in close association with those of several extinct animals (Pleistocene forms of horses, camels, and notably ground-sloth). Harrington noted twelve instances within the cave where artifacts were found with or under sloth bones, hair, and dung. Aside from some finds of historic Paiute and early Pueblo provenience from superficial levels, the cultural remains were darts and arrows, cordage, fragments of baskets, etc. which in general resemble those of the ancient Basket Maker culture of the Southwest. This investigator separates these into two cultural levels (Basket Maker and an earlier culture contemporaneous with the sloth), but the segregation is not convincing. Assuming that the evidence is conclusive that the artifacts are

as old as this fauna, and again, that these species became extinct by terminal Pleistocene times at least (which some paleontologists doubt), Harrington assigns the sloth period culture to the days of Lake Lahontan, the glacial lake of Nevada.

A closely reasoned discussion of *Contacts with America across the Pacific* by R. B. Dixon (*The American Aborigines*, Toronto, 315) gives a negative answer to the suggestion that the cultures of the American Indians were influenced by Oceanic voyagers. The importance attaching to this point is that if similarities of cultural form in the two areas are demonstrated to have resulted from historic contact rather than by convergent development, the parallelism of cultural process hitherto envisaged would have to be abandoned. Dixon's argument is four-fold: the similar traits are analogous, not homologous; they occur so randomly in both America and Oceania (mostly in Melanesia and Indonesia) that a series of voyages to widely separated points in America would have to be posited; that the known characteristics of long-distance Polynesian voyages argue against any so far as the New World; that it is unthinkable that the bulk of Polynesian culture would have made no impress on America while leaving traces of unessential traits. He considers the possibility reasonable for one case alone: a club of definitely New Zealand type said to have been taken from a Peruvian grave of pre-Inca date. But it is well to remark that the record for even this instance is open to question.

This year brought the publication of accounts from three ethnographical blind-spots of northern North America. From the Aleutian Islands there was a brief survey of the *History, Ethnology, and Anthropology of the Aleut* by W. Jochelson (*Carnegie Inst. Wash.*, 432), almost wholly a compilation from somewhat obscure Russian sources, with a few original observations. C. B. Osgood's *Ethnography of the Great Bear Lake Indians* (*Ann. Rept. National Mus. Canada*, 31) is the first reasonably full report on any of the widely scattered tribes of the Mackenzie Basin in northern Canada. As important as the ethnographic material is the classification of tribal identities in this area. An extended account of *The Sanpoil and Nespelem* of north-eastern Washington (*Univ. Wash. Publ. Anth.*, 5) by V. F. Ray provides a norm for appraising this neglected southern segment of the north-western plateaus.

In a discussion of *The Plains Culture Area in the Light of Archæology* (*Amer. Anth.*, 35, 271), W. D. Strong synthesizes the hitherto uncoordinated archaeological remains for the central Plains. Evidence is assembled for a culture with Eastern Woodland leanings in the eastern part of Nebraska, followed by historic Siouan culture. In the centre, historic Pawnee culture had an earlier phrasing which shows influences from the Southeast. In the west, an early nomadic hunting culture, associated with bison types now fossil, was followed by a potteryless culture, which in turn was followed by the buffalo hunting culture of the historic period. The evidence is that agriculture was pursued over the eastern and central sections even prior to the appearance of the agricultural Pawnee-Siouan type. It is therefore suggested that sedentary agricultural life was more typical of the early central Plains than is commonly held.

New data from the California tribes are available from four localities. R. Beals' *Ethnology of the Nisenan* (Univ. Calif. Publ. Amer. Arch. Ethn., 31, no. 6) presents the culture of a hill people in the north central part of the State. While in most respects it is of the generalized central Californian type, social organization shows the impress of influences from the south. The religious and ceremonial structure has been little affected, or at least affected only recently, by that group of observances which E. M. Loeb analyzes under the title *The Eastern Kuksu Cult* (same ser., 33, no. 2), the western forms of which were considered last year. This cult was found north of San Francisco Bay in the Coast Range and lower Sacramento valley. This author divides the cult into western and eastern phases. The former comprised "the tribal initiation (ghost dance) and kuksu cult in their archaic and typical form. In the east . . . the hesi cult arose on the Sacramento river and, by a process of incorporation, put an end to the two original separate units." Ultimately, he believes, the kuksu element was derived from Mexico, the hesi impetus from the Northwest Coast. As has been remarked in an earlier YEAR BOOK, it seems unlikely that Loeb's historical reconstruction will be generally accepted. An account of *Miwok Material Culture* (Bull. Publ. Mus. Milwaukee, 2, no. 4) by Barrett and Gifford covers for the first time in *extenso* the mode of existence of the Indians of central California. A culture of quite different type is presented in J. H. Steward's *Ethnography of the Owens Valley Paiute* (Univ. Calif. Publ. Amer. Arch. Ethn., 33, no. 3). This group on the eastern margin of California participated in the simple culture of the Great Basin tribes. Extraneous influences seem relatively rare.

The ethnographic survey of the block of Yuman tribes in southern California, the Californian peninsula, and adjacent Arizona has reached a point where there is now no large group unrepresented in the collections of field data. That on the Walapai and northern Yavapai of Arizona and on the Kiliwa of the peninsula still remains to be published. This year's contributions concern *The Cocopa* (Univ. Calif. Publ. Amer. Arch. Ethn., 31, no. 5) by E. W. Gifford and *Yuman Tribes of the Gila River* (Univ. Chicago Publ. Anth.) by L. Spier. The culture of the Yumans on the lower Colorado River appears to be duplicated in typical form among the Cocopa at the river mouth. The present account is most full on the side of material and economic life.

The Gila River Yumans were originally the Maricopa and Kavelteadom: they were joined a century ago by Halchidhoma, Kohuana, and Halyikwamai, who fled eastward under pressure of constant warfare. The general mode of life was nearly identical with that of the Cocopa and other Colorado River peoples, save that the Maricopa show appreciable influences in techniques from the Pimans to the east. Maricopa religion, however, while fundamentally the highly specialized form of the Yumans to the west, shows some generalized North American traits. Whether it therefore represents an archaic form or has been secondarily influenced by the cultures to the east remains to be demonstrated.

The southwest archaeological zone, richest north of Mexico, has been intensively cultivated for forty years, so that the succession of culture

stages in the heart of the area is now well documented. Only at this late date is attention being given systematically to its extension, attenuation, and local variation on the peripheries. A preliminary report on *Early Inhabitants of Western Utah* by J. H. Steward (Bull. Univ. Utah, 23, no. 7) gives some details of mound and house types on the northwestern margin. In the opposite quarter are cave finds from western Texas discussed by Pearce and Jackson (*Anth. Papers Univ. Texas*, 1, no. 3). Like others, these investigators report a culture that is a seeming mixture of Basket Maker type with others of later date in the Southwest. It is noteworthy that these typologically distinguishable remains occurred in the same cave levels, not stratigraphically segregated.

More centrally located, but still eccentric to the major development in the Southwest, is the imperfectly known Mimbres valley, southwestern New Mexico. Conscientious excavation of a type site by H. S. and C. B. Cosgrove (*Papers, Peabody Mus., Harvard Univ.*, 15, no. 1) shows that fully developed Mimbres culture corresponds to middle Pueblo III period of the central archaeological zone (possibly 950-1150 A.D.). Even though its life span was short, the ruins show a developmental sequence of house forms: early rectangular pit dwellings with clay-lined walls and flat roofs, followed by semi-pit forms of rubble masonry, and still later by true masonry house clusters of Pueblo type.

A very rational presentation of *The Maya Correlation Problem Today* (Amer. Anth., 35, 403) by L. Roys offers the general student some perspective on the controversies that rage among the specialists on the relation of the ancient hieroglyphic calendar of Yucatan to our Christian calendar. Far from having been established with certainty, the two correlations favored to-day (those of Spinden and Goodman) are neither above criticism.

It has long been recognized that parts of these hieroglyphic inscriptions were astronomical and numerical symbols, the values of which can be read with some certainty; as for the remainder, it is suspected that they were linguistic text. But the many attempts to demonstrate their phonetic or ideographic character have all proved abortive. A very suggestive study of *The Phonetic Value of Certain Characters in Maya Writing* (Papers, Peabody Mus., 13, no. 2) by B. L. Whorf may hold the solution. These glyphs commonly occur in the codices in connection with pictures as though they were explanatory text. Noting that the glyph elements occur in fixed order, in which certain elements are known to be names of the gods pictured, Whorf assumes certain others are verbs. Fortunately for his purpose, the Maya language makes use of monosyllabic stems, each covering a group of related actions. Assuming also that the verb refers to the action pictured, he selects the appropriate verb and gives the glyph the phonetic value of the verb. This is found to check with the list of Maya glyphs with Spanish equivalents recorded by Bishop Landa in 1565, the validity of which has often been doubted.

So much attention has been given to dated monuments in the Mayan field, that other possible approaches to outlining the picture of cultural development have been neglected. Since dated stelae were lacking in *The Ruins of Holmul, Guatemala* (Mem. Peabody Mus., 3, no. 2), Mer-

win and Vaillant were forced to use stylistic variations in pottery and architecture. This is the first site in the Mayan area to yield stratified pottery deposits.

The discovery of new ruins near Pomuch, Campeche, was announced by A. Escalona on September 19. These resemble Maya remains of southern Yucatan.

A discovery of importance in Peruvian archaeology was announced in September by J. C. Tello. A series of great ruins uncovered in the Valle de Nepeña, north of Lima, give evidence that the important archaic culture of Chavin in the Sierras is represented in the coastal area.

EXPEDITIONS AND ACTIVITIES. The Naturhistoriska Riksmuseet (Stockholm) was the recipient of collections made by S. Hedin in China and Mongolia, and those of F. Lessing from the Lolos and Shansi province, southern China. E. Manker studied the nomadic forest Lapps in Vittangi district, Sweden. The Göteborgs Museum (Gothenburg) also acquired north Chinese material from G. Montell of the Hedin expedition. An archaeological series from La Candelaria, Argentina, and ethnological collections from the Tapiete and Toba in the Chaco were made by S. Rydén. For the National Museum at Copenhagen, three excavations were carried on in Greenland: on Eskimo sites, by T. Mathiasen at Disko Bay and M. Glob in northeast Greenland; on Norse archaeology, by A. Roussell in the Godthaab district. K. Birket-Smith and F. de Laguna made archaeological and ethnological investigations among Chugach Eskimo and Eyak Indians of Prince William Sound, Alaska. A. Möller began collecting in Melanesia and Indonesia.

The Riks Ethnographische Museum at Leiden reports Josselin de Jonge engaged on a two-year expedition to the Dutch East Indies, where he has already investigated in Buru and the southwest islands. For the Ethnographical Department of the Koloniaal Instituut in Amsterdam, P. Julien has proceeded to Africa for serological studies among the Congo Pygmies and tribes of the upper Nile and Kenya. Both institutions report publications in the East Indian field.

The University Museum (Oxford) continued excavations on Pleistocene and Bronze Age sites on the Gower Peninsula, England, and near Oxford, and cooperated with the Field Museum in Mesopotamia.

The Institut d'Ethnologie (University of Paris) reports ethnological expeditions by Soustelle to the Otomi and Lacandonos of Mexico, Vellard to Paraguay, Dijour to the Mataco of Bolivia, Labouret to the Cameroons (West Africa), Cuisinier to the Malay States, Devereaux to the Moi Sedang, O'Reilly to Bougainville Island and Watelin to the Ile de Pâques.

The Berlin Museum für Völkerkunde participated in the Lessing collections from south China mentioned above and others from north China and Mongolia. Minor collections were received from South America, Mexico, and New Zealand. Its expeditions included the dispatch of Waldschmidt to Further India, Neverman to Dutch New Guinea and the New Hebrides, and Sneath to Brazil and Bolivia. The Staatliche Museum für Tier-und Völkerkunde at Dresden acquired a large collection from British New Guinea.

Like all other European institutions, the Museum für Völkerkunde in Vienna reports curtailment of all activities, and no expeditions be-

cause of low finances. During the year, however, new exhibits were made of material from New Guinea, Tierra del Fuego, Canary Islands, and central North America.

Apart from some new installation the Museum für Völkerkunde at Leipzig confined itself to publication.

The Istituto del Antropologia, University of Florence, had two expeditions in Tripolitania, north Africa. L. Cipriani measured Taureg, Tebu, and other tribesmen of Fezzan, and collected ethnological and Paleolithic specimens. A palethnological expedition was led in the same area by P. Graziosi. In Italy the Istituto carried on excavations in several prehistoric caves and continued anthropometric studies in the army.

The second psychological expedition to the Kishlaks district of Uzbekistan, central Asia, undertaken by the State Psychological Institute of Moscow and associated institutions, involves anthropological investigations since its primary aim is to establish the processes of thought under varying cultural and social conditions. The leaders of the expedition were A. Luria, K. Koffka, and P. Leventueff.

For the Australian National Research Council (Sydney), H. Thurnwald undertook an ethnological expedition to New Guinea and the Solomon Islands.

The Museu Paulista (São Paulo, Brazil), the National Museum of Canada (Ottawa), the Provincial Museum (Victoria, B. C.), and the U. S. National Museum report activities practically suspended.

In Mexico the Department de Monumentos Prehispánicos continued excavations at Teotihuacán, in Mexico City, at Chichén Itzá (Yucatan), Monte Albán (Oaxaca), Calixtlahuaca (Mexico), at Tula and Tenayuca, and in Cholula.

The Carnegie Institution of Washington continued its general scientific survey of the Maya area (Yucatan) with excavations at Chichén Itzá, Uaxactun, and in Campeche, ethnological surveys in Merida, Dzitas, and villages in Quintana Roo, linguistic work on Huastec, anthropometric studies of Maya children, and a botanical survey in Peten (Guatemala).

The University of Pennsylvania Museum furthered a series of archaeological expeditions. At Piedras Negras, Guatemala, a succession of building periods was found at three Mayan sites. In Iraq, excavations continued at Ur, Tell Billa, and Tepe Gawra pushed back into prehistoric horizons. Other excavations at Tepe Hissar, Persia, disclosed early Sasanian remains, and at Eske-Kermen on the Crimean peninsula, remains of the dolmen period.

Activities of the Bureau of American Ethnology (Washington) were financially possible during only the first half year. J. P. Harrington continued linguistic study of the Indians of southern California; W. D. Strong engaged in an investigation of the northeastern part of Spanish Honduras and the Bay Islands; F. H. H. Roberts resumed excavations in an early Pueblo site near Allantown, Arizona.

For the American Museum of Natural History (New York), M. Mead carried on ethnographic work among the natives of the Sepik River and the Aitape district, New Guinea; J. Bird made a brief trip to study the archaeology of Tierra del Fuego. The Museum of the American Indian (New York) reports local excavations in New

Jersey, at Fort Ticonderoga and Throggs Neck, New York, and on Southampton Island and Melville Peninsula, Canada.

The Field Museum of Natural History (Chicago) had one expedition in the field: P. S. Martin resumed excavation at the Lowry ruin, Ackmen, Colorado. Most of the museum's attention was given to the installation of two halls housing racial types and prehistoric cultures. The Southwest Museum (Los Angeles) reports M. R. Harrington investigating at several points in Nevada: a Basket Maker site on the Virgin River, a deposit of human remains with Pleistocene animals near Las Vegas, and directing archaeological work on a large scale in anticipation of the flooding of Moapa valley by the Boulder Dam. The University of Michigan Museum continued special investigations of ceramics under J. B. Griffin and ethnobotany under V. H. Jones.

The Bishop Museum (Honolulu) had four ethnological and linguistic expeditions. In the Polynesian field, E. G. Burrows visited Alofi and Fortuna, E. S. C. Handy investigated Hawaiian medicine and magic, J. F. Stimson legends and chants in the Tuamotots. G. MacGregor visited Rennell Island and several others in the Solomon Archipelago.

Most of the active work in ethnology in the United States was, as usual, carried on by university departments. The University of Pennsylvania concentrated on religion and ceremonials of the tribes of the northeast: F. G. Speck on Delaware-Munsee and Cayuga (Ontario and Oklahoma), G. Tantaquidgeon on Cayuga, and A. I. Hallowell on St. Francis Abenaki and Berens River Saulteaux (Quebec). The Catholic University (Washington) had J. M. Cooper and R. Flannery working among the Cree and Montagnais (James Bay, northern Canada). For Columbia University, G. Reichard continued study of the material life of the Navaho (New Mexico). Yale University has several field investigations: ethnological by W. Fenton among Seneca (New York), W. Dyk and W. W. Hill among the Navaho; linguistic by M. Swadesh among Chitimacha (Louisiana) and C. Voegelin among Shawnee (Oklahoma); archaeological by C. B. Osgood in Venezuela and Panama, and F. Rainey in Florida; musical by G. Herzog among various Indians at the Chicago Fair.

The University of Chicago conducted archaeological work in Illinois under T. Deuel and ethnological investigations by S. Tax among Menominee, Pottawatomie, and Ojibwa (Wisconsin), F. Eggan among Choctaw, Cheyenne, and Arapaho (Oklahoma), W. Gilbert among Cherokee (Oklahoma), A. Bowers among Mandan (North Dakota), M. Opler among Apache (New Mexico). R. Redfield continued social investigations in Yucatan. Linguistic studies were made by B. Haile of Navaho, C. Wisdom of Chorti (Guatemala), and M. Andrade of Huastec (Vera Cruz, Mexico).

The University of California had field studies of Yavapai (Arizona) by E. W. Gifford, Southern Paiute (Nevada-Utah) by I. Kelly, Mixe (Oaxaca, Mexico) by R. Beals, and Tlingit (Alaska) by R. L. Olson; while C. Du Bois investigated the Ghost Dance movement of California and R. H. Lowie the language of the Crow tribe (Montana).

The field training courses of the Laboratory of Anthropology (Santa Fe, New Mexico) were

under R. Linton on Wichita (Oklahoma) ethnology, H. Hoijer on Apache (Arizona) language, and F. H. H. Roberts on the archaeology of Pueblo sites in Arizona.

NECROLOGY. By the death of Walter E. Roth at Georgetown, British Guiana (April 6, aged 72), the South American field lost another important contributor of the older generation. With Nordenskiöld, von den Steinen, Im Thurn, and Farrabee, who all died within the last few years, he ranked among the pioneers of ethnographic research in that continent. Roth's investigations among the natives of the Orinoco and Amazon were made possible by his services as local magistrate and later as curator of the British Guiana Museum.

Zelia C. Nuttall died in Mexico City, April 12, aged 74. During her long residence in Mexico she was instrumental in stimulating archaeological work and was a vigorous contributor of researches in earlier years. She held honorary title at the National Museum of Mexico, Peabody Museum (Harvard), and University of California.

William H. Holmes, chief of the Bureau of American Ethnology from 1902 to 1910 and subsequently director of the National Gallery of Art, died at Royal Oak, Mich., April 20, aged 86. Attached to the Hayden Geological Survey in 1872 as an artist, his discovery of the ancient ruins of southern Colorado precipitated him into an archaeological career. He is best known for his early contributions to the archaeology of North America and Yucatan.

Paul Hambruch died in Hamburg, June 23, aged 51.

Frederick Starr, emeritus associate professor of anthropology at the University of Chicago, died in Tokyo, August 14, aged 74. Apart from extensive travels over the whole globe which resulted in minor publications, he was identified during most of his life with Japan. He was credited with a knowledge of Japanese customary behavior rivaled by no other foreigner.

The death of Knud Rasmussen (in Copenhagen, December 21, aged 54) creates a real gap in Greenland scientific life. Himself of Eskimo descent, his interest in the Eskimo led him to extensive exploration and anthropological studies in the Arctic from Greenland to Alaska. As leader of the five Thule expeditions he was responsible for most of the recent serious work on the Eskimo.

See SCULPTURE.

ANTIGUA. See LEEWARD ISLANDS, BRITISH.

ANTIOCH COLLEGE. A nonsectarian co-educational institution in Yellow Springs, O., founded by Horace Mann in 1853 and reorganized in 1920 by Arthur E. Morgan with the aim of embodying anew the educational philosophy of its first president. The number of students enrolled for the fall of 1933 was 552, of whom 334 were men and 218 women. The faculty for 1933-34 numbered 93. The productive funds of the institution amounted to \$267,414, and the operating income for the year was \$331,497. The library contained approximately 41,100 volumes. President, Arthur E. Morgan, D.Sc., D.Eng.

ANTIQUES. See ART SALES.

ANTI-SALOON LEAGUE OF AMERICA. A federation of churches and temperance organizations in the United States, whose object is the extermination of the beverage liquor traffic. It was established in 1895 by a coalition of

the anti-saloon leagues of four States and the District of Columbia. At the end of 1933 it embraced 48 State or Territorial leagues and had affiliation with 45 other national temperance organizations, as well as with the World League against Alcoholism (q.v.).

During 1933 the major effort of the league was directed toward combating the attempt to modify the National Prohibition Act so as to legalize beer and wine and toward resisting the repeal of the Eighteenth Amendment to the Constitution. The platform declarations of the Republican and Democratic parties, and the position taken by the presidential candidates in the national election of 1932, threw the influence of both party organizations in opposition to prohibition for the first time since the adoption of the amendment in 1920.

Representatives of the league submitted argument in opposition to the Collier Beer Bill to legalize 3.2 per cent beer and wine, when it was pending in the 72d Congress. In the several States the league was active in supporting candidates to the State conventions opposed to the repeal of the Eighteenth Amendment and campaigned to save State prohibition enforcement laws. Also it opposed repeal in the several State prohibition referenda held during 1933. An educational campaign against the use of alcohol was conducted among young people, and statistical and factual matter, relating to the social and economic phases of the alcohol question, was published by the American Issue Publishing Co., located at Westerville, Ohio.

The officers of the league in 1933 were: President, Bishop E. G. Richardson, Philadelphia, Pa.; secretary, S. E. Nicholson, Media, Pa.; honorary treasurer, Foster Copeland, Columbus, Ohio; treasurer, H. B. Sowers, Westerville, Ohio; general superintendent, F. Scott McBride, Washington, D. C.; director of the department of education, Ernest H. Cherrington, Washington, D. C.; attorney, Edward B. Dunford, Washington, D. C.

ANTI-SEMITISM. See JEWS; GERMANY.

ANTI-WAR PACT. See DISARMAMENT.

ANTWERP TUNNEL. See FOUNDATIONS; TUNNELS.

APICULTURE. See ENTOMOLOGY, ECONOMIC.

APPLIED CHEMISTRY. See CHEMISTRY, INDUSTRIAL OR APPLIED.

APPLIED PSYCHOLOGY. See PSYCHOLOGY.

APPONYI, ăp'p6-nyl, ALBERT COUNT. A Hungarian statesman, died Feb. 7, 1933, in Geneva, Switzerland, where he was leader of the Hungarian delegation to the World Disarmament Conference. Son of Count Gy6ry Apponyi, chancellor of the Austro-Hungarian empire, he was born in Vienna May 29, 1846, and was educated at the Universities of Vienna and Budapest. He became a member of the Hungarian Diet in 1872, serving at first as leader of the Conservative party, and after 1878 of the National party. In 1899 he joined the Liberal party and two years later was elected president of the Chamber of Deputies. On seceding from the Liberal party in 1904 he reorganized the National party and, with his followers, joined the coalition which brought about the fall of the Tisza cabinet in 1905. From 1906 to 1910 he was Minister of Education in the compromise Wekerle cabinet. During the World War he held the same post in the Esterhazy and Wekerle cabinets, but retired in 1918 as a result of the October revolution.

Count Apponyi was leader of the Hungarian delegation to the Paris Peace Conference. Later, he took his place in the Lower House of the newly constituted Hungarian Parliament, and was chosen speaker. He was an ardent supporter of the League of Nations, representing his country at the assemblies of 1924 and 1925. Though a monarchist, he was too great a nationalist to support the movement in 1931 to place the Archduke Otto upon the throne, for he believed that, in attempting to fulfill a movement opposed by the European powers, Hungarian independence would be threatened through the necessary assistance that the nation would have to seek from Austria. He published *Æsthetics and Politics, The Artist and the Statesman* (1895); *A Brief Sketch of the Hungarian Constitution and of the Relation between Austria and Hungary* (1908); *Austria-Hungary and the War* (1915); *The American Peace and Hungary* (1919); *Hungarian Foreign Policy* (1921); *Emlékirataim, Hungarian politics from 1872 to 1922* (1922); *Memoirs* (vol. 1, 1933); *Die verfassungsrechtliche Entwicklung Ungarns*, speeches delivered in three Dutch universities (1927); and, with others, *Justice for Hungary* (1928).

AQUEDUCTS. The attention of engineers in this field continued to centre on the great works described in the 1932 YEAR BOOK—the Los Angeles, San Francisco, and Boston supplies. While a few important grants were made by the R.F.C. and the P.W.A., it was felt that federal assistance had not been effective in stimulating activity in the water supply field. In many cases, such works are not organized on the self-supporting or self-liquidating basis necessary for such grants, and the possibility of federal aid has been further complicated by the deplorable state of finances in many American cities. This is particularly true in New York, where work on the new Catskill supply is practically at a standstill.

LOS ANGELES. The expenditure on this greatest aqueduct of all time will total \$220,000,000, and the R.F.C. agreed to bid on \$40,000,000 bonds at par. The work was described in detail in THE NEW INTERNATIONAL YEAR BOOK for 1932.

SAN FRANCISCO. The famous Hetch Hetchy supply is rapidly nearing completion, the only remaining work being the last lining and completion of the 28½ mile Coast Range tunnels. This is to be finished early in 1934. The total cost of this work, long delayed and much needed for the adequate supply of San Francisco, will far exceed the original estimates. This has been due in large part to the construction of costly but temporary works which were made necessary by the extraordinary drought of 1931. (See 1931 YEAR BOOK.)

BOSTON. Interest in the extension of the Metropolitan supply into the Swift and Ware river valleys has centred on the tunneling operation which will extend the work to Quabbin Reservoir, and the cut-off wall construction for this reservoir. The contractor's bid on this work was very low but the extremely efficient tunneling methods which he has adopted, particularly in mucking, have made this a most effective operation. (See FOUNDATIONS AND TUNNELS.)

Among the smaller projects, the Capitan supply for San Diego should be noted. A loan from the R.F.C. for this work, and also for a supply for Salem, Ore., has permitted these two constructions to go forward.

Denver is in a precarious position due to lack

of water, and also of funds for construction. It is planned to secure a supply from the western slope of the mountains west of Denver and to carry it by pipe line and tunnel to the city. Some 15,000 feet of 8-foot continuous welded steel pipe is involved, and indicates the growing importance of this type of conduit. It is probable, however, that all of the available city funds will have to be used in purchasing agricultural water to meet the emergency instead of in building this new supply.

Another interesting project is that for creating a Water Project Authority to undertake a comprehensive plan for supplying the Central Valleys of California. This again illustrates the trend toward the collective solution of water supply problems and this particular project will probably develop into one of the most important works of this kind to be undertaken in the near future.

PARIS, FRANCE. Final plans for the construction of the proposed aqueduct to bring a million cubic meters of water a day to the French capital from the apparently inexhaustible supplies in the fine, deep sand of the Vals de Loire still remain to be settled. As in so many other countries, financial difficulties have held up progress and this work, so important but so great in scope, can probably be financed only through national grant.

ARABIA. The great peninsula in the southwest of Asia between the Persian Gulf and the Red Sea. Area, estimated at 1,000,000 to 1,200,000 square miles, the latter figure includes the Syrian desert and the Sinaitic Peninsula. The population is estimated at from 5,000,000 to 10,000,000 and represents all degrees of transition from the nomadic life of the Bedouin, in the interior, to the highly developed civilization of the towns. The divisions of Arabia are as follows:

KINGDOM OF SAUDI ARABIA. This kingdom is made up of the territory formerly known as the Kingdom of the Hejaz and the Nejd. Ruler in 1933, King Abdul Aziz Ibn Saud.

The Hejaz occupies the western coast of Arabia from Trans-Jordan on the north to Asir in the south. Area, about 150,000 square miles; population, about 1,500,000. Mecca, the capital and the holy city of Islam, had about 130,000 inhabitants; Medina, the site of Mohammed's tomb, 30,000; Jidda, which is the seaport for Mecca, 40,000. The chief revenue of the country is derived from the annual pilgrimage bringing large numbers of Moslem pilgrims from abroad. The oases in the mountains and valleys produce dates, honey, and a variety of fruit. Bedouin products are hides, wool, and clarified butter. Exports of the country are very small. The British gold sovereign is the basis of the currency.

The Hejaz, according to the constitution of Aug. 29, 1926 (modified in 1931 and 1932), is governed by the King acting through a Viceroy (at present his second son Emir Faisal) who lives in Mecca. There are four ministries and three departments of state as well as various advisory councils of notables and officials approved by the King, which include a consultative legislative assembly in Mecca, municipal councils in Jidda and Medina, and numerous village and tribal councils.

Nejd occupies the highland of central Arabia the area of which is indefinite. The population is estimated at about 3,000,000; Riyadh, the capital, had about 30,000 inhabitants; Hufuf,

30,000; the towns of Mubarraz, Shaqra, Anaiza, Buraida, Hail, Jauf, Sakaka, and Hauta, each had a population ranging from 10,000 to 20,000. The chief products are dates, wheat, barley, fruit, hides, wool, clarified butter, and Arab cloaks, also camels, horses, donkeys, and sheep. Annual export of camels to Syria and Egypt brings a steady revenue to the Bedouin but the export of Arab horses to Bombay has fallen off. The chief imports consist of piece-goods, tea, rice, coffee, and sugar.

The Nejd is governed in patriarchal manner by the King acting through his eldest son Emir Saud who nominally resides in Riyadh and assumes there the position of Viceroy.

During the year 1933 King Ibn Saud crushed an attempt of the Idrisi tribes to overthrow the Wahabi régime in Asir, and forced those of the malcontents not decimated into the mountains on the edge of the great deserts of the Rub el Khali.

ASIR. A province on the west coast between the Hejaz and Yemen, formerly ruled by the Idrisi dynasty but since 1930, by an agreement between Ibn Saud and the Idrisi, it has been practically annexed to the Kingdom of Saudi Arabia. Population about 1,000,000; capital, Sabaia.

YEMEN. The Inanate of Yemen is an independent Arab state on the Red Sea coast between Asir and the British Protectorate of Aden. The area is about 75,000 square miles and the population from 2,000,000 to 3,000,000. Sana', the capital, is a walled city with eight gates and has a population of about 25,000. Coffee, barley, wheat, millet, and hides are the chief products and exports. Revenues total about \$5,000,000 annually. Ruling Iman in 1933, Yahya Hamid ed-Din.

THE HADRAMAUT. A region of fertile valleys situated to the east of the Aden Protectorate. The larger part of the country owes allegiance to the Qa'aiti dynasty, the head of which at present is the Sultan of Makalla, but a rival dynasty known as the Kathiri rules a number of towns and villages inland. The whole area is under loose British protection.

OMAN. An independent state at the southeasterly corner of Arabia; under the protection of Great Britain. Area, about 82,000 square miles; population, estimated to be 500,000, mostly Arabs but there is much negro blood along the coast. Muscat, the capital, had 4300 inhabitants and the adjacent town of Matrah about 8200; the population of these two towns was composed almost exclusively of Negroes and Baluchis. Trade is chiefly from and to India. The chief products are dates, pomegranates, fresh and dried limes, and dried fish. Total exports for 1931-32 amounted to 1,707,327 rupees (rupee averaged \$0.2635 for 1932); total imports, 3,737,118 rupees. Muscat is the only port of call for steamships and 293 ships (steam, and sail) of 631,694 tons entered and cleared the port during 1931-32. Transportation inland is by pack animals. The reigning Sultan in 1933 was Seyyid Said bin Taimur.

KUWAIT. A state on the northwestern coast of the Persian Gulf stretching from Iraq in the north to Nejd in the south. Area, about 1930 square miles; population about 60,000. Kuwait, the capital, had a population of about 25,000; it is an important seaport on the Persian Gulf. Ruler in 1933, Sheik Ahmed ibn Jabir al Subah.

BAHRAIN ISLANDS. An archipelago in the Persian Gulf about 20 miles from El Hasa on the Arabian coast. The chief islands are Bahrain, 27 miles long and 10 miles wide; Muharrak; Sitra; Nebi Saleh. Total area, about 250 square miles; total population, about 120,000. The important towns are Manama, the capital, with 25,000 inhabitants; Muharrak, 20,000; Bodadja, 8000.

In 1931-32 the exports amounted to £547,896; total imports, £821,824. The islands are the centre of the pearl fishing industry of the Persian Gulf and over 15,000 divers are engaged in fishing during the summer. Boat building, date cultivation, and breeding of white donkeys, are other industries. Ruler in 1933, Sheik Hamad bin Isa al Khalifa who has treaty relations with the government of India.

For other Arab or partially Arab states, see also IRAQ, PALESTINE, TRANS-JORDAN, SYRIA, and ADEN.

The Kingdom of Saudi Arabia and the government of Iraq jointly undertook a survey during the year of the proposed motor highway from Medina in the Hejaz to Bagdad in Iraq. The highway will be about 750 miles long and will take about three or four days to traverse by automobile as compared with 35 to 40 days taken by camel caravan.

HISTORY. King Ibn Saud and his Wahabite warriors crushed another of the periodic risings of his unruly subjects early in 1933. This outbreak was staged by the Idrisi, a tribe noted for its resistance to Turkish rule, over which Ibn Saud had extended his authority by the annexation of Asir in 1930. War between Ibn Saud and the Imam Yahya of Yemen appeared to be brewing toward the end of 1933, when Ibn Saud ordered the mobilization of his army to enforce his boundary claims. The prospect of friction between Ibn Saud and the Emir Abdulla of Trans-Jordan on the north was ended with the signing on July 27, 1933, of a treaty of friendship and a protocol providing for the arbitration of disputes.

King Ibn Saud took steps during 1933 to develop his territories with foreign capital, but was careful to avoid commitments which might expose Arabia to European aggression. He secured funds from a group of Indian Moslems for the construction of a railway from Jidda, on the Red Sea, to Mecca to handle the large numbers of pilgrims who annually visit the Moslem holy city. Establishment of a government-owned bank at Jidda, with a capital of \$3,500,000, guaranteed by former Khedive Abbas Hilmi of Egypt, also was announced. In July, 1933, the Standard Oil Company of California obtained an exclusive 60-year concession to exploit petroleum resources throughout Saudi Arabia. The company agreed to advance King Ibn Saud two loans and to pay annual royalties.

ARBITRATION, INTERNATIONAL. On Jan. 23, 1933 the international tribunal in the boundary controversy between Guatemala and Honduras rendered its award in the Hall of the Americas of the Pan American Union in Washington. The final settlement of this century-old dispute brought to a close another chapter in the history of arbitration in the Americas. The boundary tribunal, created by a treaty signed at Washington on July 16, 1930, was composed of the Chief Justice of the United States, Hon. Charles Evans Hughes, who presided, and two distinguished Latin American jurists—Dr. Luis Castro Ureña

of Costa Rica, and Dr. Emilio Bello Codesido of Chile. For a summary of the proceedings of the tribunal, see the *Bulletin of the Pan American Union*, April, 1933, pp. 311-14.

THE I'M ALONE CASE. This case arising out of the capture and sinking of a Canadian vessel by the United States Coast Guard (see 1930 YEAR BOOK) slowly progressed during 1933. The Commissioners, Hon. Willis Van Devanter, representing the United States and the Hon. Lyman Poore Duff, representing Canada, met at Ottawa on June 3, 1933. They filed a preliminary report and order to the effect that in compliance with a direction given Jan. 28, 1932, the agents and counsel of the high contracting parties had submitted briefs and oral argument in relation to certain preliminary questions. The Commissioners announced their answers to these questions as follows:

The first question was whether the Commissioners might enquire into the beneficial or ultimate ownership of the *I'm Alone* or of the shares of the corporation that owned the ship. If the Commissioners were authorized to make this enquiry, a further question arose as to the effect of indirect ownership and control by citizens of the United States upon the claim.

The answer was that the Commissioners thought they might enquire into the beneficial or ultimate ownership of the shares of the corporation owning the ship, as well as into the management and control of the ship and the venture in which it was engaged; and that this might be done as a basis for considering their recommendations. But the Commissioners reserved for further consideration the extent to which, if at all, the facts of such ownership, management and control might affect particular branches or phases of the claim presented.

The second question in its first aspect was whether the Government of the United States under the Convention had the right of "hot pursuit" where the offending vessel was within an hour's sailing distance of the shore at the commencement of the pursuit and beyond that distance at its termination. The question in its second aspect was whether the Government of the United States had the right of "hot pursuit" of a vessel when the pursuit commenced within the distance of 12 miles established by the revenue laws of the United States and was terminated on the high seas beyond that distance.

The answer to the first part of the question was that the Commissioners were as yet not in agreement as to the proper answer, nor had they reached a final disagreement on the matter. The Commissioners, therefore, suggested that the proceeding go forward and that the evidence be produced in an orderly way, leaving the Commissioners free to give further consideration to the matter and to announce their agreement or disagreement thereon as the case may be.

The question in its second aspect was not answered because the United States government withdrew that part of its Answer which led to the propounding of the question.

The third question was based upon the assumption that the United States government had the right of "hot pursuit" in the circumstances and was entitled to exercise the rights under Article 2 of the Convention at the time when the *Dexter* joined the *Wolcott* in the pursuit of the *I'm Alone*. The question was whether, in the circumstances, the government of the United States was legally justified in sinking the *I'm Alone*.

The answer given to this question was that on the assumptions stated the United States, might, consistently with the Convention, use necessary and reasonable force for the purpose of effecting the objects of boarding, searching, seizing, and bringing into port the suspected vessel; and if sinking should occur incidentally, as a result of the exercise of necessary and reasonable force for such purpose, the pursuing vessel might be entirely blameless. The Commissioners thought, however, in the circumstances stated in paragraph eight of the Answer, the admittedly intentional sinking of the suspected vessel was not justified by anything in the Convention.

Having thus answered the preliminary questions, the Commissioners considered the practical application of their answers to the future conduct of the case. They recommended: (1) That the agents be instructed by their respective governments to prepare and submit to the Commissioners separate statements setting forth in detail

the contentions of their respective governments as to the ultimate beneficial interests in the vessel and in the cargo, together with specifications of the documents and witnesses relied upon to substantiate their respective contentions; and (2) that the agents be similarly instructed to submit to the Commissioners either a joint statement or separate statements (in either case specifically itemized) of the sums which should be payable by the United States in case the Commissioners finally determine that compensation is payable by that government.

MIXED CLAIMS. *United States and Germany.* The aggregate amount paid to private claimants by the United States Treasury Department in accordance with the provisions of the Settlement of War Claims Act of 1928, on account of awards by the German-American Mixed Claims Commission was \$134,644,824.56, as of Mar. 31, 1933.

Of the awards to private claimants 6475 had been paid in full to the date of payment. Each of the private claimants (less than 200 in number) holding 304 awards amounting to over \$100,000 had received nine payments, in a total amount approximately equal to or more than the principal of the award; what remained to be paid represented interest. All the other claimants had been paid in full except that 40 awards to private claimants remained unpaid for the reason that proper application for such payment has not been made to the Treasury Department. These 40 awards amounted to some \$405,700 with interest.

The total cost to the United States of maintaining the Commission to June 30, 1933, was estimated at \$1,260,000. Of this amount \$645,519.51 had been actually reimbursed to the United States and covered into the Treasury as miscellaneous receipts. This was from amounts so far realized by deducting $\frac{1}{2}$ of 1 per cent from each payment made to successful claimants, as required by the aforesaid Act.

On Nov. 7, 1930, there were deposited with the Treasury Department pursuant to the Debt Agreement of June 23, 1930 between the United States and Germany, bonds of the German government (running to the government of the United States) in the total amount of Rm. 2,121,600,000 (about \$505,000,000) for the purpose of satisfying the awards of the Commission. The bonds fell due and became payable on March 31 and September 30 of each year, the last bond maturing Mar. 31, 1981. Payment of each of the four bonds which fell due on Sept. 30, 1931, Mar. 31, and Sept. 30, 1932, and Mar. 31, 1933, in the total amount of Rm. 81,600,000 (about \$19,400,000) was postponed by Germany in accordance with the option given her in the debt agreement.

There were pending to be finally submitted to the Commission some 19 claims (involving 15 different claimants). Tentative agreements for settlement of them were arrived at by the American and German agents in March, 1933. These 19 claims involved a principal amount claimed of approximately \$1,400,000, with interest from varying dates. On the basis of the tentative agreements the recoveries in these claims as of June 30, 1933, would amount to approximately \$988,000.

In addition to the foregoing there were pending two petitions for rehearing. The first, filed Apr. 17, 1933, was a marine underwriter claim involving approximately \$515,000, and the second, filed

May 4, 1933, was in the group designated as the sabotage claims.

The latter petition involved some 153 claims of 93 American nationals who suffered losses estimated at over \$23,000,000 (exclusive of interest), in the fires and explosions at Black Tom and Kingsland, N. J. These disasters occurred in 1916 and 1917, during the neutrality of the United States. They resulted in the destruction of a large amount of valuable property, including vast quantities of munitions destined for the Allies.

OTHER MIXED CLAIMS. The Mexican Foreign Office on Jan. 10, 1933, announced the settlement of Spanish claims for damages arising out of the revolutionary disorders between 1910 and 1920. Mexico was to pay damages of approximately 2.19 per cent of the original Spanish claims, which amounted to 184,100,156 pesos. (At par the peso is worth 49.846 cents). Only the claims of the United States on behalf of its nationals remained to be settled.

On Sept. 16, 1933, funds were deposited by the government of Hungary in the Hungarian Special Deposit Account in the Treasury Department of the United States which enabled that Department to pay, under the Settlement of War Claims Act of 1928, all of the awards and judgments of the Tripartite Claims Commission against Hungary, which were on said date certified to the Department by Commissioner Chandler P. Anderson, appointed Sept. 14, 1933, vice Edwin B. Parker, deceased. This concluded the work of the Commission, save for certain clerical and record work.

PERMANENT COURT OF ARBITRATION. The appointment by President Roosevelt of Prof. Manley O. Hudson of the Harvard Law School as American member of the Permanent Court of Arbitration filled a vacancy caused by the death in 1932 of Robert E. Olds, former Undersecretary of State.

ARBITRATION, LABOR. See LABOR ARBITRATION AND CONCILIATION.

ARCHAEOLOGICAL INSTITUTE OF AMERICA. A society for the promotion of archaeological investigation and research, founded in Boston in 1879 and incorporated by Act of Congress in 1906. It has largely accomplished its purpose through its American School of Classical Studies at Athens, the School of Classical Studies of the American Academy in Rome, the American Schools of Oriental Research in Jerusalem and Bagdad, the School of American Research in Santa Fe, N. M., the American School of Prehistoric Research at Peabody Museum, Yale University, and the Committee on Mediæval and Renaissance Studies. In 1933 it has 55 affiliated societies or chapters, with a membership of 3425. The official organ is the *American Journal of Archaeology*, a quarterly, while *Art and Archaeology*, a non-technical monthly, is published by the institute's Washington society. The officers in 1933 were: President, Louis E. Lord, Oberlin College; first vice-president, David M. Robinson, Johns Hopkins University; general secretary, Clarence Ward, Oberlin College; treasurer, Rollin H. Tanner, New York University; and recorder, Stephen B. Luce, Boston, Mass.

ARCHAEOLOGY. In the desert some 40 miles northwest of Abu-Simbel have been discovered diorite quarries containing amethystine quartz from which the Egyptians 3500 years ago obtained their amethyst. The quarries have been lost since that time. At Gizeh the University of

Cairo expedition has unearthed a pyramid near the three great pyramids. It was the burial place of Queen Khamet, who was a daughter of King Mycerinus. In the same place was also found a street which ended in a small town which seems to have been the residence of the priests of the place. Near the second pyramid was uncovered a hitherto unknown sphinx and 12 mastabas. It is interesting to note that underneath the houses of the priests was a system of tunnels which connected with the temple between the great pyramids.

Near the Great Sphinx the Egyptian University has cleared away a large space with the attendant discovery of two important tombs. One is that of Wep-m-Nefert, director of the palace and administrator of the famous vineyard planted by King Zoser. The wife of Wep-m-Nefert was Meris-Ankh, a king's daughter. In a serdab to the left of the entrance to the tomb were discovered five statues of this princess. Four were of white limestone and two stand with the left foot advanced—an unusual posture for a woman. The eyes of these figures were of crystal set in copper sockets. To the right of the entrance to the burial chamber of Wep-m-Nefert, which still remains under water, is the burial chamber of Wep-m-Nefert's son, Aba. This chamber was found to be lined with fine white limestone sculptured in part in low relief. In the chamber was found an interesting document signed by 15 witnesses which gave a certain income to this Aba. Among these witnesses were a steward, a doctor, an oculist, a builder, and a painter.

The second tomb was that of Nemaatra, the chief singer of the Pharaoh and priest of the Sun temple and the pyramid of King Neuserre. The walls of the burial chamber are covered with sculpture and painted scenes of contemporary life. To the right of this chamber is a smaller one belonging to Neferesses who was a member of the royal harem, as well as superintendent of the dancers of the king.

Next to the mastaba of Meresuanekh was excavated a shaft of another dating from the fourth dynasty. At the bottom of the shaft an opening led into a burial chamber rectangular in form and containing in the middle a sarcophagus. In the chamber were found 78 model alabaster vases and other offerings. In the sarcophagus was the body of a woman on whose head was a gold fillet. She also wore a necklace of 50 gold beads each in the shape of an insect.

West of the town of Hermopolis the Egyptian University has uncovered whole streets dating from the first century B.C. to the second A.D. Here also has been found a Græco-Egyptian temple, tombs, and two-storied houses showing fairly well-preserved wall-paintings. The lower stories of these houses were for the dead, the upper for visitors. These houses date in the fourth or fifth centuries A.D.

At Lisht the Metropolitan Museum of Art has discovered a fine large mastaba which belonged to the Chief Priest of Ptah at Memphis. On the walls were 296 columns of hieroglyphics. In front of the building was a very large chapel. Not the least interesting find at Lisht was that of a caisson used in building the shaft of the Pyramid of Se'n-Wasret I, second king of the XIIth dynasty.

At Tell el Amarna has been cleared a large complex of buildings next to the temple of the Sun. The rectangular space is about 800 by 300

yards. A ramp led up to the entrance on the west side. At the left was a pavilion with rows of columns resting on cement foundations while ahead was the House of Rejoicing which consisted of two pavilions. At the east end of these steps led into small open courts. The next division, called The Finding of Aten, was made up of open courts. In the last court, which was surrounded by chapels, was an altar. In the south part of the town were found houses of artists which contained some fine paintings.

At Megiddo in Syria the expedition of the Palestine Exploration Fund believes that it has found the stables of the cavalry of King Solomon. Here was discovered a cartouche of Sheshonk I, the Sheshak of the Bible, which is thought to show that he actually made a march against Jerusalem. Seven miles from Bethlehem in a cave have been discovered wall-carvings which go back to the Natufian period, about 12,000 B.C. These carvings represent the elephant, wild pig, rhinoceros, and gazelles. In the same cave were found evidences of a flint industry of the Clactonian period which has been dated anywhere from 100,000 to 200,000 years B.C. At Beth-zur was found a wine shop with large jars set in a rock-cut trench. To the south and west of the shop were the houses of the people who made a living out of the soldiers stationed here, for the town was a military post.

Under the direction of Dr. Herzfeld of the Oriental Institute of the University of Chicago, a stone age village dating about 4000 B.C. has been excavated near the site of Persepolis in Persia. Here also were recovered fine sculptures going back to the time of Cyrus the Great. The site of the discoveries was only 2 miles away from Persepolis. This is the best stone age village yet found. In some places the walls were 6 to 7 feet in height. The houses have the earliest known examples of windows and on the floors are the pots, fire-dogs, etc., just as they were left.

More important were the sculptures found at Persepolis on the walls of the palace of the time of Cyrus. The colonnaded halls, windows, and great doors were of a highly polished black stone. These members had been preserved by the fallen mud brick walls. The sculptures, among which are a number of important historical inscriptions, have been thus kept as fresh as when cut. If restored to their proper place these carvings would make a frieze 5½ feet in height and about 1000 feet in length. The subject represents the formal reception by the king of Persian and Median officials. The work is executed in exquisite detail as can be seen from the fact that the lynch pins of the chariots are carved to represent female figures, the legs of which act as the pin which holds the wheels in place. Although the frieze was once colored only one relief at present preserves its paint. This shows the king wearing a robe bordered with scarlet and purple and with scarlet shoes upon his feet.

The British School of Archaeology in Iraq has been engaged in work at Tell Arpachiyah in northern Mesopotamia where it was found that the latest remains, which appeared just below the surface of the ground, date no later than 4000 B.C. Here were uncovered traces of small houses with courtyards about 15 feet square surrounded by small rooms. Rarely were the walls over 8 inches in thickness. In the houses were found household utensils such as querns, pestles, flints, and knives of obsidian, together with a

few objects of copper. The burials showed that the bodies were first exposed after which the bones were gathered together and carefully arranged. Small figures of terra cotta representing the Anatolian Mother Goddess were found in the course of the digging. The pottery found in the upper part of the dig resembles that found at Ur, Kish, Erech, and Lagash while lower down it seemed to be affiliated with that of the north and Northern Syria. Not the least interesting of the finds was a series of small double axes like those of Crete.

The Field Museum this year concentrated its attention on that part of Tell Asmar where appeared the traces of the oldest culture. Excavations here in the houses revealed contacts with India as far back as 3000-2000 B.C. The houses had no central courts as at Ur, and wood was freely employed. The chief settlement belongs about 2500 B.C. at which time the Sumerians had come under the rule of the Semites of Akkad, whose king was Sargon the elder. Here was found the first representation in the round of the Sumerian type. This proved to be a small alabaster head of a man who bore a strong resemblance to the modern Bedouin.

At Tell Halaf have been found two colossal figures cut in basalt representing a male and a female deity fitted with a base to be inserted in the back of a lion and a lioness. Also were found reliefs showing hunting scenes and representations of a lion, a panther, a four-winged god, a six-winged goddess, and a warrior throwing a boomerang. At Lachish has been found a tomb with pottery of the time of Solomon, and at Khorsabad a Nabu temple in which was discovered a tablet giving a list of Assyrian kings which mentions earlier rulers than any yet known. This list also gives a complete succession down to the eighth century with some historical comments.

On the site of Troy the expedition of the University of Cincinnati, under the direction of Professor Blegen, has finished its second campaign. Here were found floors of houses of the fifth and fourth cities of Doerpfeld and Schliemann. Of some of the houses the walls were preserved, and in each room was discovered a hearth. The objects recovered include much pottery as well as objects of bronze, stone, and bone. The accumulated evidence showed the fifth city to be transitional between the early and the middle bronze age. Work on the outer part of the citadel brought to light upper courses of the sixth city, while inside the wall appeared a seventh city house. The great south gate of the city was examined and it was found that a roadway preserved in three successive layers passed through it, the earliest dating probably as far back as the time of the seventh city.

On the island of Cyprus the Swedes have been busy on the site of Enkomi, where a number of tombs have been opened. Some of the burials were of important persons as is shown by the fact that some of the garments were covered with sheets of gold and the bodies themselves wore golden mouthpieces and jewelry.

On the island of Rhodes over a thousand graves have been opened, the material from which gives a picture of the life on the island from the prehistoric days till those of Alexander. The most important finds were made at Kameiros where were found two belts of fortification, a drainage system, and public buildings.

This year the Athenian Academy has worked on the site of Plato's Academy which lies about 1500 meters from the Dipylon. Here was discovered the enclosing wall and an ancient street which led into the precinct.

The most notable work of the year in Athens has been the continued exploration of the ancient agora by the Americans under the direction of Professor Shear. The dig was made in four city blocks, the most northern of which is between Poseidon and Eponymon streets. The foundations of the east front of the Royal Stoa were uncovered. In the debris before the building were found two winged Victories one of which was fairly well preserved. A most unexpected discovery was that of Mycenaean graves containing three skeletons, fragments of vases, and a gold signet ring showing a bull-headed man leading away two women. In the second area was found a continuation of the drain which was first uncovered last year. It follows a street which at the edge of the area forks and shows that two roads here led out of the agora, one between the Acropolis and the Areopagus, and the other between the Areopagus and the Pnyx. In the fourth block at the extreme edge of the zone was found a great wall running north and south. It dates in the late third or early fourth century. The agora is honeycombed with walls both ancient and modern. In one closed about 480 B.C. were recovered 217 objects dating from the sixth to the early fifth centuries. Among the finds were six ostraka bearing the names of Hipparchos, Megacles, Hippocrates, Aristides, and Themistocles. The latter were voted in the year 483 B.C. This year much sculpture has been found including a fine head of the youthful Augustus, and one of the emperor Commodus. To date the agora collection of coins numbers 24,000.

At Corinth the Americans have found on the south side of the agora a huge building containing a large mosaic with the headless statue of a Roman orator lying on the middle of the floor. The central panel of the mosaic, which measures 31 feet by 24, shows an athlete holding a palm and standing before Eutychia. Twelve square medallions form the border.

On the Citavecchia at Ardea in Italy the Swedes have identified the temple as probably that referred to by Strabo as belonging to Venus. At Castelgandolfo on the Alban Lake in the grounds of the Villa Barberini has been found a Roman copy of a Polyclitan work identified as the Cyniscus. At Herculaneum the quarter between the fourth and fifth *cardines* has produced two fine Samnite houses, a number of shops, the temple of the Magna Mater, work places, and various industrial establishments. One large shop is more completely preserved than any at Pompeii. It contains a fireplace, an oil lamp hanging from a beam, amphoras on a shelf, and a bowl of beans on a counter. The House of the Lovers, which contained the inscription "Lovers, like bees, spend a honeyed existence," seems to have been finished just before the eruption. Work has continued at Minturno and at Lake Nemi. In the latter place have been found important ruins of the imperial period. At Populonia another splendid tumulus tomb has been found buried deep beneath the layer of iron slag waste from the ancient iron works on the island of Elba. The best tomb is in Poggio della Porcareccia and is an almost square cell something over two meters square. It is known as the tomb

of the Bronze Flabella because of the beautiful bronze fan found in it together with many other bronze objects.

At Rome the excavations have revealed the sacred area of the Zona Argentina near the border between the Campus Martius and the Circus Flaminius. In the Forum of Trajan have been discovered evidences of two important libraries. In the Forum of Cæsar a building has been uncovered on the walls of which were scratched 170 inscriptions among which appeared Vergil's epitaph "Mantua me genuit" together with lines from the *Æneid*. This may have been done by some school teacher who was holding his classes there.

At Merida in Spain a colonnade 225 feet long, of Roman date, has been brought to light. Within was a theatre and elaborate gardens. At Budapest the low state of the Danube has revealed a Roman camp on the end of a peninsula near Kalocsa. At Thunderbarrow Hill near Brighton in Sussex, England has been found a small Romano-British camp with furnaces for parching grain, grindstones, etc. At St. Albans on the site of ancient Verulamium has been uncovered a building in plan like the Flatiron Building in New York City. It is the first triangular temple found in Great Britain. See ANTHROPOLOGY.

ARCHITECTS, THE AMERICAN INSTITUTE OF. A society, founded in 1857 to unite in fellowship the architects of the United States and to combine their efforts so as to promote the æsthetic, scientific, and practical efficiency of the profession. Its membership in 1933 numbered more than 3400 of the 7000 practicing architects in the United States.

During the year the code committee of the institute, after consulting with the 67 local chapters and the 12 State associations of architects, developed a Code of Fair Competition for Architects under the NRA programme. The institute continued also to take a leading part in the construction industry, one of its distinguished members, Stephen F. Voorhees of New York City, serving as chairman of the code committee of the Construction League, under whose auspices the General Code for the Construction Industry was developed.

The long efforts of the institute to secure recognition of the private architect in the designing of public buildings and monuments bore fruit in the announced policy of L. W. Robert, Assistant Secretary of the Treasury in Charge of Public Works, to employ private architects to design post offices and other Federal buildings coming under the jurisdiction of his department. The housing division of the Public Works Administration also fully recognized the abilities of private architects, and the attitude of the entire administration has been most sympathetic with respect to the employment of architects in private practice.

The institute cooperated with and assisted the National Park Service and the Civil Works Administration in a programme for engaging unemployed architects and architectural draftsmen during the winter of 1933-34 in measuring historic buildings in different parts of the United States. With the assistance of the presidents of the local chapters of the institute this work was organized on a regional basis.

The official organ of the society is the *Octagon*, a *Journal of the American Institute of Architects*. The officers elected at the convention held in Washington in April, 1932, continued to serve

during 1933: President, Ernest J. Russell, St. Louis, Mo.; first vice-president, Charles D. Maginnis, Boston, Mass.; second vice-president, Horace W. Peaslee, Washington, D. C.; secretary, Frank C. Baldwin, Washington, D. C.; and treasurer, Edwin Bergstrom, Los Angeles, Calif. The executive secretary is Edward C. Kemper. Headquarters are in The Octagon, 1741 New York Avenue, Washington, D. C.

ARCHITECTURE. Although the world-wide depression has caused an enormous falling off in the amount of building almost everywhere, the year has not been without architectural interest; the Chicago Century of Progress Exposition, and the Milan Triennale Exposition in Italy both revealed definite tendencies; the final selection of an architect and a design for the great Palace of the Soviets in Moscow, and the development in Germany of a strong movement toward earlier, more traditional and more romantic types of design—both were important expressions of our contemporary architectural confusions, and, to future historians, both may be seen as more significant than they may now appear. Both the Russian and the German movements are dramatic revolutions in official, if not in popular taste; behind their almost hysterical suddenness, it is possible that there lie more deep reasons than any mere caprice of a cultural autocracy.

The case of the Palace of the Soviets is perhaps the more extraordinary. After fifteen years of passionate pursuit of a revolutionary architecture of the most extreme types—expressionistic, functional,—suddenly there appeared in the official press statements that all such architectural types were "capitalistic" because they signified the slavery of man to the machine and to profits, and that a true revolutionary architecture must put man at the centre, and, at least in official buildings, be rich with sculpture, mural painting, and ornament. The statements went so far as to suggest the public architecture of the Roman empire as a proper point from which to start. The result is well shown in the published designs finally approved for the Palace of the Soviets by B. M. Iofan:—a great series of cylindrical masses with tier on tier of buttress pilasters, the whole fronted with a great composition of sweeping porticoes.

In Germany, in line with the general retrospective sentimentality of the Nazi cultured ideal, it is more natural to expect a turning aside from the sane and forward-looking attitude that characterized German architecture. Gropius, Mendelssohn, and other leaders of the movement are in practical exile. But various characteristics of the German modern movement had become too much a part of the German tradition to be given up. Banks of windows are still used freely, and the corner window where it seems appropriate; and there still is a definite underlying simplicity of functional and structural approach, coloring even such official structures as the extraordinary wooden stadium—suberly conceived and brilliantly carried out—built in Stuttgart by Paul Bonatz for the 1933 Deutsche Turnfest. On the other hand, there has been a growing distaste for flat roofs—few of the year's houses have them—and a search everywhere (probably due to the Nazi economic policy) for new ways in which to use wood. It is characteristic of this revolution in German architectural taste that *Moderne Bauformen*, formerly one of the most advanced of the architectural magazines, published this year a

number of plans and photographs of romantic American houses as examples of house types fitted to the new Germany.

Elsewhere, all over the world, the modern movement toward a new and creative architecture continues to grow, deepen, and become more and more a part of the people's tradition. The superficial style of the Chicago exposition shows this: it was not its "style" that shocked people, and sent many away vaguely unsatisfied, it was its basic lack of composition, of any apparent sense of beauty in form relationship. Moreover, whatever form composition was present, was often concealed and disintegrated by the color decoration of the whole, by the late Josef Urban, which everywhere sacrificed coherence of architecture to an erratic brilliance. Architecturally, by far the most interesting part of the exhibition was the series of small houses, built to illustrate the use of various new materials. With but one exception, these were all "modern" in type, the greater number with flat terrace roofs. The most interesting were the wooden house of "American Forest Products," by E. A. Grunsfeld, Jr., with a beautiful, well studied plan; the Rostone House, by Walter Scholer; "Design for Living" by J. C. B. Moore and Horsley and Wood; and the airy and delightful Florida tropical house, by R. L. Weed. Others gave the impression of being mere "stunts," without other significance, such as the incoherent brick house by Andrew Rebori, and the "House of Tomorrow," with its forced and impractical arrangement, by Geo. F. Keck.

The Triennale Exposition in Milan was similarly revealing of the Italian trend away from the over-heavy neo-baroque, long the "official" style, toward ideas of greater simplicity, more functionalism, and more basic (though non-archæological) classicism. The main, permanent building, by G. Muzio, in the older tradition, has no great interest in its rectangular exterior, and its projecting arched restaurant wings seem unconnected, but its great hall is beautiful in proportion, and is superbly decorated with mural paintings; especially interesting is the end wall by Chirico. The smaller buildings, on the other hand, were imaginative and fresh. The Capella dell' Arte Sacra, by A. Cassi-Ramelli had an impressive niched entrance; the Pavilion of the Press, by Baldaassare, with five great free standing simple columns, was interesting. But, as at Chicago, it was a series of small experimental houses which had the greatest architectural interest. Especially lovely was that by Moretti, Paniconi, and Pediconi, with its interesting frescoed atrium. Interesting also were the "Artist's Villa," by Pollini and Figeni; and the "Flyer's House," by Soccimarro, Zanini, and Midena, with its great windows and its interestingly arranged living-room. All of these were brilliant examples of the great variety of form composition which modern construction methods, when handled directly, simply, and sympathetically, make possible.

UNITED STATES OF AMERICA. American building totals for 1933 showed another disastrous drop for the year, the total being over 20 per cent less than the tiny total of 1932. The result, in disintegration of the building trades, and in individual hardship and destitution for architects and draftsmen, was appalling. Dodge Corporation figures showed that architects did less than one-seventh of the work that they did in 1928, which produced an unemployment situation in the profession worse than that among any similar body of men.

Even on various relief and C.W.A. works, the tremendous crush of applicants, plus the lack of any effective organization among the draftsmen, brought it about that rates of pay for draftsmen were the same as those of unskilled labor, and that to men often skilled specialists in a difficult profession. Many were graduates of professional schools of the highest quality.

The government housing schemes of the C.W.A. proved a great disappointment. Although preliminary approval was given to several schemes for slum clearance and housing in different cities, and money earmarked for them, final approval has been forthcoming only in the case of a very small number of comparative unimportance. The difficulty has not generally been architectural, but financial; tentative set-ups based on general city land values show rents too high, or the government's proposed investments too little protected; and the Washington authorities seem to have a basic objection to putting so large a proportion of total expenditure into land costs. The whole problem of slum-clearance and cheap housing is a thorny one, which is made all the more difficult because such a large amount of slum land has come, through foreclosures, into the possession of Savings Banks and Insurance Companies, whose assets could only be radically reduced by devaluing the land at great social danger. The coming year will probably see the problem clarified, as the demand for action of some kind is overwhelming.

The most important official buildings completed during the year were the Hartford, Conn., Post Office, by Malmfeldt, Adams and Prentice, in a dignified and simple modern classic; the Parcel Post Office of New York, by the supervising architect of the Treasury, distinguished only by its size; the Federal Building in Boston, by Cram and Fergusson, an incoherent sky-scraper pile in rich materials, with a purely commercial character; the St. Paul City Hall and Ramsey County Court House, by Ellerbe and Co. and Holabird and Root Associated, distinguished by its strength, its dignity, its clear directness, and its rich interiors; the large City Hall and War Memorial Building at Newton, Mass., by Allen and Collens, in a conventional Georgian manner; and an important trio of Art Museums—those at Portland, Ore., Seattle, Wash.; and the William Rockhill Nelson Art Gallery of Kansas City. The Portland Museum, by A. E. Dwight and Associates, and the Seattle Museum, by Bebb and Gould, are somewhat similar in their simple, gracious dignity, and both are designed with the simplest use of rectangular openings in simple masses; that at Seattle has its simplicity softened by a restrained use of curves in plan. The Nelson Art Gallery in Kansas City—so famous for the extraordinarily high character of its contents,—designed by Wight and Wight is much more conventional and old fashioned in its exterior aspect, with its parade of ionic columns and classic mouldings, but its composition is clear and impressive. The Coit Memorial tower on Telegraph Hill, San Francisco, by Arthur Brown, Jr., is a square shaft of 181 feet high surmounting a rectangular base of complex set-back outline.

But the most important public building of the year was not a government or municipal building; it was the great Cincinnati, O., Railroad Station, by Fellheimer and Wagner. Its superb conception was both novel and efficient, and its organization into one composition with the sta-

tion plaza by means of large quadrant wings enclosing triple traffic lines:—for busses, trolley cars, and taxis and automobiles—gave it a monumentality of composition quite unusual, yet one that grew naturally from the problem. Its great semicircular concourse leading easily into a large waiting-room over the tracks is also superb in its simplicity of form.

Little commercial building was attempted in 1933. The Metropolitan Life Insurance Co. completed a vast addition to the Home Office in New York, by D. Everitt Wade and H. W. Corbett. The Insurance Co. of North America Building, in New York, by Shreve, Lamb, and Harmon is simply and effectively detailed, and its setbacks are well composed. The Medical Arts Building, Duluth, Minn., by Erickson & Co. has well composed simple lines. The First National Bank building in New York, by Walker & Gillette, in a sort of simple neo-grec style; the People's National Bank, Tyler, Tex., by Alfred C. Finn, with strong vertical emphasis; and a Service Station at Ann Arbor, Mich., by Woodworth and Loree, because of its daring and brilliant use of enamelled iron and glass, also deserve mention.

Of industrial buildings, the Port Authority Commerce Building, New York, by Abbott Merkt & Co., is noteworthy for its large size; it is said to be, in usable floor area, the largest structure in New York. The Forest Products Laboratory, Madison, Wis., by Holabird and Root, is imaginative and expresses its functional plan in an exterior admirably massed, and distinguished with a beauty of rhythmic line not unlike the work of the German Erich Mendelsohn.

In educational and ecclesiastic work of the year, the Yale Divinity School at New Haven, Conn., by Delano and Aldrich is outstanding because of its beautiful plan and its creative handling of a late "Colonial" manner; its dignified and charming simplicity is a pleasant contrast to the blatant ostentation of many of the other recent Yale buildings. The first four new buildings of Hunter College (the New York Municipal Woman's College) in the Bronx, by Thompson, Holmes, and Converse, and Charles B. Myers, are simple and well planned. Winchton L. Risley's School at Sherman Oaks, Calif., is delightful in its direct modernity; and the Methodist Episcopal Church of Knoxville, Tenn., by Barber and McMurray and John Russell Pope associated, has a pleasant grouping around a cloistered court, and a lovely tower.

Houses of the year deserving mention include all "styles"; it is apparent that no one type holds sway in American taste. Few, save that of Rex Stout, in Fairfield County, Connecticut, by Lawrence Kocher & Gebhard Ziegler, are obviously revolutionary or even markedly "modern," but in general there is evident a gradual breaking down of hard-and-fast "stylism," and a liking for simple and direct, and rather non-romantic forms, which are significant. Houses by Verna Cook Salomonsky, in Scarsdale, N. Y. by Rowland Coate, in Beverly Hills, Calif.; by Charles S. Keefe, in New Canaan, Conn.; by Robert C. Kilbourn, in Candlewood Lake, Conn.; by John Byers, in Los Angeles, Calif.; and by James C. Mackenzie, Jr., in South Norwalk, Conn., all reveal this trend.

GREAT BRITAIN. The year's work in England again reveals and emphasizes the fact that the future of English architecture lies along revolutionary and purely modern lines. Wherever a classic style—the favored British classic of the early

century—is used, the result tends to be dry, complicated, and either incoherent or dull; wherever a new creativeness appears, the result is uniformly better, not because of its novelty, but because it possesses more sense of composition, more direct planning, and a clearer and fresher use of materials. Thus Sir Reginald Blomfield's No. 4, Carlton Gardens, London; and the Civic Hall of Leeds, by E. Vincent Harris, the two most extravagant examples of the older style, are both a little loud, a little incoherent, a little confused, despite the delicate detail of the former and the great scale of the latter. The building of No. 4 Carlton Gardens was the subject of great controversies as a great body of public opinion wished to preserve the charm and the Unity of Carlton Gardens unchanged, and town planning opinion was almost unanimous against the destruction of the old character, as the new building would inevitably destroy it. Another defeat suffered by the lovers of old London, was the final defeat by Parliament of the valiant attempts to preserve Adelphi Terrace, designed by the Adam Brothers. Parliament, however, compromised in requiring all designs for new structures there to be passed by the Crown Lands Committee, so that some uniformity may still be preserved.

Besides the Leeds Civic Hall, important town halls were erected at Stretford, by Bradshaw, Gass, and Hope; and at Preston, by Briggs and Thorneby. The former is in the usual Georgian classic; the latter in an interesting variation of Greek Revival. The enormous Masonic Peace Memorial in London, by Ashley and Norman, reveals the usual traditional classic in its most ostentatious complexity. By contrast the three Thames bridges—Chiswick, by Sir Herbert Baker; Hampton Court, by Sir Edwin Lutyens; and Twickenham, by Maxwell Ayrton—are simple, dignified, and beautiful.

The Royal Masonic Hospital, Ravenscourt Park, London, by Sir John Burnet, Tait, and Lorne, is a superb conception, entirely new and creative with a bold use of brick and beautiful cantilevered balconies. Its details, throughout, are appropriate and sensitive, and its frank use of modern materials and constructional methods welded into one aesthetic whole, makes it one of the foremost English buildings of recent years. Somewhat similarly free, and equally creative is the exquisite Midland Hotel, Morecombe, by Oliver Hill, with broad bands of openings beautifully composed in a white stucco wall, and the whole planned in a beautifully open and inviting manner. Similar in style, and almost equally interesting is the riverside restaurant at Maidenhead, the "Showboat," by Bailey and Wadham; a roadhouse at Cobham, by Clough Williams-Ellis, used inexpensive wooden construction to produce a composition of the same general character.

In commercial building, the outstanding event was the completion of the new work at the Bank of England by Sir Herbert Baker, A. T. Scott, and F. W. Troup. This work necessitated an almost complete destruction of Soane's Century-old interiors, and the development of a new plan in several stories. Soane's old screen wall around the outside was preserved; the new work above it is naturally made similar in style. But one wishes for a greater simplicity in the new work; Soane's composition is a one-story one, and any attempt to wed together old and new such as was made here by the use of colonnaded pavilions, etc. was bound to be a detriment to both. The new plan

seems direct, efficient—and at times commonplace. But one may be thankful that so much of the beautiful old interiors was salvaged, and re-used in the new work; again and again Soane's imagination and magic appear.

Universal House, Southwark, London, by Joseph Emberton is in the best spirit of free modern English work. Its simple horizontal composition, and its curved corner is effective; its use of glass spandrels between the windows recalls the "Daily Express" Building, though in the Southwark case the glass is green instead of black.

St. Saviour's, Eltham, by Welch, Cachemaille-Day, and Lander, is a beautiful and original church, showing the freshness, freedom, and charm that are so characteristic of many modern English churches. The tower is over the sanctuary, and there is in it a most interesting use of 45° planes. The arrangement of windows assures effective and dramatic lighting. Interesting also are St. Andrew's Church, Cheam, by Maxwell Ayrton, with its angular plastic ceiling and its excellent exterior, and St. Gabriel's, at Blackburn, by F. X. Velarde.

In educational buildings, the new buildings at the University of Exeter and South West England, Exeter—Mardon Hall, and the Science building, by E. Vincent Harris and S. K. Greenslade, are in a quiet and sympathetic Georgian. The new buildings for an experimental school, Dartington Hall, Ltd., at Totnes are by various architects and in various manners. It is possible that spontaneity and variety have been purchased here at too great a price of difference and disharmony. The head master's house by the American architects Howe and Lescaze is an excellent example of the so-called *International Style*; the School of the Dance-Mime, by O. P. Milne, in wood and masonry, is totally different in spirit, and the same architect's Mill and Farm Group in still a third manner. St. Anselm's School, Harrow, by Allan D. Reid, is attractively modern. The most interesting of the year's educational buildings was the new building for the architectural school of Liverpool University by C. H. Reilly, L. Briden, and J. Marshall—a beautiful, direct, and unassuming solution of the problem.

Less housing was done in England in 1933 than usual. Newquay House, Kennington Flats, London, by Louis de Soissons was characteristic of the usual open type of modern "model" tenement in London. The Liverpool flats by L. H. Keay, in Speke Road, are similar in many ways. Domestic work that warrants mention includes a group of three houses on Hyde Park West, London, by H. W. Binns and E. K. Rowe; a house at Westcott, by J. M. Simpson; and a lovely, imaginative, and entirely revolutionary house at Hornchurch, by Stewart L. Thomson.

The British Dominions. In Canada the following buildings may be noted: A new Railroad Station at Hamilton, Ontario, by Felheimer and Wagner, in a modern style with corner windows and a central tower and interesting sheet metal wainscoting within; the dignified Head office of the Hydro-Electric Company in Toronto by Chapman and Oxley and A. E. Salisbury; Upper Canada College, Toronto, by Mathers and Haldenby, in an unusually delightful version of Georgian; and the modern remodeling of the Children's Hospital, Montreal, by H. W. Davis. In general, the influence of contemporary architecture in the United States is very strong in Canada; though there is in Canadian work in general a flavor quite char-

acteristic of Canada. The most important work in Australia was the completion of the first monumental group of the University of Western Australia, at Perth, by Rodney Alsop and Conrad Sayre. It is an interesting conception carried out in a sort of cross between Italian romanesque and Renaissance; the detail is not as good as the plan and general scheme. The Shell Building, in Melbourne, by A. & K. Henderson is a 12-story office building with a simple vertical treatment on a dignified base; American influence is evident in its design.

FRANCE. The somewhat confused trends of modern French architecture seem gradually to be clarifying. There is less and less use of archaeological detail, and, too, less of the harsh rectangularity of earlier "modernist" official buildings (the Perret tradition) and less of the doctrinaire artificiality of the so-called "International" style. Plans, as usual, are almost without exception carefully studied and basically classic in conception. The Musée de la Mer, at Monte Carlo, by Hiriart, Lafaye, and Laccoureye, is typical in its suave restrained surfaces and its little touches of rich detail, such as the lovely door grilles by R. Subes. André Lurçat's Groupe Scolaire at Villejuif is the closest approach to the "international" type (except the work of LeCorbusier himself), but even in it there is a significant tendency toward a more human and less theoretical approach, and in the Groupe Scolaire Paul Doumer at Cachan, by Mathon, Chollet, and Chaussat there is achieved a graciousness of aspect that is lovely. On the other hand, the École Maternelle at Pantin, by E. Noquette, seems queerly out of date in its pseudo art-nouveau detail.

Several additions were made to the Cité Universitaire at Paris, each adding another and differing note to its extraordinary discord. The Maison des Provinces de France, by A. Guéritte is frankly art nouveau of the vintage of 1906. The Maison de Cuba, by A. Laprade, attempts the spirit of Spanish-American Baroque. The Maison des Étudiants d'Indochine, by Martin et Vieu, mixes, not too well, the horizontality of much modern work with assorted Chinese details, achieving a mere exoticism neither European nor oriental. The best of the new buildings is the Pavillon Suisse, by Le Corbusier and P. Jeanneret, brilliant in its structural conception—sunny and airy, and with an unusual freedom in its general mass composition. It has all the Le Corbusier mannerisms, but here they are subordinated to a whole conception much more serious and practical than in the greater number of his houses. The École Nationale Supérieure de Céramique at Sèvres, by Roux-Spitz, is in the older, Perret tradition, but it has a warmth and a graciousness with its classic dignity, rare in earlier work. In the École de Puériculture de la Faculté de Médecine at Paris, by Duval, Gonse, Dresse, and Oudin, the complicated programme of a modern children's hospital and medical school is integrated into a simple and direct whole, beautiful in plan and adequately expressed in a simple brick exterior. Other interesting educational buildings were the building for the outside ateliers of the École de Beaux Arts at Paris, by H. R. Expert, bold and simple, with an effective use of "strip" windows; and the American Women's Student House, Paris, by Pol Abraham, with interesting curved setbacks.

Of the churches of the year, that of Ste. Agnès

at Alfort, by de Laujardiére and Puthomme, is noteworthy because of its ingenious plan and its simple interior; its entrance tower is less successful. The church at Mitry-Mory, by M. J. Barlier, in modified Romanesque, has a good interior, but an exterior too complex; and the Chapel of Ste. Jeanne d'Arc at Gennevilliers, by M. Favier, is interesting in its use of concrete.

The best French work of the year was undoubtedly in the class of apartment houses and housing, in which there was great activity. Despite occasional over-complexities of cantilevered balconies, etc. of which, in their search for chic and interesting exteriors, the French architects are inclined to be over lavish, in general the new groups are effectively composed, planned with uncanny ingenuity, and, in exterior aspect attractive places to live. Composition is usually achieved by simple horizontal balconies, and judicious arrangements of large masses. Of the low-cost types, the Cité Chatenay-Malabry, by Arvidson, Bassompierre, de Ruté, and Sirvin, is typical of the best French recent work. Its general layout is good, and its 12-story tower is a pleasant contrast to the horizontal movement of the 4-story buildings. The housing "H.B.M." (*Habitations à bonne marché*) at Nanterre by Henri Pacon and E. Lafont, associated, is also pleasing. Of more expensive types in Paris itself, the following are outstanding: the apartment house on the Quai de Passy, by Lucas and Beaufils, with exquisitely studied plans; that at Bastion 47, Boulevard Berthier, by Bassompierre, de Ruté, and Sirvin; and that at Auteuil, by Dupuy and Thiébaud.

G. H. Pingusson's extraordinary Hotel "Latitude 43" at St. Tropez, uses long horizontal balconies around a simple sweeping curved plan beautifully, and the whole composition settles into its hillside site most harmoniously.

Private houses that deserve mention, chiefly for excellence of plan are: Jean Patou's Basque house "Berriotz," by M. L. Sue, in a kind of modernized renaissance; and a Villa at Vaucresson by C. Letrosne.

GERMANY AND AUSTRIA. The growing conservatism of German taste is well illustrated by the competition for the new Munich "Glass Palace"; the first prize design by Bohm and Feldt had as its main feature a colonnade connecting a series of small galleries. The new University buildings in Heidelberg, by K. Gruber, show the same trend in their traditional hipped roofs. In various new post office buildings in Bavaria, designed by the official post office architectural office, the new, in simple walls and grouped windows, is often charmingly combined with the traditional, in hipped roofs; the buildings fit well into their village settings. Equally effective are a series of buildings by the Oberpostdirektion of Nuremberg. The new airport at Breslau, by Behrendt and Knipping is, naturally, more modern in spirit.

Yet the traditional is not everywhere dominant. Schools, hospitals, churches, commercial, and industrial buildings are still most frequently built in the modern, non-historical spirit one has come to expect in Germany; it would seem that in these buildings, at least, Nazi culture had accepted the great creativeness of the revolutionary German past decade as an integral part of German culture, despite the fact that many of the leaders and the greatest talents in the development of that creativeness are under the Nazi ban, and largely living in foreign countries. Thus the schools at Wörsdorf-im-Taunus, by Kaufmann and Nau-

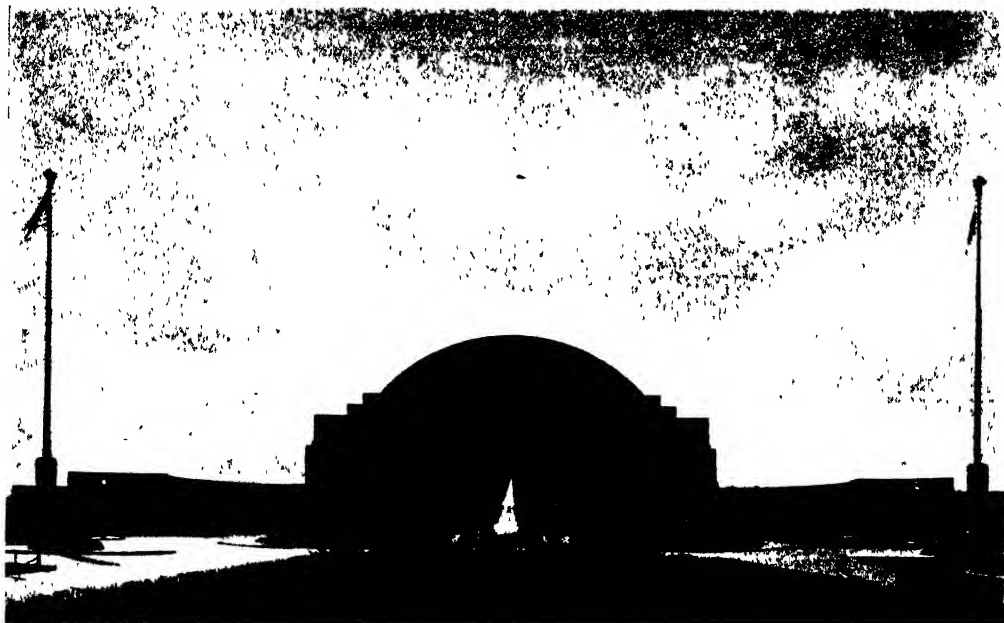
mann; and at Wuppertal-Volnwinkel, by Hollatz, Krefeld, and Schrader; the Municipal Berufsschule, at Hagen-Haspe, by G. Oberste Berghans; and the new clinical buildings of the hospital at Freiburg-im-Breisgau, are all distinctly in the modern manner. The Hagen-Haspe school is especially successful.

The greater number of new churches continue the high standard of imaginative sincerity that has been set during the last few years. The most remarkable is possibly F. Höger's superb church on the Hohenzollernplatz in Berlin, with its closely spaced concrete pointed arched trusses and its façade of brick vertical window mullions. St. Paul's Church in Altona, by Bensel, Kamps, and Amsinck, has an interesting rectangular massing. F. Schumacher's Crematorium Chapel at Hamburg has daring, inclined skylight side lighting and great parabolic arches, and the cemetery chapel at Kornwestheim, by H. Schmal, is simple, and capably done. The new church of St. Thomas, in Berlin-Charlottenburg, by P. Linder shows the influence of the brick work of F. Höger. The Evangelical Church at Wohltorf in Sachsenwald, by Bensel, Kamps, and Amsinck had a daringly bold composition of stark masses, and a rectangular tower with an interesting corner treatment. Mention should also be made of Winfried Wendland's simple and charming week-end church at Boxfelde, with its curved lamella roof. The Catholic churches at Altenheim, by A. Bosslet, and at Stuttgart-Kaltenenthal, by H. Herkomer are also freshly composed and, in general, more picturesque than the Evangelical churches. The Lillienthal Monument at Berlin-Lichterfelde, by F. Freymueller is strangely composed, but rather disturbingly effective with the great black ball surrounded by a ring shelter of flat roof supported on a single circle of thin metal columns, the whole placed on a steep conical mound.

The completion of the great Columbus House—an office building—in Berlin, by Erich Mendelsohn showed a building freely composed with his characteristic suave horizontal bandings. The new mine buildings of the Zollverein, Essen, by Schupp and Kremer, are interesting; and Hans Herkomer's great Becker Brothers' brewery at St. Ingelbert, in the Saar, is extraordinary in its perfect relationship to the town, which its great storage tower overlooks so convincingly, despite its entire modernism. The railroad station at the Wandlitzsee, by W. Wagner; and the delightful sports restaurant in the Blasewitz Forest Park, by R. E. Kolbe, with its inviting expanse of plate glass, and its spreading flat roof, also deserve mention.

The year's individual houses are endlessly varied, with a strong tendency toward the use of steep gabled or hipped roofs, and plans of distinctly American type. Such are many of the Stuttgart houses by Volkart and Trüdinger; the houses at Kikolasee and Griebnitzsee, near Berlin, by F. Schopohl; and the house at Munich—Solln, by K. A. Bernbé, but flat roofs are still used occasionally, as in P. Linder's house in Zehlendorf, and the beautifully imaginative country house near Breslau by R. Fränkel, with its inviting downstairs loggia and upstairs living terraces. This house, too, has a formality of conception rather rare in Germany. Equally interesting is Volkart and Trüdinger's, wooden week-end house at Wangen on the Bodensee.

The whole system of German housing developments seems to have finally collapsed with the coming of the Hitler government. There is still a



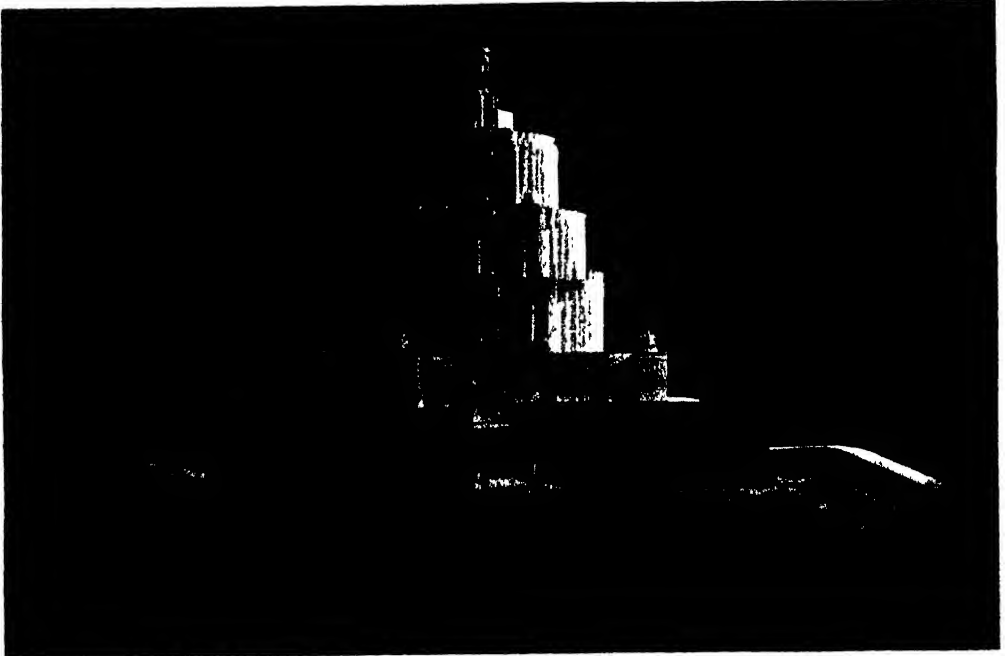
Courtesy of Nyholm Phillips

THE CINCINNATI RAILROAD STATION
Cincinnati, Ohio



Dorr News Service

THE WILLIAM ROCKHILL NELSON GALLERY OF ART
Kansas City, Missouri
ARCHITECTURE



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THE PALACE OF THE SOVIETS
Moscow, U S S R
The Architect's Model of the Proposed Palace



THE SEATTLE ART MUSEUM
Seattle, Washington

half-hearted attempt to produce inexpensive, rather traditional "subsistence" houses in various localities, but the sentimental agrarianism of Hitler has achieved as yet little concrete architectural expression. The most important event in the housing field was the community of 25 single houses that formed part of the Stuttgart Bau Ausstellung of 1933. They were all of wooden construction, and designed by such well known architects as R. Schmitthenner, Bonatz and Scholer, Volkart and Trüdinger, H. Eitel, and Eisenlohr and Pfennig. One of the most attractive—to American eyes—was that by Guido Görres of Berlin. This object lesson in different ways of using wood as a building material may be of great future importance in Germany.

Of the small amount of building done in Austria, one of the most interesting structures completed was a new office building in Vienna, by Theiss and Jaksch. It is an ambitious combination of a band of low shops, wings 8 stories high, and a central tower 16 stories high, with a glass observatory at the top. Important also was the delightful Wandelhalle in Bad Hall by Clemens Holzmeister, rich, elegant, and formal; the same architect's country school at Vienna-Grinzing; and the beautiful sanitarium "Subiaco" at Kremsmünster, by H. Steinender.

ITALY. In addition to the Triennale, the two most important buildings of the year were the Exposition building at Rome, in celebration of the 10th anniversary of the fascist revolution, by Libera and Valente, and the great Sports Forum Mussolini at Rome by E. del Debbio. The former was a dignified heavy structure, modern in feeling, with four great free-standing elliptical columns supporting a spreading slab porch roof. The latter was a great formal layout of stadium and gymnasium buildings, of severe neo-classic detail in stone and stucco, rather heavy-handed, but definitely monumental. There is considerable importance given to colossal statues around the stadium proper. Other noteworthy buildings are the extraordinary hotel in the Cottischen Alps, at Sestrières, consisting of a great circular tower 150 feet high, with a spiral ramp in the centre serving 11 stories of bedrooms around the outside—the rooms arranged spiral fashion themselves. This was designed by V. B. Bottina; the same architect used the same general idea again in the "Torre Balilla," at Marina di Massa. Also deserving note are Rava and Larco's Hotel at Leptis Magna, Tripoli; U. di Segni's housing in Tripoli; and the fantastic Prince of Piedmont Hotel at Sestrières, by Chevalley and Passenti.

CZECHOSLOVAKIA. The recent architecture of Czechoslovakia is more completely and thoroughly "modern" than that of almost any other country; and in its development the asceticism and rather dry functionalism of the so-called "International Style" has had almost complete sway. Thus the Municipal Bath at Brunn, by B. Fuchs, seems more like a factory on its exterior than a bath building, but it is full of ingenious planning and direct structure, and its little dressing-cabin wings are attractive. The same architect's students' dormitory in Brunn is similarly simple, direct, and harsh. J. Fragner's Chemical Factory at Prague, and electric power house at Kolin, are interesting. The new crematorium at Brunn, by Wisner, and the University at Bratislava, by K. Silinger, are different in spirit; the former dignified with a kind of fantastic dignity; the latter distinguished by its impressive simple mass com-

position. Note should also be taken of Kolator's Café and Swimming Pool at Barransov for its daring use of a beautiful and difficult site.

SCANDINAVIA. The house and museum of the sculptor Gustav Vigeland, at Oslo, by Ree and Buch, is a massive rather bleak building of great classic monumentality emphasizing its museum rather than its domestic function. The Crown Prince's summer house at Skangums, by A. Arneberg, is informal, large, and modern in type; the hotel at Sundöya, by Bjereke and Eliassen, similarly modern, has an interesting octagonal tower. Many of the recent Norwegian country houses, in wood, have a character quite similar to our own; characteristic are those in Oslo and its environs by O. Bang, by A. V. Korsmo, and by O. Scheen. In Sweden, where economic conditions have greatly reduced the total amount of published work, the present dominance of the functional types of design continues. The most important example is the royal Katharina School, at Stockholm, by Dahl and Hedqvist, with a long classroom wing, an auditorium block and a connecting stair hall; it is all airy, rectangular, and hard. Danish work, on the other hand, varies between pure functionalism and a freer, more human, less theoretical type. K. Gottlob's school at Højdevangens is characteristic of the former trend; the Dyssegaards school by Brandt, Hagen, and Schiotz,—a monumentally conceived whole—of the latter.

In Finland, there is still great building activity, and a consistent, rather classic modernism of style. The crafts school in Viborg by V. Keinänen; the Arthurinluina, Helsingfors, by M. Valikangas, and the Helsingfors Sparbank, by Frosterius and Gripenberg, are typical. The two outstanding Finnish architectural works, however, are the lovely St. Peter's Church, in Helsingfors, by T. Ryberg, that combines with the simple directness of most modern German work something of the Swedish graciousness of detail; and the daring 10 story sanitarium in Pömmar, by A. Aalto, with its superb cantilevered balconies, great sun terrace, and attractive smaller buildings. It is one of the *chefs-d'œuvre* of modern reinforced concrete construction.

SWITZERLAND. Swiss buildings demanding note are the Église Ste. Maria, Berne, by F. Dumas; the apartments at Geneva by Hoechel and Minner; the villa Bellevue, by A. Lozeron, and the great housing group of 9 story apartments around large garden courts at Mont-Choisy-deux-Parcs, Geneva, by Brailard and Vial. During the year also the exterior of the Palace of the League of Nations at Geneva was almost completed. This was a coöperative design by the chief winners of the second international competition—Nénot and Flegenhimer, Broggi, Vaccaro, Franzi, Lafèvre, and Vago. The plan developed avoided many of the faults of the competition plans; interior courts have disappeared, and the whole has been more closely integrated. There is a great formal entrance court of honor, with the assembly on the main axis, and the Council chamber and Library balancing each other on either side. The Secretarial building stretches out from the Council Chamber forming its own court, entirely open at the back, and the whole is tied together by a brilliantly studied combination of minor axes through arched vestibules. The conception is serious and monumental; the style of the exterior is impersonal, modern classic, with little historical reference, noble in scale, and rather forbidding and cold.

OTHER COUNTRIES. In Belgium the most important event was the great international competition for the development of the great area across the Scheldt in Antwerp. There was no First Prize, but 3 Second and 4 Third Prizes were awarded; also the city bought the plan of Flegenhimer, Rotival, and Winders, which arrived too late. The prize winners' plans were of all types, so that the city has not committed itself to any one type of scheme, and intends to study more carefully all, and perhaps develop an eclectic plan borrowing suggestions from many. The prize winners were Stijnen; Viret, Marmorat and Mounoyer; Fahrenkamp (with a strictly functional plan of endless rows of parallel apartments); Gutton; Cols and DeRoek; Goormans; Timpson, Turnbull, and Zeiss; and Le Corbusier. In Hungary, the interesting church at Balatboglar, by I. Kotsis; and the mountain hotel at Kekes, by L. Miskolczy, with sheltered balconies and a simple end mass, both deserve mention. In Holland, the most important building was the impressive grain elevator in the Maas harbor at Rotterdam, by Brinkmann and Van der Vlugt. South American work still oscillates erratically between overloaded baroque and art-nouveau modernism. The Municipal Fine Arts Museum at Montevideo, by E. P. Baroffio, is an exception in its quiet classic plan. In Greece a number of important new schools were built. The great school at Psychiko, by A. Kriesis, is characteristic.

ARCTIC EXPLORATION. See POLAR RESEARCH.

ARGENTINA. A federal republic of South America, consisting of 14 Provinces, 10 Territories, and the Federal District. Capital, Buenos Aires.

AREA AND POPULATION. Argentina has an area of 1,079,965 square miles and a population estimated on Jan. 1, 1933, at 11,846,655, including about 30,000 Indians. About 30 per cent of the population is concentrated in the 10 largest cities. Buenos Aires had 2,214,702 inhabitants on Jan. 1, 1933. The other chief cities, with estimated 1932 populations, are: Rosario, 485,354; Córdoba, 253,182; La Plata, 182,401; Avellaneda, 214,512; Tucumán, 123,572; Bahía Blanca, 102,430; and Santa Fé, 125,295. In 1931 there were 77,934 marriages, 319,317 births, 137,171 deaths, 63,665 immigrants and 59,706 emigrants. The population is almost entirely of European descent, with Spanish and Italian stocks predominating.

EDUCATION. Nearly 22 per cent of the population was illiterate in 1930, compared with 35 per cent in 1916. Elementary education is free and compulsory for children from 6 to 14 years of age, funds being provided by the Federal and Provincial governments. In 1931 there were 11,552 primary schools with 1,441,348 pupils, and 473 secondary schools with 103,304 pupils. National schools numbered 4786, with 638,306 pupils. The national universities at Córdoba, Buenos Aires, La Plata, Tucumán, and Santa Fé (the latter with branches in Rosario and Corrientes), had 19,997 students in 1931.

PRODUCTION. Argentina is predominantly devoted to agriculture and livestock raising and the prosperity of these industries is entirely dependent upon the sale of their products abroad. Of the total value of exports in 1932, 66 per cent represented agricultural and 31 per cent livestock products. Of the 66,600,000 acres under cultivation in 1931, about 72 per cent was de-

voted to cereals and linseed. Argentina ranks sixth among the wheat producing countries and in 1931 was second only to the United States in corn output. It furnishes about one-half of the world's supply of linseed. The announced production of the chief crops in 1932-33, with 1931-32 figures in parentheses, was: Wheat, 235,376,000 bushels (219,594,000); corn, 263,769,000 bushels (284,831,000); oats, 69,583,000 bushels (69,280,000); and linseed, 52,305,000 bushels (89,068,000). The volume of exports in bushels of the four chief crops in 1932 was: Wheat, 126,395,000; corn, 277,740,000; oats, 49,232,000; and linseed, 79,880,000. Alfalfa, oats, potatoes, grapes, and tobacco are other crops.

The livestock census of 1930 showed 32,311,855 cattle, 44,413,221 sheep, 9,858,111 horses, 1,039,420 mules, 5,647,396 goats, and 3,768,738 swine. This gave Argentina third and fourth rank, respectively, among the sheep and cattle-raising nations of the world. Meat products, exported chiefly to the United Kingdom, accounted for 15 per cent of the 1932 exports; wool, 6 per cent; hides, 4.7 per cent. The volume of meat exports in 1932 was about 574,000 tons. The wool clip in 1932-33 was 330,700,000 pounds.

Quebracho extract is an important forest product. The leading industries are meat refrigeration and flour milling. Petroleum output in 1932 was 13,003,691 barrels, of which 5,575,146 barrels were from state-owned fields. Small quantities of gold, silver, tungsten, copper, and coal also are mined. On June 30, 1933, there were 333,997 unemployed in Argentina, according to a census by the National Department of Labor. Of these 34,548 were seasonally unemployed.

COMMERCE. The sharp decline in the value of Argentine foreign trade during the period of the world depression is shown in the accompanying table.

ARGENTINE FOREIGN TRADE
[In gold pesos worth 96.48 cents at par]

Year	Imports	Exports	Surplus of exports or imports (—)
1929	861,997,355	953,743,919	91,746,564
1930	739,182,744	614,104,180	—125,078,564
1931	516,484,457	640,558,451	124,073,994
1932	367,956,396	566,624,300	198,667,904

The value of the leading exports in 1932, converted into dollars at average exchange rates, was: Cereals and linseed, \$206,623,000; meats, \$49,700,000; wool, \$19,444,000; skins and hides, \$15,712,000; forest products, \$7,182,000; wheat flour, \$5,378,000. The chief imports in 1932 were: Textiles and textile products, \$59,802,000; fuel and lubricants, \$39,188,000; food products, \$24,602,000; iron and its manufactures, \$17,395,000; chemical products, \$15,999,000; and machinery and vehicles, \$8,811,000.

The 1933 foreign trade (in paper pesos, worth \$0.4245 gold at par) was: Imports, 897,102,000; exports, 1,120,448,000 pesos. Imports increased 5 per cent in value while exports declined 13 per cent. The United States supplied 12.7 per cent of the total imports and took 7.7 per cent of the exports.

The percentage distribution of Argentine exports by value in 1932, with 1931 figures in parentheses, was: United Kingdom, 34.5 (39.0); Netherlands, 11.1 (10.6); Belgium, 10.2 (9.3);

France, 8.9 (8.5); Germany, 8.3 (8.2); Italy, 5.3 (4.8); and United States, 3.4 (6.1). The United States ranked second to the United Kingdom as a source of Argentine imports. Imports from the United States were \$31,666,000 in 1932 (\$82,873,130 in 1931 and \$158,224,646 in 1930); exports to the United States were \$15,654,000 in 1932 (\$35,980,400 in 1931).

FINANCE. The Minister of Finance estimated a net deficit of about 30,000,000 paper pesos for the fiscal calendar year 1932. The cash revenues, income from credit operations, and cash expenditures for the years 1930, 1931, and 1932 are shown in the accompanying table prepared by the Institute of International Finance:

ARGENTINA: REVENUES AND EXPENDITURES

[In thousands of paper pesos]

	1930	1931	1932
Revenues collected	688,485	697,146	767,595
Credit operations	578,495	125,118	871,103
Total revenues ...	1,266,980	822,259	1,138,758
Cash expenditures	1,250,294	835,381	1,124,044

In the budget for 1933, total revenues were estimated at 824,797,410 paper pesos, including 91,168,839 pesos to be raised by bond issues, while expenditures were placed at 821,316,052 paper pesos, leaving a nominal surplus of 3,481,358 pesos. Provisional returns for 1933 showed receipts of 838,000,000 pesos and expenditures of 860,000,000 pesos. The deficit was 22,400,000 pesos.

The consolidated national debt on June 30, 1932, amounted to 2,729,964,000 paper pesos, of which 966,813,000 pesos represented the external debt. On Oct. 31, 1932, the floating debt was 885,600,000 paper pesos. The service of the national debt in 1932 required 286,059,000 pesos or 37 per cent of all cash revenues; in 1927, it required 147,499,000 pesos, or 20 per cent of cash revenues. The gold peso (par 96.48 cents), exchanged at an average of 66.74 cents in 1931 and 58.44 in 1932. The paper peso had a theoretical par value of 42.45 cents, United States currency, or 44 per cent of the value of the gold peso.

COMMUNICATIONS. Railways open to traffic on Sept. 30, 1932, had 24,752 miles of line, of which 5399 miles belonged to the Federal government and 19,353 miles to private companies. The 14 principal private lines reported a decline of 7 per cent in passenger traffic and of 11 per cent in freight traffic in 1932, as compared with 1931; their gross receipts were 194,685,560 gold pesos in 1932 (216,932,350 in 1931) and their expenditures were 155,370,870 gold pesos (164,838,850 in 1931). State railway receipts fell to 20,265,200 gold pesos in 1932 from 23,590,500 in 1931, or by 13 per cent. The highway mileage in 1933 was estimated at 137,177 miles, including some 2597 miles of hard-surfaced and 44,580 miles of graded and drained roads. The first of a series of national airlines, authorized by Presidential decree, was to be opened Dec. 1, 1933, between Buenos Aires and Córdoba. There were a number of other lines in operation under foreign control. During 1932, 72,138 vessels of 39,482,153 tons entered the ports and 71,448 of 39,345,983 tons cleared.

GOVERNMENT. The Constitution, as restored Feb. 16, 1932, vests executive power in a president elected for six years, and legislative power in a national congress, comprising a senate of

30 members elected for nine years by the provincial legislatures, and a chamber of deputies of 157 members elected for four years by universal suffrage. The Governors of the Provinces exercise extensive powers independently of the Federal executive. President in 1933, Gen. Augustin P. Justo, inaugurated Feb. 20, 1932; Vice President and President of the Senate, Dr. Julio A. Roca.

HISTORY

DRIFT TOWARD CLASS WARFARE. An alarming trend toward armed class strife was noted in Argentina during 1933, due chiefly to the growing violence of the Fascist *Legion Civica*. The newspapers as well as prominent individuals warned that "dark, tragic hours are approaching for the republic. . . ."

The beginning of the year found the nation still under martial law. All constitutional guarantees had been suspended since Dec. 17, 1932, when the Buenos Aires police frustrated an extensive uprising against the government by the Personalista or Irigoyen wing of the Radical party. President Justo acted with moderation, however. He made no move to suspend elections or to replace the elected provincial governors with Federal interventors. On May 2, 1933, he issued a decree terminating the "state of siege" and the following day Congress reconvened, after having been suspended since January 10. Most of the political prisoners arrested in connection with the December conspiracy were released on April 28, except former President Marcelo de Alvear and Honorio Pueyrredon, former Ambassador to the United States. Former President Hipólito Irigoyen, another alleged ringleader, was released in accordance with an order issued by the Federal courts February 23. His death on July 3, eliminating Argentina's most colorful figure from the political stage, was followed by great demonstrations of popular affection. See **IRIGOYEN, HIPÓLITO**.

While releasing the Radical conspirators, President Justo earned the hostility of the Argentine Fascists by refusing to continue the quasi-official status which their organization had enjoyed under Provisional President Uriburu. A demonstration in Buenos Aires by the *Union Civica* on May 19 was broken up by the police. Thereafter the Fascists, copying Hitler's methods in Germany, adopted more violent tactics against radical groups in an effort to preserve the conservative institutions of the republic.

On October 1, government police reported the discovery of another radical conspiracy and the arrest of some 23 ringleaders. Discovery of the plot followed the arrest of General Severo Toranzo, former Chief of the Argentine General Staff under President Irigoyen, who was charged with seeking Bolivian support for a revolt in Northern Argentina. In return, he was said to have promised to change Argentina's policy on the Chaco Dispute in Bolivia's favor. The Bolivian government was reported to have rejected the proposal. According to the police, the plot called for simultaneous outbreaks in Buenos Aires and several provinces in the interior, to be aided by non-commissioned officers in the army.

These successive conspiracies against the government greatly alarmed the conservative elements and strengthened the position of the Fascists. The activities of the latter in breaking up the political gatherings of their opponents led

to the formation of the National Civic Militia by the Radicals and of a Socialist militia called the Red Guards. The Irigoyen wing of the Radical party also established the newspaper *Viepera* in Buenos Aires to oppose the Fascist movement. Toward the end of October, the police confiscated several editions of the paper and arrested its editors for publishing diagrams and explanations showing how to make and throw bombs and hand grenades. Toward the end of the year the rapid spread of political assassinations by armed bands was reported from Buenos Aires and various provinces. Meanwhile unrest in the navy was reflected by several attempts at mutiny and other forms of insubordination. The demands of the Minister of the Navy, Admiral Pedro S. Casal, that the agitators be severely punished led to conflicts with high naval officers, who enjoyed the support of other Cabinet members. As a result, Admiral Casal resigned on November 8.

The most serious revolt staged by the Radical party since the overthrow of Irigoyen in 1930 broke out in five northeastern provinces on Dec. 29, 1933. It coincided with the termination of the party's national convention at Santa Fe. Through the support of the army and vigorous action the government checked the spread of the uprising and then defeated the main rebel forces at Santo Tome and Libres in Corrientes Province, after severe fighting. All the Radical leaders were imprisoned or exiled to Patagonia.

ECONOMIC DEVELOPMENTS. In addition to political and social strife, the roots of which lay deep in Argentine history, the government was confronted with widespread unrest due to the hardships imposed by the world economic depression. A country whose economic life was based upon the production of wheat, meats and other primary products for export, Argentina suffered acutely from the economic convulsion. The value of its foreign trade shrank from \$1,487,923,000 in 1926 to \$546,017,000 in 1932, despite the fact that the volume of cereal and linseed exports in 1932 was considerably larger than the average pre-depression shipments. The phenomenal price decline was checked to a large extent in 1933, but the demand for Argentine products abroad continued to fall off.

The drastic decline in export values, together with the restriction of foreign loans, imposed a severe strain upon the country's economic and financial structure. This was reflected in a 40 per cent decline in the exchange value of the Argentine peso. Nevertheless, the National government was one of the few Latin American administrations which continued punctually to meet service charges on the national debt. To redress the adverse balance of payments sufficiently to meet charges on the foreign debt, nearly half the country's gold stock was shipped abroad, imports were drastically curtailed, and national taxes were increased from 518,924,000 pesos in 1931 to 622,261,000 pesos in 1932.

The sacrifices entailed by the government's fiscal policy aroused increasing protests. The demand of the Minister of Finance for additional taxes to balance the 1933 budget was rejected by Congress, which reduced the proposed appropriation for debt service by 50,000,000 pesos. The Minister was authorized to reduce the service on both the foreign and domestic debt by agreement with the bondholders. During 1933 a strong movement developed in Congress for monetary inflation and for a moratorium on the

amortization service of the public debt. At the same time, farmers' and stock raisers' organizations brought strong pressure to bear for price fixing or other farm relief measures. In October, representatives of 8000 wheat growers in the Bahía Blanca region agreed not to harvest their crops unless the government fixed a minimum price at the farm covering the cost of production.

The government steadfastly opposed most of these proposals. The intention of the President to maintain full service on the public debt and to balance the budget in 1934 was announced August 18. He said there would be no increase in taxation, but that expenditure during 1934 would be cut to the level of incoming revenue. In previous years the government had attempted a small-scale agricultural price-maintenance programme, chiefly through restriction of sugar production, the regulation of grain exchanges, and the restriction of imports. It was unwilling to undertake a domestic price-fixing programme for wheat, in view of the fact that large quantities were exported. The government attempted to aid agriculture by signing the international wheat agreement in London August 25. By this agreement, signed by 20 governments, the combined exports of the four chief producing countries—Argentina, Australia, Canada, and the United States—were to be limited to 462,000,000 bushels during 1933-34. The Argentine quota was 110,000,000 bushels (see ECONOMIC CONFERENCE, WORLD). In October Congress passed a law for the construction of a series of grain elevators throughout the agricultural districts, to be operated under the direction and control of the government. The measure was intended to break the control of powerful independent grain exporters over the grain crops.

In rejecting inflation, the government was obliged to adopt the alternate course of extending and supplementing its deflationary policy. The depreciation of the United States dollar after that country abandoned the gold standard on Apr. 19, 1933, placed more serious difficulties in the way of Argentina's export trade and increased the demand for governmental action. The government responded by concluding a series of important commercial treaties and by restricting imports from countries which were selling more goods to Argentina than they purchased from her. Also a large part of the public debt was converted into bonds bearing lower interest rates.

These measures, however, proved insufficient, and on November 29 the government abandoned its deflationary policy in favor of controlled inflation. The peso, which had been artificially stabilized for two years, was "unpegged" and allowed to seek its natural level on the exchange market. It immediately depreciated 20 per cent. The monetary change was but one step in a coordinated national recovery programme which resembled in many respects that of President Roosevelt's in the United States. A Grain Regulating Board was established November 29, with authority to purchase wheat, corn, and linseed at basic prices fixed at about one-fifth higher than those obtaining on that date. The board was to sell these cereals to exporters at international market prices and to make good its losses by using the profits accruing from the difference between the buying and selling rates of foreign exchange. Other points in the plan called for the inauguration of a great public works programme and the removal of un-

employed from the cities to agricultural colonies.

THE COMMERCIAL TREATIES. Foremost among the trade treaties concluded by the government was the Anglo-Argentine agreement signed May 1, 1933, at London. This became provisionally operative for three years on that date. A supplementary tariff convention was signed in Buenos Aires September 26, the Argentine law putting it into effect being promulgated October 9. The treaty of May 1 gave Argentina practical equality with the British Dominions with regard to the export of meat products to the British market. In return British creditors of Argentina received preferential treatment in the allocation of foreign exchange by the Argentine Exchange Control Commission. It was provided that the full amount of sterling exchange arising from the sale of Argentine products in the United Kingdom, after deducting a reasonable sum annually toward the service of Argentine external debts (national, provincial and municipal), would be made available to meet current remittances from Argentina to the United Kingdom. During 1933, the equivalent of 12,000,000 paper pesos was to be segregated from the exchange made available to Great Britain under the above plan and used for the cash payment of claims held up for lack of exchange prior to May 1, 1933. The Argentine government agreed that after the exhaustion of this sum, it would issue sterling bonds, at par, bearing interest at 4 per cent and payable within 20 years, up to an amount sufficient to liquidate all remaining frozen British balances in Argentina outstanding on May 1, 1933. A protocol to the convention, among other stipulations, guaranteed fair and equitable treatment of British capital in Argentina.

By the supplementary agreement of September 26, Argentina agreed to reduce its tariff rates or official valuations on nearly 300 items of the Argentine import tariff, as well as to maintain existing duties on certain other classes of goods. In return the United Kingdom agreed not to increase its duties on meat and other Argentine natural primary products and not to impose quantitative restrictions on other specified products. According to British estimates, 70 per cent of all British exports to Argentina benefited from the tariff reductions, which in general brought Argentina's tariff rates down to the level prevailing in 1930. On November 7 a decree of the Argentine Ministry of Finance extended to all other countries the tariff reductions specified in the Anglo-Argentine treaty. However, the schedule had been drawn so as to benefit British manufacturers to a greater extent than those of other countries.

On October 19, the Minister of Finance announced that the sterling loan called for in the Anglo-Argentine agreement had been oversubscribed. The goal was £10,000,000 sterling and subscriptions totaled £13,526,335, or 171,581,423 paper pesos at the agreed exchange rate of 43 pence to the gold peso. In effect, British creditors received Argentine government bonds, bearing 4 per cent and payable in 20 years, for their peso holdings in Argentina.

Other important tariff agreements were concluded during 1933 with Italy and Chile and negotiations were opened for similar agreements with the United States and Brazil. The Italian treaty was signed in Rome, September 26. The treaty with Chile, replacing the *modus vivendi* of Nov. 12, 1932, provided that each country

should grant the other specified tariff concessions, which might be revised upon three months' notice. It was also agreed to maintain in both countries the existing ratio between paper money and gold; to maintain railway communications between the two countries; to promote construction of new transandine railways by way of So-compa and Loquimay; to facilitate the mutual exchange of merchandise; to establish facilities for the sanitary inspection of plants and animals; to prevent smuggling; to establish international drawback certificates; to sign a convention on customs regulations and the international transportation of passengers, baggage, and freight; and to grant reciprocity in consular exemptions, immunity, and privileges. The treaty was to run for three years, subject to ratification by the congresses of both countries. Ratifications were exchanged Oct. 21, 1933.

RESTRICTION OF IMPORTS. The further restriction of imports from countries with which Argentina had an unfavorable balance of trade was effected through a decree of November 10. It provided that exchange permits must be secured from the Exchange Control Commission before orders for goods could be placed abroad, and that an import license would be required for each shipment before the exchange permits would be issued. The effect of the decree was to give the Control Commission practically dictatorial powers in regulating imports.

This measure supplemented an order issued by Finance Minister Pinedo on October 18, which prohibited the remittance to any country of funds blocked previous to May 1, 1933, on the ground that such action would violate the new treaty with Great Britain. The latter measure had the effect of forcing the foreign creditors of Argentine merchants to follow the British example in exchanging the blocked peso credits for Argentine government bonds. American companies were the greatest sufferers under the exchange embargo, but it applied also to Spanish, German, French, and other foreign exporters whose payment had been delayed for lack of foreign exchange. Americans were also the principal sufferers under the import licensing scheme, as the United States had for years enjoyed a heavy favorable balance of trade with Argentina. The Exchange Control Commission took the position that since the United States purchased only 5 per cent of Argentina's exports in the first half of 1933, Americans were entitled to only 5 per cent of the available foreign exchange.

Under the pressure exerted by these moves, a number of foreign countries took steps to admit a larger proportion of Argentina's exports. In order to thaw out French, Belgian, and Swiss funds blocked in Argentina, a consortium of French, Belgian, and Swiss bankers offered the government a 20-year loan of 320,000,000 French francs at 4 per cent. Finance Minister Pinedo accepted the offer, on condition that the bankers lend as much more as might be subscribed by firms desiring to use this method to thaw out frozen credits. Approximately 100,000,000 pesos, or more than \$35,000,000, were held by American firms in blocked accounts in Argentina. They were offered the alternatives of lending these funds to the Argentine government for 15 years at 2 per cent or for 20 years at 4 per cent, the 15-year loan to take the form of Treasury notes and the 20-year loan to take the form of bonds. Before the end of 1933, a sum equivalent

MINERAL PRODUCTION. Again the output of petroleum declined, from 14,791,000 (1931), to 11,907,000 barrels (1932). The Smackover field, though yielding less as to quantity, continued to supply the main part of the State's production, of which 79 per cent came from this field (1932), as against 78 per cent for 1931.

FINANCE. State expenditures in the year ended June 30, 1932, as reported by the U. S. Department of Commerce, were: for maintaining and operating governmental departments \$11,495,156 (of which \$3,021,583 was for local education); for conducting public-service enterprises, \$62,371; for interest on debt, \$7,764,275; for permanent improvements, \$19,751,133; total, \$39,072,935 (of which \$20,208,250 was for highways, \$1,770,935 being for maintenance and \$18,437,315 for construction). Revenues were \$26,157,208. Of these, property and special taxes furnished 21.0 per cent; departmental earnings and compensation to the State for officers' services, 4.2; sale of licenses, 46.4 (in which was included a gasoline sale tax that produced \$6,723,789). Funded debt outstanding on June 30, 1932, totaled \$160,480,055, of which \$135,919,888 was for highways. Net of sinking-fund assets, the debt was \$160,277,759. On an assessed valuation of \$554,834,984 the State levied in the year ad valorem taxes of \$4,827,064.

EDUCATION. According to data of the National Education Association some 400 of the rural schools of the State were unable to open for the academic year 1933-34, by reason of their lacking the means with which to meet the expenses of operation. The figure did not reveal the presumptively great number of schools that, though able to open, either had reduced the length of the period of operation for the year 1932-33 or could provide only for a shortened period of operation in the year 1933-34.

LEGISLATION. The regular session of the Legislature, convened in January, passed a number of radical anti-creditor measures. The State facing default on its debt in March, the legislators enacted the Ellis bill, providing for an issue of \$146,000,000 of 25-year 3 per cent bonds with which the State was to refund, dollar for dollar of face value, its own "full-faith-and-credit" bonds and the bonds issued by road districts, all of which bore higher rates of interest and some of which purportedly had priority of claim and were specially secured by pledge of receipts from taxes on automobiles and gasoline. The Hardin-Nance act, also passed, abolished priority of claim for certain of the old issues. Constitutional amendments were proposed to the people, to the effect that the State might issue no bonds except as approved by popular vote or for refunding purposes; and that property, excise, privilege and personal taxes might not be increased save as approved by popular vote or by vote of three-fourths of the Legislature. Revenues previously set apart for the service of a specified part of the State debt were appropriated for the service of the new refunding bonds.

The jurisdiction of courts to enforce collection of debts was suspended for 90 days. Jurisdiction of circuit and chancery courts in proceedings for foreclosure of mortgages on homesteads was suspended for two years. The issue of deficiency judgments was also suspended. It was further provided that owners might be appointed receivers for their own property. The allowed period for redeeming property sold for taxes was

extended to four years, and the rate of penalty was reduced to 3 per cent, from 10.

An old-age-pension law was enacted, appropriating \$1,500,000 a year for payments to poor persons over 70 years old, and providing special revenue from a tax of 1 per cent to be levied on all warrants presented for payment at State or county treasuries; this act was later declared unconstitutional. The State Penal Board was authorized to hire out prisoners in order to meet the cost of operating the penal system. The banking commissioner was invested with special powers of great extent to deal with the then current crisis in State banks. An election was called for July 18 to choose delegates from the 75 counties to a State convention that was to deal with the State's ratification of the proposed repeal of the Eighteenth Amendment of the Federal Constitution.

Special Session. States holding Arkansas bonds having started proceedings against the Arkansas plan for the conversion of such bonds (see above), Governor Futrell called a special session which, on August 23, appropriated \$60,000 for interest on the particular bonds held by other States. There was passed also a measure to legalize the sale of beer. The Legislature appointed a commission to discuss matters with the representatives of the holders of its bonds.

POLITICAL AND OTHER EVENTS. The State's effort (see above) to oblige its bondholders to take a refunding issue at lower interest and with loss of special priority for some of the bonds was resisted by a bondholders' committee. The States of Pennsylvania and Nevada, holding Arkansas bonds, declined to convert. An appropriation of the small sum required to pay interest on the bonds owned by other States having been made, a Federal court enjoined Arkansas officials from making the preferential payments. Pennsylvania then, in October, instituted suit in the Federal Supreme Court for an order requiring Arkansas to increase its taxes on gasoline, oil, and automobiles sufficiently to raise the \$7,500,000 a year required to meet charges on the old bond issues.

Delegates in favor of repealing the Federal Eighteenth Amendment were elected by popular vote on July 18, the popular vote running about 3 to 2 for repeal. These delegates met in State convention on August 1 and unanimously voted the State's adoption of repeal of the Eighteenth Amendment as proposed by Congress.

OFFICERS. The chief officers of the State, serving in 1933, were: Governor, J. Marion Futrell; Secretary of State, Ed. F. McDonald; Treasurer, Roy V. Leonard; Auditor, J. Oscar Humphrey; Attorney General, Hal L. Norwood; Commissioner of Education, W. E. Phipps.

Judiciary. Supreme Court: Chief Justice, C. E. Johnson; Associate Justices, Frank G. Smith, T. H. Humphreys, William F. Kirby, Thomas M. Mehaffey, and Turner Butler.

ARKANSAS, UNIVERSITY OF. A coeducational State institution of higher learning in Fayetteville, Ark., founded in 1871. It comprises the colleges of arts and sciences, education, agriculture (including experiment station), engineering (including experiment station), graduate school, and schools of law, business administration, and medicine, the last named being in Little Rock. In the fall of 1933 the enrollment was 1884 and for the summer session it was 435. The number of faculty members was 160. The endowment

amounted to \$132,000 and the income for the fiscal year ending June 30, 1933, was \$871,500. The library contained approximately 117,000 volumes. Among important gifts was one of \$5000 a year for three years, beginning January, 1931, for museum purposes from the Carnegie Foundation. Also one of \$5000 from Dr. Coulter W. Jones of Long Beach, Calif., for the establishment of a graduate scholarship in chemistry. President, John Clinton Futrall, LL.D.

ARMAMENTS, LIMITATION OF. See DISARMAMENT; NAVAL PROGRESS; MILITARY PROGRESS; GERMANY, GREAT BRITAIN, FRANCE, and ITALY under *History*.

ARMENIA. The Armenian Soviet Socialist Republic is one of the three republics constituting the Transcaucasian Socialist Federated Soviet Republic of the U.S.S.R. Bordering on Turkey and Persia about midway between the Black Sea and the Caspian Sea, Armenia had an estimated area of 11,945 square miles and a population, on Jan. 1, 1933, of 1,032,700. Erivan, the capital, had about 75,000 inhabitants (October, 1929); and Leninakan, about 43,000.

In 1929-30 the area under cultivation was about 1,000,000 acres and in 1932 over 74,000 acres were devoted to cotton. Industrial production for the year 1932 was valued at 216,700 roubles (rouble equals \$0.5146 at par in the U.S.S.R.). The schools for general education had 120,800 pupils; there are also 7 educational institutes for higher education, 48 technical schools, and 9 workers' faculties.

ARMIES. See MILITARY PROGRESS.

ARMITAGE, SIR CECIL HAMILTON. A British soldier and colonial governor, died at Rendcomb, Gloucestershire, England, Mar. 10, 1933. Born Oct. 8, 1869, he served with distinction in the Ashanti expedition of 1895-96, through whose success the kingdom of the Ashantis was made a British protectorate, and was active in 1897 in the neutral zone of the Northern Territories. In 1900 he again served in Ashanti, being Acting Resident General when during the siege of Kumasi Sir Frederic Hodgson, the governor of the Gold Coast colony, with part of the garrison succeeded in escaping to the Cape Coast and in raising a relief expedition. He was made a Companion of the Distinguished Service Order in recognition of his part in defending the fort, and told the story of the four-month siege in *The Ashanti Campaign of 1900* (1901). Following this rebellion the country, along with the Northern Territories, was definitely annexed to the Gold Coast colony. From 1910 to 1920 Sir Cecil was Chief Commissioner of the Northern Territories of the Gold Coast colony, and from 1920 to 1927 Governor and Commander-in-Chief of the Gambia colony and protectorate. He was created a Companion of St. Michael and St. George in 1911 and a Knight Commander of the Order of the British Empire in 1927.

ART EXHIBITIONS. Most important among the art exhibitions of 1933 was the great Exhibition of Paintings and Sculpture held in the Art Institute of Chicago, as a part of the Century of Progress Exposition, opening June 1 and continuing to November 1. The theme, "Century of Progress" was broadly interpreted to mean not only art of the last century but a hundred years of progress in American collecting. All but one of the more than 1200 works of art in this collection came from American sources, the one exception being "Whistler's Mother" lent by the

Louvre. Twenty-five American museums and 225 American collectors generously made loans. One hundred years ago very few great works of art were on this side of the Atlantic, but as strikingly evidenced in this exhibition, the United States now possesses treasures of amazing quality, many of which were acquired during the last 25 or 30 years,—some going at once to museums, others finding their way into private collections. One of the chief aims of the Century of Progress Exhibition was to show works which were rarely if ever seen by the public, thus emphasizing the resources of the Nation and affording the public rare opportunity and privilege. Further emphasizing the growth of art collecting in America, the statement was made that the 1200 paintings in this exhibition were assembled from a card list of no less than 30,000 items. The value of the works shown approximated \$75,000,000. It occupied 41 galleries and was arranged in definite historical sequence, covering painting from the 13th century to contemporary times—a collection of individual masterpieces, more important than any exhibition of art yet held in America. This exhibition assembled by Robert B. Harshe, Director of the Chicago Art Institute, Chauncey McCormick, Chairman of the Institute's Art Committee, and Daniel Cotton Rich, Associate Curator of Paintings, was attended by 1,538,103 persons, with the highest daily attendance amounting to 44,432.

Three lectures were given daily in Fullerton Hall, and, in addition, special guidance was provided for individuals and for groups. An elaborate catalogue was issued with carefully edited notes on each exhibit and abundant illustrations. This catalogue, which sold at \$1, was so popular that it was issued in several editions. Besides the exhibition of paintings in oil and water color, drawings and sculpture, the Art Institute set forth at the same time an important and comprehensive exhibition of prints.

In the early part of the year a notable loan exhibition of Italian paintings "from Giotto to Raphael," lent by art museums, collectors and dealers and arranged by Dr. W. R. Valentiner, was shown in the Detroit Institute of Art.

In the Palace of the Legion of Honor, San Francisco, in June, was exhibited an important loan collection of "English Art of the Eighteenth Century," assembled and arranged by Dr. Walter Heil, Director.

In the National Gallery of Art, United States National Museum, on June 23, a year and a half after the donor's death, was opened an exhibition of the John Gellatly Collection comprising 1600 art objects and 145 American paintings. Among the art objects were jewelry, glass, tapestry, needle-work, furniture, etc. To the assembling of this collection Mr. Gellatly gave many years of his life. It essentially represents the collector's taste, which was of rare discrimination and quality. The collection is valued at \$4,000,000, and although it duplicates the Freer Collection in some of the painters represented, such as Thayer, Dewing, Melchers, and one or two others, it is distinctly individual.

In the National Gallery of Art in the early part of 1933 was held an exhibition of paintings by Cesareo de Quiros of Argentina, representing Gaucho Life in Argentina, which was set forth under the patronage of the Argentine Ambassador.

A loan exhibition of paintings and sculpture owned by residents of Berkshire County, evidencing again the richness of American private

collections and the presence in American homes scattered throughout the country of works of art of rare value, was held in the Berkshire Museum, Pittsfield, Mass., from September 1 to 24.

A Memorial Exhibition of paintings, drawings and etchings by the late Gari Melchers was held in the Corcoran Gallery of Art in November-December, 1933. In this gallery, in the spring of the year, an exhibition of Indian Tribal Arts—paintings and handicrafts by contemporary American Indians—was shown, with the result that certain mural paintings by American Indians were placed in one of the Federal Buildings, that occupied by the Department of the Interior. Also, in the late autumn a significant exhibition of craft work by members of the Southern Highlands Handicraft Guild, consisting of weavings, baskets, pewter, wood-carvings, furniture, toys, etc., was held, calling attention to what might be called our native American crafts.

A comprehensive and important loan exhibition of paintings by Boldini, arranged by Mrs. Chester Dale, was held in the Wildenstein Galleries, New York, in 1933, for the benefit of Bellevue Hospital.

For the purpose of raising money for other charities an important loan exhibition of paintings by Rembrandt was held at Knoedler's in April. During the same month, moreover, three famous private collections—those of Lord Duveen, Stephen C. Clark, and Jules Bache—were opened, one day each, to the public for a nominal fee.

The firm of Durand-Ruel of Paris and New York, celebrated the 130th anniversary of its founding in March with an important exhibition in its New York Galleries of paintings by Claude Monet. Monet's work was introduced to America by a member of this firm, Paul Durand-Ruel.

Inaugurating the opening of galleries in its new home located at 22 East 60th Street, New York City, the Museum of French Art held in January a comprehensive exhibition of sculpture by Bourdelle. The French Ambassador, M. Claudel, attended the opening on January 11 and made an address. At the same time in the Brummer Galleries, New York, an exhibition of sculpture in bronze and plaster by another distinguished French sculptor of the modern school, Maillol, was held and attended by no less than 31,000 visitors.

Because of financial stringency the National Academy of Design omitted its regular winter exhibition in 1933 but at its 108th Annual Exhibition held in March distributed the following prizes: Thomas B. Clarke Prize to Jerry Farnsworth; first, second, and third Hallgarten Prizes respectively to, William N. Goodell, Catherine Morris Wright, and Junius Allen; Saltus Medal for Merit to Ruth Nicholson, Isaac N. Maynard Prize to Sidney Dickinson; Altman Prizes to W. Granville Smith and Chauncey F. Ryder; Ellin P. Speyer Memorial Prize to Stephen Bransgrove; Adolph and Clara Orig Prize to Louis Betts.

The Pennsylvania Academy of the Fine Arts held its 128th Annual Exhibition as usual in the spring of 1933, at which the following awards were made: Widener Gold Medal for Sculpture to John Gregory; McClees Prize to Edmond Amateis; Jennie Seenan Gold Medal to Georgina Kliegaard; Temple Gold Medal to S. Walter Norris; Carol H. Beck Gold Medal to William Glackens; Walter Lippincott Prize to Wayman Adams; Mary Smith Prize to Catherine Morris Wright.

The Carnegie Institute, Pittsburgh, omitted its annual International Exhibition in 1932, but re-

sumed it again in 1933 with, however, certain changes and restrictions. The number of paintings were reduced and only invited works were shown. The foreign works shown were selected by the Director, Mr. Homer Saint-Gaudens, and his associates in Europe. There were no foreign representatives on the International Jury which was composed exclusively of laymen—the directors of three art museums, Mr. Robert B. Harshe, Director of the Chicago Art Institute, Mr. C. Powell Minnigerode, Director of the Corcoran Gallery of Art, Washington, D. C., Mr. Meyric C. Rogers, Director of the City Art Museum, St. Louis, and Mr. Saint-Gaudens. The prize awards were as follows: First Prize (\$1500) to André Dunoyer de Segonzac (French); Second Prize (\$1000) to John Steuart Curry (U. S. A.); Third Prize (\$500) to Henry Varnum Poor (U. S. A.); and Honorable Mentions to the following: Stanley Spencer (English); Alexander J. Kostellow (U. S. A.); Jose Gutierrez Solana (Spanish); Mariano Andreu (Spanish); the Garden Club of Allegheny County Prize to Max Peiffer Watenphul (Germany).

The American Academy of Arts and Letters opened in November, 1933, to continue to May, 1934, a comprehensive exhibition of paintings and drawings by George de Forest Brush, one of its members.

FOREIGN. At the time of the Economic Conference in London, Edward Bruce, an American artist, held an exhibition of his paintings which was most favorably received.

ARTIFICIAL LANGUAGES. See PHILOLOGY, MODERN.

ARTIFICIAL SILK. See RAYON.

ART INSTITUTE OF CHICAGO. See ART EXHIBITIONS.

ARTISTS. See MUSIC; PAINTING; SCULPTURE.

ART MUSEUMS. Early in January, 1933, the Taft Museum, in Cincinnati, was opened to the public. This museum, located at 316 Pike St., Cincinnati, will perpetually stand as a memorial to the generosity of the donors, Mr. and Mrs. Charles P. Taft, and the cooperative spirit of the leading citizens of Cincinnati, through whose contributions its establishment was made possible. The building, now converted to museum purposes, is one of the oldest residences in the city dating from 1820. It belonged to Mrs. Taft's father and she and Mr. Taft lived therein for many years. In 1927 Mr. and Mrs. Taft offered to present the house and the art collection contained therein to the Cincinnati Institute of Fine Arts, provided the city would raise an additional two and a half million dollars for upkeep. The amount was not only raised but over-subscribed, the subscribers being 3750 in number. Upon the death of Mrs. Taft in 1931, two years after that of her husband, an additional million was provided by will to cover the cost of adapting the house to museum uses and for perpetual maintenance. Under the direction of Walter H. Siple, Director of the Cincinnati Museum Association and the Taft Museum, the house was remodeled and fire-proofed. It still has the appearance of a home but a home in which chief emphasis is put on its art collection. This collection is especially rich in paintings, Limoges enamels of the 13th and 17th centuries, Italian majolicas and Chinese porcelains, and contains a small but choice library of art books given by the two daughters of the donors. Forty pieces of furniture by Duncan Phyfe and other period pieces contribute to



Courtesy of Grand Central Art Galleries, N. Y.

"HANGING OF JOHN BROWN"

By Daniel Boza

Awarded the Prix de Rome



Courtesy of Carnegie Institute, Pittsburgh, Pa.

"TORNADO"

By John Steuart Curry

Awarded Second Prize in the 31st Carnegie Institute International Exhibition of Paintings, Pittsburgh

ART

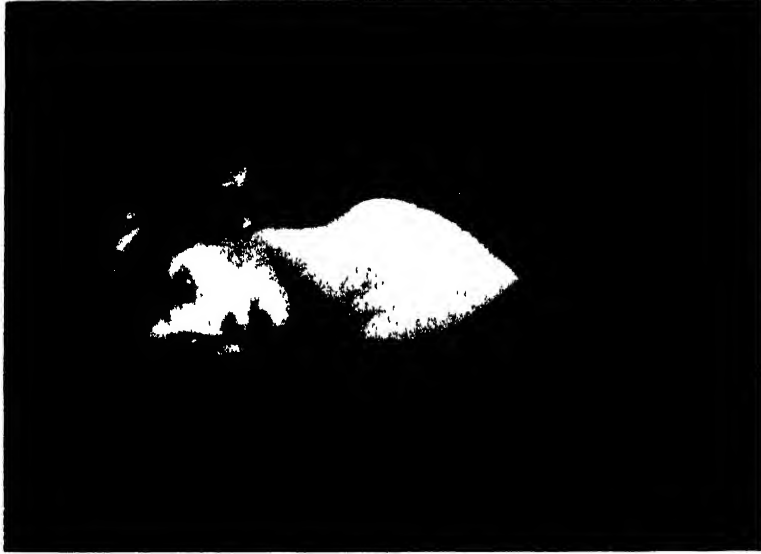


Courtesy of the American Art Association—Anderson Galleries Inc

"MRS RAIKES AND DAUGHTER"

By Sir Thomas Lawrence P R A

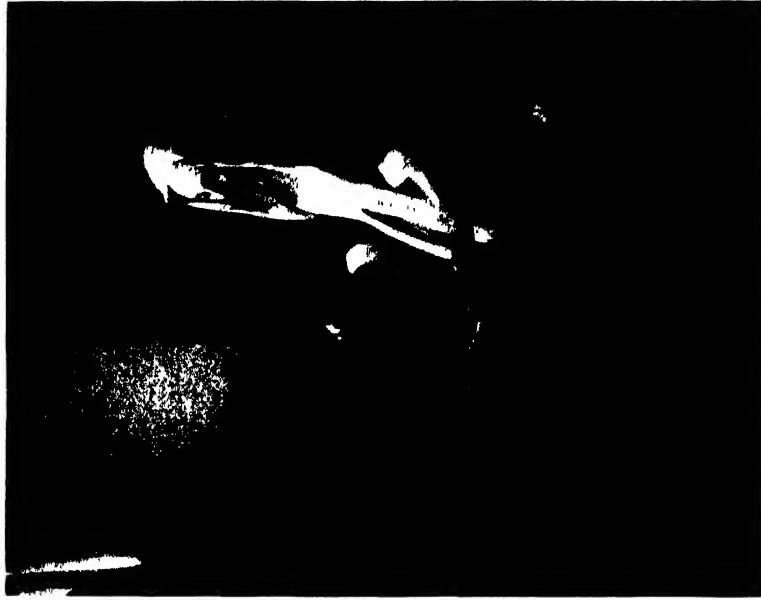
From the collection of Alfred H. Mulliken



"LOCISA, COUNTESS OF MANSFIELD"

By John Hoppner, R A

From the collection of Brig Gen Sir Charles and Lady Gunning



Courtesy of Joseph Widener

"WOMAN WEIGHING GOLD"

By Vermeer

Exhibited at the Century of Progress Exposition, Chicago

the appearance of a completely furnished home. In the rooms that are not roped off reproductions of old furniture rather than originals are shown.

The new Worcester Art Museum, Worcester, Mass., was opened on January 6. This museum had its inception in 1896 when the first building of the present group was erected. To this nucleus has now been added a building designed by William T. Aldrich, architect, of Boston. It adds twenty galleries grouped around an interior court. In this building a 12th century refectory was installed intact.

The Toledo Museum of Art opened two new wings on January 10. One wing houses a concert hall which seats 1500 people; the other provides enlarged exhibition facilities and more adequate quarters for the museum school. The opening was marked by a concert in the new "Greek" theatre given by the Philadelphia Orchestra under the leadership of Leopold Stokowski. An exhibition of 300 paintings from the Museum's permanent collections, ranging from primitives and old masters to the work of contemporary painters occupied the 36 galleries of the enlarged building. There were also on exhibition at that time the Libbey Collection of ancient glass, reinstalled in a magnificent court; the permanent collections of Oriental and Egyptian art; the George W. Stevens Collection of books and manuscripts, and a great number of prints.

Seattle, Washington, opened its new Art Museum on July 1. This museum is essentially modern in design with solid exterior walls without window openings. It was the gift of Mrs. Eugene Fuller and her son, Dr. Richard E. Fuller, who at the present time is acting as director.

The Springfield Museum, Springfield, Mass., was formally opened on October 7th with appropriate ceremonies. This building is of white limestone, modern in style, and contains not only fourteen galleries but an auditorium and class rooms. James Philip Gray and his wife, Julia Emma Gray, were the donors. At the time of the opening an exhibition of Eighteenth Century Paintings and Contemporary American Paintings was set forth. This exhibition was assembled by Josiah P. Marvel, Director.

The William Rockhill Nelson Gallery of Art at Kansas City, Mo., a building costing \$2,750,000, was formally opened on December 10. This building designed by Wight and Wight, which is classical in design, is unique in having no skylights. All galleries have overhead, artificial light provided by a system especially designed for the purpose. The sculptural adornments of the exterior are by Charles Keck and depict the exploration and settlement of the middle west. The bronze doors at the south entrance were designed by Charles Keck and the architects, Wight and Wight. The landscape setting was the work of the St. Louis firm of Hare and Hare. The first and second floors contain the galleries for both permanent and loan exhibits, period rooms, and an oak hall, taken from Mr. Nelson's house. On the ground floor are an auditorium, administrative and receiving offices, library, educational department, and an American Indian room. The Nelson Gallery was erected from funds bequeathed by Mr. and Mrs. William Rockhill Nelson and their daughter and son-in-law, Mr. and Mrs. Irwin Kirkwood. To these bequests was added another, made by Mrs. Mary F. Atkins, for whom the East Wing of the building is named. The Nelson bequest also provided for the collections. These col-

lections were gathered under the trusteeship of J. C. Nichols, H. V. Jones, and A. M. Hyde, a staff composed of Paul Gardner, Director, Charles O. Cornelius, American Adviser. Rarely has a Museum come into existence in just this way and seldom has a new Museum opened with such a rich permanent collection.

In the late autumn the corner-stone of an Art Museum at the University of Virginia, Charlottesville, Virginia, was laid with appropriate ceremonies.

The Brooklyn Museum opened on May 19th a new Egyptian Hall with an exceptionally fine installation by Jean Capart, Director of the Royal Museum of Art and History, Brussels. At the opening M. Capart made the principal address.

Several valuable paintings, including eight from the Friedsam Collection, by such famous artists as Van der Weyden, Fouquet, Clouet, Luini, Fra Angelico, Van Dyck, Lawrence, Romney, Cranach, and Rubens, were stolen from the Brooklyn Museum on the night of April 30th. A reward of \$2000 was offered by the Museum for information leading to their recovery, but without result.

During the past year the Chicago Art Institute installed in the Hutchinson Wing a Bavarian Room.

The Boston Museum of Fine Arts this year discarded all of its casts of sculpture, because of the growth of its collection of originals. The casts were dispersed by gift to teachers and institutions in Boston. Smith College also disposed of all the casts in its permanent collection.

During the early months of 1933 Whistler's portrait of his Mother, on loan from the Louvre in Paris, was shown in museums at San Francisco, Los Angeles, St. Louis, Columbus; and from June 1st to November 1st it was included in the Century of Progress Exhibition at the Chicago Art Institute. In November it was at the Cleveland Museum of Art and in December it was shown in the new Museum at Kansas City. Twenty-nine cities requested the privilege of showing the painting, only twelve of which were able to get on the schedule which presumably will end with its return to Paris in June, 1934. However, the Museum of Modern Art petitioned the Louvre for an extension of time. Extraordinary precautions have been taken to guard this painting not only in transit from city to city but while on display. It has been shown only in completely fire-proof buildings, and has been protected not only by a guard on constant duty and an iron rail but by a concealed mechanism so delicate that if the painting were moved in the slightest degree a loud alarm would sound. For further protection a detailed photograph of the painting is taken by each museum on the day of its arrival and departure. The genuineness of the photograph is vouched for by the affidavit of museum officials. The final detail of authenticity is assured by photographing with the painting a local newspaper published the day it arrives and the day it leaves the city. When it is recalled that this painting might have been purchased in this country for the modest sum of \$800, at the time it went to the Louvre, its present valuation and popularity are the more remarkable.

The Museums of this country have quite generally suffered from financial conditions. Not only have their incomes been seriously cut down but there has been a diminution in gifts of money.

On April 11th for economy's sake the Newark Museum closed two of its departments, dismissed

eighteen members of its staff and reduced the salaries of the remaining staff members 25 per cent, the city having reduced its annual appropriation to the Museum from \$100,000 to \$65,000. The Detroit Art Institute has during the year been on a greatly reduced budget and its director, Dr. Valentiner, for this reason has been on indefinite leave.

FOREIGN. What has been called an "outstanding example of International reciprocity in art" was the exchange of objects between the Spanish Republic and the Fogg Museum of Harvard University which took place in 1933. The Fogg Museum's donation was the famous Sahagun tomb, a much prized historical treasure, the return of which was coveted by Spain. In acknowledgment of this generous gift the Spanish Republic presented to the Museum a group of art objects, most important among which were four columns which supported the altar of St. James in the pilgrim shrine of Santiago de Compostela and dated back to the early part of the 12th Century.

In June, Bernard Berenson, the well-known art critic and connoisseur, announced his intention to give his home, the "Villa i Tatti," near Florence, Italy, and his art collection therein to Harvard University, his Alma Mater, to be used as a residence for American art students.

The Spanish Republic made public acknowledgment of a gift from the artist's widow, of fourteen paintings of eminent Spaniards by Maurice Fromkes to form the nucleus of a National Portrait Gallery in Madrid. Fromkes was an American but had spent much time in Spain and was best known for his paintings of Spaniards.

ACQUISITIONS. Despite financial stringency the list of museum acquisitions during the year 1933 contains some notable items, due undoubtedly to the fact that purchase funds remained intact.

Not long ago the Metropolitan Museum (N. Y.) acquired a terra cotta statuette of Diadoumenos, an ancient copy or adaptation of the "Youth tying a fillet around his head," by Polykleitos, but in 1933 the Metropolitan Museum acquired a life-sized marble statue, a Roman copy of the same work, and placed it on view in its Hall of Recent Acquisitions. The entire torso had to be restored in plaster but the good preservation of the remaining parts compensated for this loss. The Metropolitan Museum also acquired two panels of a diptych (picturing the Crucifixion and the Last Judgment), ascribed to Hubert Van Eyck, a work which was included at one time in the permanent collection of the Imperial Museum of the Hermitage, Russia. It was then catalogued as by John Van Eyck, but the attribution was later changed to Petrus Cristus. However, regardless of attribution it is a marvelous work. This same Museum acquired through purchase paintings by Raphael and Mantegna; a 14th century tapestry and some fine armor of the 16th century. Through the gift of John D. Rockefeller, Jr., the Museum acquired a magnificent collection of Assyrian sculpture from the Palace of King Ashur-Wasir-Apal II; and an important Burgundian sculpture of the 15th century was purchased by the Museum. In December the Metropolitan Museum of Art received two large and important gifts of textiles—a collection of lace brought together by the late Mabel Metcalf Fahnestock and presented by her daughters, Mrs. Ruth Fahnestock Schermerhorn and Miss Faith Fahnestock—one of the finest private collections ever assembled in this country—and a splendid group of European woven fabrics and embroideries, the gift of Mrs. Valentine A. Blaque of Paris in memory of her husband.

The Museum of Fine Arts, Boston was enriched by a gift of 250 pieces of English silver of the 16th, 17th, and 18th centuries, anonymously given as a memorial. This Museum also acquired Sargent's portrait of Edith, Lady Playfair, and a painting by Cezanne "L'Estaque."

The St. Louis City Museum bought a painting by Tiepolo and a fine Attic stele. Paintings by Eugene Speicher, Maurice Sterne, and Alexander Brook, contemporary American artists, were also acquired.

The Cleveland Museum of Art acquired a pastel by Whistler, a stone head of Buddha of the 12th century, and a 14th century reliquary.

The Toledo Museum of Art acquired a bronze bust of the Duchess of Hamilton by Jacob Epstein and a Gothic stone figure of St. Joseph of d'Armathie.

The Minneapolis Institute of Arts purchased a marble head of Aphrodite of the 4th century B.C., and also a bronze Renaissance bust of an aged patrician, as well as a German Gothic statue of "Saint Eloi Shoeing the Leg of a Horse." This museum also received during the year a notable gift of American silver.

The Fogg Museum bought an important Spanish painting of the late 15th century and received as an anonymous gift a collection of nearly 4000 Japanese prints.

The Museum of the Rhode Island School of Design acquired two paintings by Daumier.

The Cincinnati Museum bought "Family Group" painted by Cornelis de Vos.

The Dallas Museum, Dallas, Tex., acquired a portrait by Van Dyck.

The Seattle Museum acquired three works in sculpture by Hunt Diederich and also a work by Allen Clark.

The Albright Gallery, Buffalo, purchased Monticelli's Portrait of Madame Rosenthal.

The Addison Gallery of Art, Phillips-Andover Academy, purchased a head of the Japanese poet, Noguchi, by Alfeo Faggi.

Smith College Museum of Art acquired a wooden statue in polychrome of a "Man with Falcon," of the 14th or 15th centuries which came from the French Pyrenees. A bronze portrait head of Paul Robeson by Jacob Epstein was also acquired.

The Whitney Museum early in January announced the purchase of 28 paintings from its First Biennial Exhibition of Contemporary American Paintings held the previous month. This purchase made from a fund of \$20,000 contributed by Mrs. Harry Payne Whitney took the place of the usual prize awards. The paintings were added to the Museum's permanent collection.

A portrait bust of "Pop" Hart by Reuben Nakian was given to the Museum of Modern Art by Mrs. John D. Rockefeller, Jr.

NECROLOGY. Among leaders in this particular field were the following deaths during 1933: William Sloane Coffin, President, Metropolitan Museum of Art; Joseph Breck, Director of the Cloisters, Metropolitan Museum; Eli Kirk Price, President of the Pennsylvania Museum; Francis H. Dewey, President, Worcester Museum; Benjamin Ives Gilman for many years Secretary of the Museum of Fine Arts, Boston; Philip H. Henry, founder and director of the Phillips Art Museum of Asheville, N. C.

ART SALES. In June, 1933, the American Art Association-Anderson Galleries, Inc. (N. Y.) announced a total of \$3,180,117.50 realized by 66 sales conducted during the season of 1932-33, beginning the last of September of the former year and concluding May 25th of the latter. Of this amount, paintings brought \$848,757.50; prints \$48,207.50; furniture, tapestry, rugs, silver, and other art objects, \$1,910,762. The highest total reached in any one collection was \$347,940, brought by that of the late Alfred H. Mulliken of Chicago and New Canaan, whose collection embraced distinguished 17th and 18 century British and French portraits, notable antique English and other furniture, rare clocks, silver, porcelains, etc. The paintings in this collection realized \$286,100. From it the Springfield Museum of Fine Arts secured several important works. Other museums that did the same were the New York Metropolitan Museum, the Brooklyn Museum, the Reading Public Museum and Art Gallery, the W. R. Nelson Gallery of Art in Kansas City, etc. Despite hard times, the dispersal of this and many other collections, during the season was marked by attendance which taxed the capacity of the large assembly hall.

The Burton Mansfield Collection consisting mainly of examples of the American School also sold well. In this collection a water color by Winslow Homer, "Watching the Tempest," brought \$3100—a record price—and an oil painting, "Fisher Girl" by the same artist, sold for \$11,000.

At this sale paintings by Childe Hassam and J. Alden Weir brought the highest prices realized for works by these painters within the last four years. One thousand eight hundred dollars was paid for a pastel, "A Venetian Scene," by Whistler. The highest price paid for any painting during the season was \$35,000, fetched by Hoppner's half-length portrait of "Louisa, Countess of Mansfield," the property of Sir Charles and Lady Gunning of London, which sold in New York in April. Rembrandt's "Woman Plucking a Fowl" from the Kleinberger Collection sold for \$26,000, while Lawrence's portrait of "Mrs. Raikes and Daughter" sold for \$17,100. All three of these paintings went to private collectors. The 31 paintings in the Gunning Collection brought in the aggregate over \$100,000; the Kleinberger Collection of primitives and old masters, \$126,635, and the Mulliken Collection of paintings, \$286,100.

Among the prints sold were two examples of Whistler's "Nocturne; Palaces," both in the seventh state, one of which brought \$1325 and the other \$1300.

Less American furniture was sold during this season than the previous one, fine 18th Century English and French furniture predominating. Two sales of American furniture, one in January and the other in March, yielded \$91,719. In one of these sales, \$1300 was paid for a church bell cast by the Reverses of Boston.

FOREIGN. The prices of pictures went up in London sales rooms during the year 1933. At Sotheby's in June the sum of £9200 was realized for six sketches by Rubens from the Barrymore Collection, Marbury Hall. At the same sale Mantegna's painting of "The Virgin Nursing her Child" went for £1950, and the National Art Collection Fund acquired "Job in his Misery" by Jan Lievin for £400. Three thousand one hundred guineas was paid at a later sale for a small Hobema. In June the Director of the National Gallery of Ireland secured a painting of St. Justa by Zurburan, paying 720 guineas for it. In July, portraits of the late Lords Baltimore, six in number, came up for sale at Sotheby's. Through the interest and enterprise of an American attending the Economic Conference and the cooperation of the former owner and new purchasers, five of these paintings were acquired for the State of Maryland. They have been given permanent placement in the State capitol at Annapolis.

At Christie's on June 15, when the Oppenheim Collection was sold, objects of art, furniture, metal work, etc., brought higher prices than for many years.

A portrait of Joseph Conrad painted in 1924 by Walter Tittle, American artist, was purchased by the British Nation for inclusion in its National Portrait Gallery. The King of England in May ceremoniously opened the new Duveen wing to this Gallery.

The King of Italy bought a small equestrian statue by Sidney B. Waugh, Fellow in Sculpture, American Academy in Rome, which was shown in an exhibition there.

High prices were also maintained in French and German sales rooms.

ARTS AND LETTERS, AMERICAN ACADEMY OF, AND NATIONAL INSTITUTE OF. See **ACADEMY OF ARTS AND LETTERS, AMERICAN.**

ASCENSION, ISLAND OF. See **ST. HELENA.**

ASHANTI. See **GOLD COAST.**

ASIA. See **CHINA, JAPAN, SOVIET CENTRAL ASIA, SIBERIA, INDIA,** and the other articles on

the subdivisions of the continent. See also the articles; **EXPLORATION; POLAR RESEARCH.**

ASIR. See **ARABIA.**

ASSOCIATION FOOTBALL. See **SOCCER.**

ASTRONOMY. Although eclipses, occultations, configurations of the planets, the position of the moon, the returns of the known periodic comets, and other phenomena, can be predicted years in advance, nevertheless most spectacular events of astronomy occur unheralded—remarkable meteoric showers, brilliant comets previously unknown, novæ visible in full daylight, and so on. The most spectacular event of 1933 was the appearance, early in August, of a bright spot on Saturn, which lasted until about September 13. This spot was discovered independently by an amateur observer in England, the Berlin Observatory, and the Naval Observatory at Washington. Only twice before has a spot, or any other irregular marking, been observed; in 1876, Asaph Hall observed the first spot, and in 1903 Barnard at the Yerkes Observatory observed the second.

The spot was, when first observed, about one-fourth of Saturn's diameter long, and one-eighth of the diameter wide, or about 9000 by 4500 miles. Later observations showed it to be the brightest of a row of spots stretching some 40° in longitude, or about 50,000 miles. The appearance of a similar spot on Jupiter would be no news at all, for Jupiter's surface is crowded with details and changing constantly; but Saturn habitually presents an almost featureless surface. Before any spots had been observed on Saturn there was no doubt that it rotated rapidly since the polar flattening is greater than for any other planet. All three of the white spots have been used to determine Saturn's period of rotation, although the first determination was made by Sir Wm. Herschel in 1794 without the aid of any definite spot but from some peculiarity of the surface.

Barnard's spot was in planetary latitude +36° and from it Barnard established the fact that the equatorial rotation of Saturn is much faster than at mid-latitudes. This, as is known, is also the case with Jupiter, but the Saturnian equatorial excess appears to be much greater (almost five times) than the Jovian. Thus it is believed by many astronomers that the visible surfaces of both planets are formed of clouds driven by powerful and persistent winds. This is not strange, for the earth would appear to an outside observer as thickly dotted with brilliant white spots, and having cloudy regions in a belt near the equator, with clearer zones on each side, and irregular masses nearer the poles corresponding to the storm areas of the temperate regions; as the earth's storm areas usually move eastward several hundred miles a day, an outside observer would deduce from them a rotation period shorter (by about twenty minutes) than 24 hours. In the trade wind zones within the tropics the winds are prevailing from the east, and clouds would give a longer period than 24 hours. The differences in rotation period of these terrestrial spots would thus range over nearly an hour, or even more if an outside observer happened to catch cirrus clouds driven by the rapid westerly winds at high altitudes. These differences are far less than for the great planets; the winds in the stratospheres of the latter must blow at speeds far exceeding the earth's worst hurricanes. If spots like the last two (Barnard's and the 1933 spot) should appear simultaneously on Saturn, the difference in their rotations would cause the equatorial spot

to gain a whole revolution on the other in about 26 of Saturn's rotations on its axis. It is 232,000 miles around Saturn's equator, hence if the northern spot were fixed to the body of the planet there would be a west wind on the equator blowing 800 miles an hour. It is not so far around the planet in a higher latitude so a 650-mile east wind in the temperate zone would suffice here. Or there might be a 400-mile west wind at the equator and a 300-mile east wind in the North. Why such tremendous gales should blow upon the great planets is not yet understood.

Perhaps the next most spectacular event was the display of meteors which took place on October 9. These were visible throughout Europe, but were not seen in North America. The display was believed to be the most brilliant since the Leonid shower of 1866. Gerasimovic at the Poulkovo Observatory reported a rate of more than one hundred meteors per minute and Witkowski at Poznan estimated a maximum rate of ten meteors per second.

The radiant point was in the constellation Draco. These meteors were moving in the same orbit as the Giacobini comet. This comet has a perihelion distance equal to the earth's distance from the sun, and its orbit is inclined 30° to the ecliptic. The comet was observed this year as a very faint object, and came to perihelion on July 15, reaching the point of closest approach to the earth on July 21. At the time of the meteor shower it had passed far beyond, and was nearly 150 million miles away. The swarm of tiny particles which followed behind it, and gave rise to the meteor shower, trailed a long distance. It seems probable that the October display arose from the earth's encounter with a denser cluster of meteoric particles in this long trail, for the main part of it lasted only about two hours, during which time the motion of the meteors relative to the earth was only about 75,000 miles. At the next return of the comet (1940) the earth will be far away on the opposite side of the sun, but in 1946 there should be a really close approach of the two bodies, and a remarkable display of meteors may be visible.

A number of crater-like formations discovered in recent years in different parts of the world where there is no indication of volcanic action have been carefully studied recently. There is considerable evidence in favor of the theory of meteoric origin not only of the well-known Meteor Crater in Arizona, but also of the group of craters found near Henburg, Australia, in 1931, and of the craters found at Wabar, in the Arabian desert, in 1932. Others that have been studied are the craters near Vanovara in North Central Siberia; near Odessa, Texas; on the Island of Oesel, in Esthonia; and (the most extensive of all) those discovered on the South Atlantic Coast, between Norfolk and Savannah, from aerial maps of this region made in 1930: these photographic maps revealed numerous elliptically shaped scars over this territory; covering an area of 40,000 square miles; these scars were extensively investigated by Melton and Schriever, and they announced their conclusion as to meteoric origin late in 1932. The average length of the scars is 2210 feet and average width 1430 feet with maxima of 8090 feet and 4410 feet respectively; the major axes of the ellipses are practically parallel.

Opik has completed an investigation on the perturbations of a comet (or meteor), while in the aphelic part of a very elongated orbit, by passing stars. On reasonable assumptions as to

the mass and relative velocity of the disturbing star, as well as the frequency of these approaches, the perturbations are shown to increase the perihelion distance systematically when the aphelion distance is over 2000 astronomical units. Meteors or comets of aphelion distance greater than 10,000 astronomical units are not likely to come within observable distance. To make the discovery of an ordinary sized comet probable it is necessary that it have a perihelion distance less than two astronomical units.

Near aphelion a comet moves very slowly: thus, one with a period of one million years will have a maximum distance of 20,000 astronomical units, and requires almost 100,000 years to travel the last hundred units of this distance. The stars move much faster. If, when the comet was at aphelion, a star came within 10,000 units, the comet would then be attracted by the star four times as strongly as by the sun; but with the average motion that a star would have, the star could not remain at this close distance for more than about 3000 years. Its attraction would therefore act for only a short time, while the sun attracts the comet incessantly. Hence, even at great distances the sun's influence prevails, and the extent of its effective domain is much greater than has previously been supposed. The net effect of the star's attraction on a comet is to give the latter a pull toward the nearest point on the star's track. The closer the star comes, the greater is its attraction, but the shorter is the time during which it is near, so that the effect does not increase to nearly as much as that of the steady pull of a fixed body.

A disturbance great enough to pull the comet away from the sun into a parabolic or hyperbolic orbit would be produced only if the star came really near it. For a comet 20,000 units from the sun the approach would have to be within 200 units; for one million units away, within 1400 units. The stars are so far apart that such approaches must be exceedingly rare. Opik calculates that, if the sun had a family of comets with orbits so elongated that their maximum distance was one million astronomical units, it would take 3,000,000,000 years for one-half of the number to be lost by encounters with passing stars. Only 7 per cent of comets within an aphelion distance one-tenth as great would be lost at the same time. With the larger distance a comet's period would be about 350 million years, with the smaller about 11 million, so that the former group is likely to make several returns to the sun, and the latter a great many, before they vanish into space.

The chance that a comet of such long period will continue to return near enough to the sun to be observed from the earth is much less probable. Opik concludes that a comet with a period of a million years would have at best an even chance of continuing, during the probable past history of the solar system, to return within the region where comets shine and grow tails. Comets with smaller periods would be less affected. Opik's estimates of observed inclinations suggest that observable comets do not go beyond 2000 astronomical units. His theory affords an estimate of the extreme limit of the solar system at 10^6 astronomical units.

EXTRAGALACTIC SYSTEMS. From an investigation of 45,000 extragalactic nebulae identified on 1300 plates, Hubble has outlined the zone of avoidance and concluded that within the errors of observation the distribution in the twogalactic hemispheres is the same. There is no appreciable

systematic variation in longitude, but the increase in numbers with latitude is well defined, following a cosecant law between 15° and 90° . Except for occasional clusters, the distribution over the sky is random, and the increase in numbers with the exposure time of the plates is consistent with a uniform distribution in depth.

A faint cluster in *Corona Borealis*, discovered by Hubble, shows about 600 nebulae, with a most frequent photographic magnitude of about 19.5, within a circle $30'$ in diameter. A red shift corresponding to a velocity of $+21,000$ km/sec. observed by Humason for one of the nebulae in this cluster is in excellent agreement with the value predicted by Hubble from its distance. This is the largest recessional velocity thus far observed.

MISCELLANEOUS. C. T. Elvey has measured the sky background in the region containing the Gegenschein with a photoelectric photometer attached to the 40-inch telescope at the Yerkes Observatory. These measurements furnish data sufficient to separate the illumination which is due to the Gegenschein from that which arises from the light scattered in the atmosphere. He obtained an integrated brightness of the Gegenschein equivalent to a star of photographic magnitude $+0.2$.

On the assumption that our galaxy was formed by the encounter of two spherical systems of stars, in each of which the physical characteristics of the stars permanently near the centre differed somewhat from those of stars near the boundary, Strömberg has carried on a theoretical investigation of the dynamics of the galaxy which has led to a new formulation of the energy integral in the problem of three bodies.

On October 6, the tercentenary of the Astronomical Observatory at Leiden, Holland, was celebrated. This is the oldest university observatory in Europe, having been founded by Golius, a pupil of Snellius.

On November 1, the Fels Planetarium was opened to the public in Philadelphia. This is the second planetarium to be opened in America, and the twentieth in the world.

PHENOMENA. Six comets appeared during 1933, including the returns of Pons-Winnecke, Wolf, and Giacobini 1900 III. A new outburst of Nova Ophiuchi No. 3 (R S Ophiuchi) took place in August; the magnitude reached 4.3 on August 12. The brightest magnitude previously observed was 7.7, in 1898; during the past 20 years, the magnitude has fluctuated from 11 to 12. After the outburst, the spectrum showed some of the coronal lines.

NECROLOGY. Ormond Stone, January 17; Robert T. A. Innes, March 13; Georg Struve, June 10.

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ATHENS. See ARCHEOLOGY.

ATHLETICS, TRACK AND FIELD. Two slim college youths, one from Dunedin, New Zealand, representing Oxford University, the other from Princeton University, furnished the major thrill and achievement of the 1933 track and field season. On a July afternoon, under perfect conditions and on a magnificently groomed track at

Princeton, in the Princeton-Cornell vs. Oxford-Cambridge track meet, this pair eclipsed the mile record, most important of track fixtures. The winner was Jack E. Lovelock of Oxford, the loser William R. Bonthron of Princeton. Lovelock raced shoulder to shoulder with the black haired Princetonian all the way, burst ahead at the last turn and broke the tape in 4:07.6, with Bonthron trailing by six yards and crossing the finish line in 4:08.7. Against this time stood the world's previous best of 4:09.2, hung up by Jules Ladoumegue, of France, in 1931. Bonthron had capped a great season by taking the double at the Intercollegiates—the mile and the half-mile. Lovelock had been in the Olympic mile final, had broken the world's three-quarter as well as the British mile marks. On top of his great effort against Lovelock, Bonthron came back an hour later to win the half mile in 1:53 against the invading squad.

All in all, the mile at Princeton was the major achievement of the year, but during the year no less than twelve track and field records fell, with Americans responsible for five of them. Luigi Beccali, Italian, who had taken the 1500 meter run (Olympic mile) at Los Angeles in 1932, shattered two existing marks in 1933. He ran the 1500 meters in 3:49, beating Lovelock on the way, at Turin. He turned in 1000 yards in 2:10.1, as against the listed standard of 2:11.2 Johnny Morriss, of Lafayette, La., lowered the 110-meter hurdles mark, doing 0:14.3 in the national A.A.U. meet in Chicago in June. V. Iso-Hollo, Finnish runner, lowered the four-mile mark to 19:01. Walter Marty of Fresno, California eclipsed the best running high jump mark when he cleared 6 feet, $8\frac{5}{8}$ inches. Ben Eastman, blonde Stanford University runner, remembered for his memorable quarter-mile duels with Bill Carr in 1932, set a new 600-yard mark of 1:09.2. Matti Jarvinen of Finland bettered the javelin record with a toss of 224 feet, 9 inches, and H. Sievert of Germany piled up 8467 points in the decathlon to better the record by five points. Glenn Cunningham, barrel chested runner from the University of Kansas, added his name to the record book with a new American record for 1500 meters of 3:52.3. Cunningham was the hero of the indoor season because of his trio of mile triumphs over Gene Venzke, and because of one 4:12 mile indoors. Cunningham, a member of the United States team that toured Europe in the summer, was beaten only twice in the year, once by Venzke in the national indoor 1500 meter run, and again in the N.C.A.A. half mile in the summer when Charles Hornbostel of Indiana University nipped him at the tape. In those same N.C.A.A. games Cunningham turned in a mile in 4:09.8. Cunningham won the national A.A.U. outdoor 1500 meter event as well as the 800-meter run.

Ralph Metcalfe, from Marquette University, won National A.A.U. championships at 60, 100 and 200 meters and N.C.A.A. titles at 100 and 220 yards. He was hitting world's record almost every time and went through the year with only one defeat. Keith Brown, the Yale University pole vaulter, tied for four major championships: the Intercollegiate indoor and outdoor, the National A.A.U. indoor and outdoor. He cleared 14 feet or better five times.

Miss Annette Rogers of the Illinois W.A.C. was the outstanding performer in women's track. She captured the 100-meters dash outdoors, the 200 meters and the running high jump indoors.

In November the A.A.U. passed a resolution pledging a boycott of the 1936 Olympic games at Berlin unless the Nazi stand of anti-Semitic discrimination in sports was discontinued. A few days later, on assurance from Dr. Theodore Lewald of the German Olympic Committee and Brig.-Gen. Charles H. Sherrill, American member of the International Olympic Committee, that all restrictions would be removed, the American Olympic Association passed a more conciliatory resolution with the boycott threat one of inference rather than of direct words.

ATMOSPHERE. See METEOROLOGY.

ATOMS, ATOMIC THEORY. See CHEMISTRY; PHYSICS.

AURORAE. See METEOROLOGY.

AUSTRALIA, COMMONWEALTH OF. A confederation of six States, established Jan. 1, 1901, as a self-governing dominion of the British Empire. Capital, Canberra.

AREA AND POPULATION. The area of the six States and two Territories and the census populations of Apr. 4, 1921 and June 30, 1933, are shown in the accompanying table.

AREA AND POPULATION OF AUSTRALIA

States and Territories	Area in square miles	Population Apr. 4, 1921	Population June 30, 1933
New South Wales	309,432	2,100,371	2,601,104
Victoria	87,884	1,531,280	1,820,360
Queensland	670,500	755,972	947,789
South Australia	380,070	495,160	580,987
Western Australia	975,920	332,732	438,948
Tasmania	26,215	213,780	227,605
Northern Territory	523,620	3,867	4,860
Federal Capital Territory	940	2,572	8,947
Total	2,974,581	5,435,734	6,630,600

During 1932, births numbered 110,933 (118,509 in 1931); deaths, 56,755 (56,560); marriages, 43,634 (38,882). Births in 1932 exceeded deaths by 54,178 (61,949 in 1931), while emigration exceeded immigration by 4843 (12,061 in 1931), leaving a total estimated increase of 49,335 (49,888 in 1931). The rate of increase for both 1931 and 1932 was less than half the annual rate of increase for the previous decade. The census populations of the chief cities (all of them State capitals) on June 30, 1933, with figures for Jan. 1, 1932 in parentheses, were: Sydney, New South Wales, 1,235,367 (1,256,230); Melbourne, Victoria, 992,048 (1,030,750); Brisbane, Queensland, 299,782 (317,150); Adelaide, South Australia, 312,629 (324,337); Perth, Western Australia, 207,464 (209,729); Hobart, Tasmania, 60,408 (58,270). The population of Canberra, the Federal capital, on June 30, 1933, was 7325. These seven cities contained approximately half the total population of the Commonwealth.

EDUCATION. Elementary education is free and compulsory. In 1930, there were 10,257 State-aided schools, with an average attendance of 801,729, and 1803 private schools, with an average attendance of 193,691. The six State universities, located in the capitals of the respective States, had 2693 matriculated and 1209 non-matriculated students in attendance in 1930. For educational statistics of the several States, consult the article on each State.

PRODUCTION. Australia is primarily dependent upon its agricultural and livestock industries, although manufacturing is extensively developed.

The estimated value of production by industries for the fiscal years ended June 30 are shown in the accompanying table from the *Quarterly Summary of Australian Statistics*.

VALUE OF AUSTRALIAN PRODUCTION, YEARS ENDED JUNE 30

[In thousands of pounds sterling]

Item	1930	1931	1932
Agricultural	£ 77,109	£ 70,500	£ 74,489
Pastoral	84,563	69,499	61,540
Dairy, poultry, bee-farming	49,398	43,067	41,478
Forestry and fisheries	11,371	8,319	7,653
Mining	17,912	15,856	13,852
Manufacturing*	149,184	112,966	106,456
Total	389,537	319,701	304,968

* Value added in process of manufacture.

Wheat and wool are the primary products of agriculture and stock raising respectively. Of the 21,166,900 acres under crops during the 1931-32 season, 14,741,313 acres were devoted to wheat. This compared with a wheat acreage of 18,164,920 in 1930-31 out of a total crop acreage of 25,163,816; the crop acreage was less than 2 per cent of the total land area. Wheat production in 1932-33 was estimated at 212,398,359 bushels (190,612,188 bushels in 1931-32). Production of the other leading crops in 1931-32 was: Oats, 15,194,080 bushels (16,658,058 in 1930-31); corn, 7,062,383 bushels (8,025,619 in 1930-31); hay, 3,167,459 tons (4,149,061); sugar cane, 4,213,453 tons (3,688,869). Wool production for the season ended June 30, 1932, amounted to 1,006,630,847 pounds (913,141,253 pounds in 1930-31). Live-stock in the country in 1931 included 110,618,893 sheep, 12,260,955 cattle, 1,776,421 horses, and 1,167,845 swine. Dairy produce during 1931-32 included 390,654,070 pounds of butter, 31,422,973 pounds of cheese, and 71,121,740 pounds of bacon and ham.

Minerals produced during 1932 consisted of 713,882 fine ounces of gold, 8,544,148 tons of black coal, 14,406 tons of copper, 190,132 tons of pig iron, 187,515 tons of lead, 8,993,578 ounces of silver, 2059 tons of tin, and 84,742 tons of zinc. The value of all minerals extracted during the calendar year 1932 was £15,613,299 (£13,352,316 in 1931). The value of manufacturing production, including the cost of materials used, showed a sharp decline from £420,445,288 in 1928-29 to £281,645,785 in 1931-32. During the same period the value added in process of production fell from £167,623,316 in 1928-29 to £110,981,830 in 1931-32. In the latter year there were 21,657 factories, with 336,658 workers, who received wages of £55,931,818. In order of the value of output in 1931-32, the principal manufacturing lines were: Food, drink, and tobacco, £28,697,012; industrial metals, machines, implements and conveyances, £22,804,135; clothing, £11,105,046; heat, light, and power, £9,699,248; and paper, stationery, printing, book binding, etc., £9,620,946.

COMMERCE. The upturn in Australian foreign trade in the year ended June 30, 1933, after the continuous declines of the preceding four years, is shown in the accompanying table compiled by the Commonwealth Statistician.

In Australian currency values, exports totaled £104,354,638 in 1930-31, £107,967,143 in 1931-32, and £121,277,185 in 1932-33. In previous years British and Australian currency values were the same. The value in Australian currency

AUSTRALIAN FOREIGN TRADE, 1928-29 TO 1932-33
(British currency values)

	Imports	Exports *	Surplus of imports (-) or exports (+)
1928-29	£143,647,861	£141,632,589	£- 2,015,292
1929-30	131,081,820	125,127,148	- 5,954,172
1930-31	60,959,638	88,904,142	+ 27,944,509
1931-32	44,712,868	85,002,631	+ 40,289,763
1932-33	57,985,442	96,861,556	+ 38,876,114

* Including re-exports.

of the leading export items in 1932-33 (1932-32 in parentheses) was: Greasy wool, £32,103,045 (£28,983,787); scoured wool, £4,299,816 (£3,118,459); butter, £9,264,665 (£9,812,827); flour, £4,147,003 (£3,833,237); mutton and lamb, £2,697,224 (£2,994,062); beef, £1,854,582 (£2,087,829). The six leading import lines in 1932-33, in order of value, were: Apparel, textiles and manufactured fibres; metals, metal manufactures, and machinery; paper and stationery; oils, fats, and waxes; drugs, chemicals, and fertilizers; and vegetable foodstuffs and non-alcoholic beverages. During 1932, United States statistics showed exports to Australia of \$26,817,690 (\$27,167,312 in 1931) and imports from Australia of \$4,643,403 (\$12,504,130).

For the year ended June 30, 1933, imports from the United Kingdom were valued (in British currency (at £23,930,554; from the United States, £8,007,809; Japan, £3,564,553; Netherland India, £2,907,204; Canada, £2,244,369. Exports from Australia (in Australian currency) in the same period were: United Kingdom, £65,975,132; Japan, £11,468,459; Germany, £5,084,802; United States, £3,538,650; New Zealand, £2,770,237; and Canada, £1,209,237.

FINANCES. For the fiscal year ended June 30, 1933, revenues totaled £73,512,809 (£71,532,298 in 1931-32) and expenditures were £69,967,000 (£70,218,207 in 1931-32). The surplus was £3,547,000 in 1932-33 and £1,314,091 in 1931-32. The budget estimates for 1932-33 were: Revenue, £65,986,000; expenditure, £67,287,000. For 1933-34, revenue was estimated at £68,580,000 and expenditure at £69,756,000, leaving a deficit of £1,176,000. For details of the 1933-34 budget, see under *History*. Revenue and expenditure of the Commonwealth and of the six States in 1932-33 are shown in the accompanying table.

REVENUE AND EXPENDITURE OF AUSTRALIAN COMMONWEALTH AND STATES, 1932-33
(In thousands of pounds sterling)

State	Revenue	Expenditure	Surplus (+) or deficit (-)
New South Wales	50,721	54,992	- 4,271
Victoria	24,283	25,139	- 856
Queensland	13,397	14,951	- 1,554
South Australia	10,161	11,170	- 1,009
Western Australia	8,332	9,196	- 864
Tasmania	2,522	2,577	- 55
Total, six States	109,416	118,025	- 8,609
Commonwealth	73,512	69,967	+ 3,545
Grand total *	172,430	177,494	- 5,064

* Duplications eliminated.

According to provisional figures, the public debt of the Commonwealth on June 30, 1933, stood at £396,806,503 and that of the States at £807,851,620, or a total of £1,204,658,123. The Commonwealth debt on June 30, 1932, was £398,

884,730, the State debt was £788,943,138, and the total Commonwealth and State debt was £1,187,827,868, or more than £181 per capita. Not taking exchange difficulties into account, the nominal interest payable on the total debt in 1932-33 was £50,437,385 (£33,289,319 on the States' and £17,148,066 on the Commonwealth debt). In addition, there was a short-term debt on June 30, 1933, of £83,000,000, of which £69,280,000 represented State and £13,720,000 Federal obligations.

COMMUNICATIONS. On June 30, 1932, there were 26,959 miles of government railways and 840 miles of private railways open for traffic. Of the government lines, 2145 miles were owned by the Commonwealth and 24,814 miles by the six States. For the year 1931-32, all government lines reported gross earnings of £37,580,000 and operating expenses of £28,142,000. All the systems showed an improvement in their net financial position in 1931-32, as compared with the previous year. The Federal system's deficit was reduced to £78,000 from £150,000 in 1930-31. There are some 330,000 miles of highways, of which about 6500 miles are macadam. Statistics of subsidized civil aviation for the fiscal years ended June 30, 1933 and 1931 (figures for 1931 in parentheses), were: Number of flights, 3704 (3655); miles flown, 553,479 (556,966); pounds of freight carried, 445,759 (443,059); pounds of mail carried, 30,722 (27,320); passengers carried, 8644 (7422). The net shipping tonnage entering Australian ports during 1931-32 totaled 5,686,898, of which 3,946,918 tons represented vessels with cargo; net tonnage cleared, 5,708,886 (5,256,181 tons with cargo).

GOVERNMENT. Executive power is vested in the King, who acts through a governor-general and a ministry responsible to the Federal Parliament. There is a Senate of 36 members (6 from each State), elected for six years, and a House of Representatives of 75 members apportioned among the States on a population basis. The composition of the House in 1933 was: United Australia party, 37; United Country party, 16; Labor (Federal group), 14; Labor (Lang group, 5); Independents, 3. Governor-General, Sir Isaac Alfred Isaacs. The Ministry, as reorganized Oct. 13, 1932, was composed as follows: Prime Minister and Treasurer, Joseph A. Lyons; Attorney-General, Minister for External Affairs and Minister for Industry, J. G. Latham; Minister without Portfolio, Stanley M. Bruce; Defense, Sir George F. Pearce; Postmaster-General, R. A. Parkill; Minister for Trade and Customs, Lieut.-Col. T. M. White; Vice-President of the Executive Council, Senator A. J. McLachlan; Interior, J. A. Perkins; Commerce, F. H. Stewart; Health and Repatriation, C. W. C. Marr.

HISTORY

FINANCIAL AND ECONOMIC RECOVERY. The most significant development in Australia during 1933 was the country's remarkable recovery from the grave economic and financial difficulties experienced since 1929. A rise in the price of wool and wheat, Australia's chief export products; a bumper wool clip of 3,044,000 bales in 1932-33 as compared with the previous five-year average of 2,600,000 bales; the successful conversion of Australian overseas obligations to lower interest rates; and a spectacular rise in Australian securities in London, despite the lower interest—all these factors testified to the success

with which the Lyons government had carried out the so-called Premiers' (Copland) Plan, which had been formally adopted as a method of economic revival on June 10, 1931 (see 1931 YEAR BOOK).

Prime Minister Lyons crowned his government's financial achievements with his budget for 1933-34, presented to the House of Representatives at Canberra, Oct. 4, 1933. He characterized the budget as "a reward which the Australian people have earned by sacrifices made and self-discipline imposed to meet the depression." Announcing a surplus of £3,546,000 in the Federal accounts for the fiscal year ended June 30, 1933, he stated that in 1933-34 taxes would be reduced by £5,440,000 and expenditures increased by £1,212,000. He estimated a budget deficit of only £1,176,000, despite this loosening of the Commonwealth's purse strings. His budget increased old-age and invalid pensions by two shillings sixpence (about 60 cents) weekly, restored part of the emergency cut in public salaries, gave further concessions to dependents of war pensioners, increased the Federal grant to the States by £248,000 and defense expenditures by £1,462,000, and reduced tariff and primage duties, mainly on British imports. At the same time a substantial improvement in the finances of the several States was reported. See under *Finance*.

After having issued some £90,000,000 in Treasury bills to finance public works and stimulate employment, the Federal and State governments, beginning June 30, 1933, were able to return to the open market and raise loans at low interest rates for their financial requirements. The expenditure of £17,300,000 of loan money on public works was authorized at the beginning of the 1933-34 fiscal year. Part of these funds were raised by an internal loan of £5,000,000, which was oversubscribed by £3,000,000. On Sept. 15, 1933, the Commonwealth completed its fifth conversion operation on the London market within a year. About £21,000,000 of 5½ and 6 per cent bonds nearing maturity were converted into 20-year 3¾ per cent bonds. The issue was immediately taken up and shortly afterward commanded a premium of 1½ per cent. Subscriptions for a 3½ per cent internal loan of £10,000,000 were closed on November 17, two days after they were opened, the full amount having been taken. Another £16,647,349 external conversion loan was announced in London December 4, bringing total conversions for the year to £88,212,536.

TARIFF REDUCTIONS. The Lyons government during 1933 continued its policy of gradually modifying the unprecedentedly high tariff established by the previous Labor government. Numerous amendments, designed to bring the tariff schedule in harmony with the trade agreement concluded with the United Kingdom at Ottawa in 1932, became effective Mar. 9, 1933. The tariff changes embodied in the Prime Minister's budget proposals of October 4 went into effect the following day. Most of these reductions gave an advantage to British manufacturers in the Australian market.

SECESSION MOVEMENT. The tariff reductions aroused much opposition among both workers and industrialists in the manufacturing centres of New South Wales and Victoria. In the other States, where agriculture, lumbering, and other primary industries predominated, the reductions were considered as not sufficiently drastic. These

States had long considered themselves victimized by the Commonwealth tariffs for the benefit of the industrial classes. The strength of the secession sentiment in Western Australia was strikingly evidenced in a State referendum on the issue held Apr. 8, 1933, the vote being nearly 2 to 1 in favor of withdrawing from the Commonwealth. On the same day the people of the State voted down a proposal for a convention to modify and reconstruct the Federal Constitution. While favoring secession, the voters ousted the Nationalist-Country party administration of Premier Mitchell, which was strongly secessionist, and placed in office the Labor party, which had opposed the secession agitation.

The secession vote in Western Australia was regarded as merely a gesture of dissatisfaction. No steps were taken by the State's new Labor government to actually withdraw. According to Federal authorities, the only legal step open to the State was to petition the King for the creation of a new Dominion. The reply to such a petition, it was believed, would be that as Western Australia had petitioned to be admitted into an indissoluble partnership, only the other partners could release her. See **WESTERN AUSTRALIA**. To soothe the feelings of the primary producers, Prime Minister Lyons proposed the appointment of a commission to investigate the grievances of Western Australia, South Australia, and Tasmania against Federal economic policies.

Meanwhile a referendum in New South Wales gave a small majority for the State government's proposal to select members of the upper house (Legislative Council) by vote of both houses of the Legislature instead of by appointment by the Crown. The reform was intended to prevent a repetition of ex-Premier J. T. Lang's practice of appointing enough of his adherents to the Legislative Council to nullify the legislation passed by a hostile majority in the lower house. See **NEW SOUTH WALES**.

PREPAREDNESS CAMPAIGN. The Lyons government also reversed the national defense policy of the preceding Scullin (Labor) Ministry, which in 1929 had abolished the compulsory military training system instituted during the Japanese war scare of 1911. The apparent failure of world peace and disarmament efforts and Japanese policy in the Far East led to extensive correspondence between British and Australian authorities. This was followed by the announcement by Sir George Pearce, Minister of Defense, early in October that the government would spend £1,500,000 during 1933-34 for naval construction, improvement of coast and aerial defenses, and the development of munitions factories. The ultimate aim of the Lyons Ministry was a powerful squadron of cruisers and destroyers interchangeable with units of the British navy. Restoration of compulsory military training was also considered.

In connection with its plans to preserve the "white Australia" policy, the government looked favorably upon proposals for the development by a British chartered company of large uninhabited tracts in northern and southern Australia. The proposal for the private development of these areas as stock raising and agricultural regions, respectively, again aroused the historic Australian controversy between the advocates of private and public enterprise.

ANTARCTIC TERRITORY ACQUIRED. By an Order

in Council dated Feb. 7, 1933, the British Crown transferred to the authority of Australia "that part of His Majesty's dominions in the Antarctic Seas which comprises all the islands and territories other than Adelie Land which are situated south of the 60th degree of South Latitude and lying between the 160th degree of East Longitude and the 45th degree of East Longitude. . . ." This territory, much of which had been discovered by Australian expeditions, was formally accepted under the name of the Australian Antarctic Territory by an act of the Australian Parliament approved June 13, 1933.

CABINET CHANGES. On Sept. 21, 1933, Prime Minister Lyons announced the appointment of Stanley M. Bruce as Australian High Commissioner in London, thus automatically removing him from the Cabinet. Mr. Bruce had previously remained in the Cabinet while handling Australian conversion operations in London, but he concurred in the Prime Minister's view that his indefinite continuance as a Cabinet Minister while he was not in Australia would involve a departure from the principle of collective responsibility of the Cabinet.

AUSTRALIAN ANTARCTIC TERRITORY. See AUSTRALIA under *History*.

AUSTRIA. A federated republic of Central Europe proclaimed Nov. 12, 1918, and consisting of the nine provinces of Vienna (City of), Lower Austria, Upper Austria, Salzburg, Styria, Carinthia, Tirol, Vorarlberg, and Burgenland. Capital, Vienna (Wien).

AREA AND POPULATION. The census of 1923 showed an area of 32,369 square miles and a population of 6,534,481, of whom 1,865,780 were in Vienna. The estimated population on Jan. 1, 1932, was 6,732,625; that of Vienna in 1930, 1,842,763. The population of the other chief towns in 1923 was: Graz, 152,760; Linz, 102,081; Innsbruck, 56,401; and Salzburg, 37,856. During 1931 there were 106,661 births, 93,846 deaths, and 49,756 marriages; immigrants numbered 2585, of whom 223 went to the United States and 286 to Argentina. Roman Catholics comprise about 94 per cent of the population, with Protestants and Jews accounting for about 3 per cent each.

EDUCATION. Elementary education is compulsory and is provided by the communes and provinces. Public and private elementary schools in 1931-32 aggregated 5342, with 29,383 teachers and 835,348 pupils. The various secondary institutions numbered 159 in 1930-31, with 55,816 pupils. There were also 8 commercial academies, with 3994 students; three State universities with 18,599 students in 1932-33; and a number of technical high schools, theological colleges, and training colleges for teachers. The university enrollment in 1932-33 was: Vienna, 12,870; Graz, 2608; and Innsbruck, 3121.

PRODUCTION. Agriculture is the leading factor in Austria's national economy, but is supplemented by important manufacturing, lumbering and mining industries. Farm production showed a remarkable expansion during the decade 1922-32, as shown in the accompanying table.

In 1930, forests covered more than 37 per cent of the total area of Austria. Of the total timber resources, 83.7 per cent were conifers and 16.3 per cent deciduous trees. Mineral and metallurgical production in 1932 was: Coal, 3,300,000 metric tons (3,200,000 in 1931); pig iron, 94,466 metric tons (145,037 in 1931); steel, 204,-

AUSTRIAN AGRICULTURAL PRODUCTION

Crops	Area in hectares *		Production, metric tons	
	1922	1932 *	1922	1932 *
Wheat	185,968	212,000	201,988	841,800
Rye	337,889	379,700	845,179	605,500
Barley	126,725	169,400	121,909	272,800
Oats	284,771	308,700	265,866	412,700
Corn	60,018	64,700	88,819	140,400
Potatoes . . .	163,220	195,000	1,398,286	2,533,200
Beetroots . . .	11,190	43,700	172,828	1,020,400
Turnips	87,655	92,100	1,214,190	2,294,000
Clover hay . . .	209,422	237,700	525,187	996,900
Hay	1,158,216	1,127,000	2,726,557	3,711,200

* Hectare = 2.47 acres. * 1932 figures are preliminary.

514 tons (322,357 in 1931); sinter magnesite, 19,452 tons; magnesite bricks, 8437 tons; salt, about 75,950 tons. The 1932 cement output was 355,000 tons. Lead and zinc, copper, and crude graphite are other mineral products. The industrial census of 1930 showed 367,458 industrial establishments, with 1,432,936 employees. The clothing industry was the most important. Other important lines were paper, wood products, textiles, iron and metal goods, rubberware, leather goods, glass, earthenware, chemicals, etc. The number of unemployed receiving relief in 1932 averaged 309,000.

COMMERCE. The decline in Austrian imports and exports during the period 1929 to 1932 is shown in the accompanying table.

AUSTRIAN IMPORTS AND EXPORTS, 1929 TO 1933

[In millions of schillings, worth \$0.1407 at par]

	Imports	Exports	Import surplus
1929	3,317.6	2,219.5	1,098.1
1930	2,738.9	1,879.6	859.2
1931	2,210.0	1,326.8	883.2
1932 *	1,402.6	793.8	618.8
1933 *	1,187.4	815.4	372.0

* Figures are preliminary.

The 1932 imports, by commodity classes, were (in millions of schillings): Finished articles, 472.1; foodstuffs and beverages, 351.3; raw materials (except mineral fuel and peat), and semi-manufactured goods, 300.7; mineral fuel and peat, 140.2; live animals, 122.3; gold and silver, 16.0. Exports were divided by classes into (millions of schillings): Finished articles, 552.7; mineral fuel and peat, 0.7; other raw materials and semi-manufactured goods, 168.8; foodstuffs and beverages, 30.8; gold and silver, 22.2; live animals, 8.6. Exports to Austria's chief markets in 1932 (in million schillings) were: Germany, 136.7; Czechoslovakia, 83.5; Italy, 75.5; Hungary, 72.2; Switzerland, 61.1; and Yugoslavia, 57.4. The principal sources of 1932 imports (in million schillings) were: Germany, 285.2; Czechoslovakia, 212.3; Hungary, 136.5; Yugoslavia, 108.0; Poland, 105.8; Rumania, 81.5. Exports to the United States were 15,100,000 schillings; imports from the United States, 56,200,000 schillings.

FINANCE. Closed financial accounts of the Federal government for the fiscal calendar year 1932 showed a deficit of 15,000,000 schillings, as compared with a deficit of 322,000,000 schillings in 1931. Expenditures in 1932 amounted to 1,920,000,000 schillings and revenues to 1,905,000,000 schillings, as compared with 1931 expenditures of 2,330,000,000 schillings and revenues of 2,008,000,000 schillings. Of the 1932 revenues, taxation accounted for 1,049,000,000 schillings. The re-

vised budget for 1933 estimated total revenue at 1,288,500,000 schillings (1,054,900,000 schillings from taxation) and total expenditure at 1,288,700,000 schillings, the estimated deficit being 200,000 schillings. See *History* for 1933 financial developments. The schilling has a mint par value of \$0.1407 gold and exchanged at an average of \$0.1396 in 1932.

The public debt on Dec. 31, 1932, aggregated 2,991,000,000 schillings, of which 2,226,400,000 schillings represented the foreign and 764,600,000 the internal debt. The foreign debt included the unsettled part of the prewar debt as well as 137,100,000 schillings raised in 1930, 270,000,000 schillings in 1931, and 266,800,000 schillings in 1932. A new loan, the proceeds of which aggregated 237,400,000 schillings, was advanced to Austria by France, England, Italy, and Switzerland in October, 1933. Austria suspended service on its foreign debt in foreign currencies on June 24, 1932.

COMMUNICATIONS. Austrian railways in 1931 had 4154 miles of line, of which 3609 miles of state and private lines were operated by the state and 545 miles by private companies. In the same year the railways carried 92,000,000 passengers (104,000,000 in 1930) and 26,600,000 metric tons of freight (31,000,000 tons in 1930). Highways in 1931 extended 21,273 miles, of which 2450 miles were national roads. In 1933, the government appropriated \$9,160,000 for the construction of 206 miles of new highway and the improvement of existing roads. A series of regular air lines were operated by the state-subsidized Austrian Air Transportation Company.

GOVERNMENT. The Constitution of Dec. 7, 1929, vested executive authority in a President elected for six (later changed to four) years, who appointed the ministry and had power to dissolve Parliament. There was a lower chamber (Nationalrat) of 165 deputies elected for four years and an advisory upper chamber (Bundesrat) of 50 members chosen by the provincial Diets. The lower chamber elected Nov. 9, 1930, was composed of 72 Social Democrats, 66 Christian Socialists, 10 Agrarians, 9 Pan-Germans, and 8 Heimatblock representatives. President in 1933, Wilhelm Miklas (Christian Socialist), reelected Oct. 9, 1931. The Ministry appointed May 20, 1932, was a coalition of the Christian Socialist, Agrarian, and Heimatblock parties. The principal members were: Federal Chancellor, Minister of Foreign Affairs, Agriculture and Forestry, Dr. Engelbert Dollfuss (Christian Socialist); Vice-Chancellor, Franz Winkler (Agrarian); Defense, Karl Vaugoin (Christian Socialist); and Finance, Dr. Emanuel Weidenhoffer (Christian Socialist). For changes in 1933, see *History*.

HISTORY

The profound readjustment of European diplomatic alignments following the advent of the Hitler régime in Germany on Jan. 30, 1933, was nowhere more dramatic and significant than in Austria. Before Hitler became Chancellor of Nazi Germany, the Austrian people overwhelmingly favored union with Germany. Their government, headed by Engelbert Dollfuss, was actively aligned with Germany, Hungary, Bulgaria, and Italy in demanding revision of the territorial clauses of the Versailles Treaty. However, when Hitler showed his hand by forcibly "coördinating" all opposition elements in the Reich, large sections of the Austrian population

lost their enthusiasm for "*anschluss*" (union). The Dollfuss government executed a diplomatic *volte-face* and vigorously rebuffed the efforts of the German and Austrian Nazis to seize control of Austria. Vienna became the focal point of the diplomatic maneuvering by which Italy, France, and Great Britain sought to check the expansion of Germany. In the course of the struggle against the Nazis, Austria evolved a new governmental system, which was Fascist in complexion, but which showed distinct divergences from the Fascist governments of Italy and Germany.

THE HIRTENBERG ARMS AFFAIR. The revisionist sympathies of the Dollfuss government were dramatically exhibited early in 1933. On January 8 the organ of the Austrian Socialist party revealed that on December 30 some 60,000 rifles and 200 machine guns had been shipped from Italy to the Hirtenberg arms factory in Austria, from where half of the arms were forwarded to Hungary. The revelation caused a great outcry in the Little Entente states (q.v.), where it was generally believed that Italy was arming the Austrian Heimwehr (reactionary bourgeois militia) and the Hungarian Fascists in preparation for a joint attack upon the peace treaties. Holding that Austria had violated a clause of the Saint-Germain Treaty prohibiting the importation of arms and ammunition, the Little Entente demanded that the case be placed before the League Council. To French and British inquiries, Chancellor Dollfuss replied on February 2 that the arms had been sent to Austria by a private Italian firm for repairs, and would be returned to Italy as soon as these were completed.

This failed to satisfy the Little Entente, however, and on February 11 France and Great Britain jointly notified Austria that they would withhold their shares of the Lausanne loan to Austria unless the arms were either returned to Italy or destroyed within two weeks. On February 21, Chancellor Dollfuss promised the British and French informally that the arms would be returned to Italy and the incident was considered closed. However, the vigorous denunciation of the Anglo-French action by the Italian press and the sympathetic support of Austria by the press in Germany, Hungary, and Bulgaria clearly indicated their community of interest. The incident was responsible for the closer unification of the Little Entente in a convention signed February 16.

At the Geneva Disarmament Conference on March 7, Austria again showed its diplomatic cooperation with Germany by voting with Germany, Italy, Hungary, and the Netherlands against the principle of the French security pact (see **DISARMAMENT**). But already the schism between Nazi Germany and its erstwhile allies had begun to appear.

AUSTRIA RESISTS THE NAZIS. The sweeping victory won by Hitler's National Socialists in the German election of March 5 precipitated a political crisis in Austria. The Austrian section of the Nazi party, with the vigorous support of Hitler and of his propaganda organization, was rapidly winning adherents among the small bourgeoisie and the unemployed of all classes in Austria. The Catholic and bourgeois groups represented in the Dollfuss government had only a slight majority in Parliament over their Hitlerite opponents on the Right and the powerful Socialist party on the Left. While long divided on internal policies, the Socialists and the Christian

Socialists (Roman Catholics) united in opposing Hitlerism. Both opposed union of Austria with Germany so long as the Reich was under Nazi domination and both opposed the holding of new Austrian elections, fearing a large increase in the Nazi representation in Parliament.

A great mass meeting of Austrian Nazis in Vienna, at which union with Germany was demanded, moved Chancellor Dollfuss to act to forestall a threatened Hitlerite *putsch*. On March 7, with the approval of President Miklas, he proclaimed a dictatorship. All political meetings and parades were prohibited. Restrictions imposed upon the press prevented the publication of Nazi propaganda. Infuriated at what they considered to be treason to the German race, the Hitlerites expanded their violent propaganda in Austria. Hitler's emissaries campaigned for his cause in every Austrian province. The German government spent large sums in support of the Austrian Nazis. German airplanes scattered Nazi pamphlets upon Austrian cities and appeals to the Austrian people were broadcast from German radio stations near the border.

Chancellor Dollfuss met this onslaught with a firmness which aroused much admiration in countries antagonistic to Germany. He dissolved Parliament, abolished freedom of speech, press and assemblage, forbade Austrians to wear the Nazi uniform, and barred the Nazis from the radio. On May 13 Dr. Frank, Bavarian Minister of Justice, and other German officials were informed upon their arrival in Vienna that their presence was "not particularly desired by the government." Hitler's government answered this snub by barring German tourists from Austria with a prohibitive visa fee. Dollfuss then forbade Austrians to visit the Reich except on urgent business. On June 12, the Austrian government expelled the German Nazi leader, Theodore Habicht, who had been promoting the Nazi cause in Austria. Two days later the Germans arrested the Austrian press attaché in Berlin. Meanwhile the Nazis in Austria resorted to bombings, shootings, and other violence against government officials. Accordingly on June 19, Herr Dollfuss outlawed the Nazi party throughout Austria and ordered their Storm Troops disbanded. To prevent the Nazis from winning control of any provinces, he lifted a page from Hitler's book and appointed special Commissioners of Public Safety in each province. He required all state employees, both active and retired, to take a new oath of loyalty to the government.

THE POWERS SUPPORT DOLLFUSS. In his fight to prevent Austria's absorption by the Reich, Chancellor Dollfuss won strong support not only in France and Great Britain but also in Italy. Mussolini was not anxious to see a Greater Germany of 80,000,000 inhabitants fronting Italy's northeast boundary, particularly in view of the fact that Hitler's programme called for the annexation of the German-speaking districts of the Italian Tirol. At the World Economic Conference in London, Dollfuss placed Austria's plight before the French, British, and Italian representatives. As a result, it was announced June 15 that they would issue their shares of the Lausanne loan (amounting to \$40,000,000) arranged in Austria's behalf a year earlier.

Shortly after Easter and again in August, the diminutive Austrian Chancellor visited Mussolini in Rome and won further support for his country's independence. On August 6 France and

Great Britain protested to Germany against German policy toward Austria, reminding the Reich that both the Treaty of Versailles and the newly signed Four-Power pact guaranteed the independence of Austria. Italy also remonstrated with Berlin and was assured by Hitler that the Reich would attempt to moderate the anti-Dollfuss agitation. Protests and remonstrances, however, proved of little practical effect. Premier Daladier of France announced on August 27 that France was resolved to "guarantee" the independence of Austria. Immediately afterwards Great Britain, France, and Italy released Austria from the military limitations imposed upon her by the peace treaties and permitted the temporary increase of the army by an auxiliary force of 8000 men.

THE NEW AUTHORITARIAN STATE. Having succeeded in temporarily repulsing the Nazi onslaught and reawakening a spirit of nationalism among his people, Chancellor Dollfuss on September 11 announced his plans for converting Austria into "an authoritarian state, based on corporations and formed on occupational lines." He declared the period of the liberalistic and capitalistic systems had ended, as had "socialist misguidance," but that the new state would reject "coördination and terrorism." While indicating his preference for a semi-Fascist government, the Chancellor denied that he planned to copy either the Italian or German systems. He clarified his intentions on September 21 by forming a new cabinet, in which he held five portfolios. Two of the strongest personalities in the previous ministry were eliminated—Franz Winkler, Democratic Peasant party leader, who had opposed the Fascist aspirations of the Heimwehr, and Karl Vaugoin, Minister of Defense in 16 previous Cabinets. Dr. Dollfuss denied that the new government cherished dictatorial intentions. He said it was "merely a step toward . . . a Christian, German corporative state under authoritarian leadership."

The composition of the Cabinet was: Chancellor and Minister of Foreign Affairs, Defense, Security, and Agriculture, Dr. Engelbert Dollfuss; Vice Chancellor, Maj. Emil Fey; Justice and Education, Dr. Kurt Schuschnigg; Finance, Dr. Karl Buresch; Trade, Fritz Stockinger; Social Welfare, Richard Schmitz; Minister without Portfolio, Dr. Otto Ender. The Cabinet took no definite steps to change the existing form of government during the remainder of the year.

NAZIS CONTINUE STRUGGLE. While the Chancellor was engaged in formulating the bases of a new constitution acceptable to the bulk of the people, the Nazis continued their violent agitation against his government. On October 3, an adherent of the Austrian Nazi party attempted to assassinate Dr. Dollfuss in Vienna. The Chancellor suffered only slight bullet wounds and a few hours later assured the country by radio that he would carry on the government as usual. Large Nazi demonstrations in Vienna on October 15 were broken up by the police. The next day it was announced that a Nazi conspiracy in the army for the seizure of the Linz garrison had been frustrated by some 20 arrests. On October 21 the government arrested the German Nazi Prince Bernhard von Sachsen-Meiningen and his wife at Klagenfurt for conducting a Nazi conspiracy against Austria.

Renewed Nazi terrorism was met by the establishment of concentration camps on the German

model, in which the adherents of Hitler were imprisoned. Martial law was proclaimed throughout the country on November 10 to prevent Nazi and Socialist demonstrations on the 15th anniversary of the republic. Despite the temporary success of the Chancellor's moves, it became evident toward the end of the year that he was losing ground in the fight with Hitlerism. This was attributed partly to dissension among his supporters—the Heimwehr and the poorly organized groups of peasants and Roman Catholics—and partly to growth of the Nazis by accessions from the Socialists. The Heimwehr, under Prince Ernst Rüdiger von Starhemberg, brought constant pressure upon the Chancellor to outlaw the Socialists and political parties and establish a Fascist state on the Italian model, independent of Germany. The peasants and clergy wanted a non-Fascist, Catholic, conservative state, in which Socialists and Nazis alike would be banned. Their chief organization was the National Corporative Front, headed by Franz Winkler, former Vice-Chancellor.

Increasingly violent clashes between these two groups led Herr Dollfuss on November 24 to ban all political meetings from Dec. 1, 1933, to Jan. 15, 1934. On December 22 an Episcopal Letter from the Austrian bishops was read in Roman Catholic churches in Austria. It enjoined all Catholics to support Chancellor Dollfuss in his struggle against his enemies, particularly the Nazis. Meanwhile many Socialists were being driven into the ranks of the Austrian Nazis by the Chancellor's progressive emasculation of the Socialists' social welfare programme in Vienna. One-third of the city's revenue was cut off by national decrees, particularly those repealing the city taxes on excess profits and on servants.

ECONOMIC AND FINANCIAL CONDITIONS. While the government was engaged in its strenuous efforts to preserve Austria's political independence, its economic dependence upon other nations became more evident. Economically, the country had deteriorated steadily during the course of the world depression, particularly after the financial crisis of the summer of 1931 had further obstructed Austria's important function as middleman for the commerce and trade of south central Europe. The beginning of 1933 found economic activity reduced to a minimum. There was little traffic on railways and highways. In Vienna, amusement houses were almost deserted while mendicant singers and musicians thronged the streets. In the provinces, government efforts to collect taxes from the sorely distressed peasants led to tax riots and sporadic uprisings necessitating the calling of troops. The taxi drivers abandoned their cabs in the streets of Vienna in protest against taxation.

The government's financial deficit for the first three months of the year far exceeded the estimates. Accordingly, the Cabinet on April 24 slashed 70,000,000 schillings from the budget expenditures and discontinued the sinking-fund payments of 13,500,000 schillings, which represented a part of the government's obligation to the National Bank in connection with the reorganization of the Credit-Anstalt. The Credit-Anstalt was the great Austrian private bank, whose threatened failure precipitated the European financial crisis in 1931. Preliminary returns of the 1933 budget operations showed a deficit of 244,100,000 schillings.

The reorganization of the Credit-Anstalt was furthered during 1933. On April 27, the bank's

agreement with its foreign creditors was amended to permit the government to withhold actual cash payments during a standstill period until Mar. 1, 1935. The outstanding foreign assets of the bank were taken over on July 31, 1933, by the holding company established under the provisions of an agreement with the creditors. The holding company, with its legal office in Monaco and head office temporarily in Paris, had representatives of the American, British, French, Dutch, German, and Italian creditors on the board. Of the holding company's capital of 30,000,000 schillings, 20,000,000 schillings was acquired by the Credit-Anstalt, while a preferred block of 10,000,000 schillings was distributed among the foreign creditors. It was stipulated that a 5 per cent dividend must be declared on the preferred block before the other shares participated. A preferred 5 per cent bond issue of 130,000,000 schillings was also given over to the foreign creditors.

THE LAUSANNE LOAN. The international loan to Austria, provided for at the Lausanne Reparation Conference in 1932 in order to stave off economic collapse in that country, was issued in the autumn of 1933. France, England, Italy, and Switzerland contributed 237,400,000 schillings (France, 100,000,000; England, 100,000,000; Italy, 30,000,000; and Switzerland, 7,400,000). Belgian, Dutch, and Czechoslovak loans, aggregating about 12,000,000 schillings, were later advanced. The proceeds were used by the Austrian government to consolidate the floating debt, liquidate outstanding transfer payments, and stabilize the currency.

The Lausanne loan, together with an internal loan of about 200,000,000 paper schillings issued in October, assisted the upward trend of business which commenced during the summer. The number of registered unemployed declined from 291,224 on August 31 to 279,053 on September 30.

See GERMANY, ITALY, FRANCE under *History*; FASCISM; LITTLE ENTENTE.

AUTHORS' LEAGUE OF AMERICA. A national organization of authors, dramatists, and screen writers. It was founded and incorporated in 1912 for the purpose of procuring adequate copyright legislation, both international and domestic; protecting the rights and property of all those who create copyrightable material; advising all such in the disposal of their productions and obtaining for them prompt remuneration therefor; and disseminating information among them as to their just rights and remedies. The league supplies to its members confidential information relating to publishers, theatrical and motion-picture producers, and other persons and companies engaged in the purchase, sale, publication, or production of copyrightable material. The league includes the dramatists' guild, the authors' guild, and the screen writers' guild. Closely affiliated with it is the Authors' League fund, an agency formed by the league to meet its obligations with respect to the care of the sick, the aged, and the unfortunate, the endowment amounting to about \$80,000. The officers in 1933-34 were: President, Marc Connelly; vice president, Elmer Davis; secretary and treasurer, Luise Sillcox. Headquarters are at 9 East Thirty-eighth Street, New York City.

AUTOMOBILE RACING. Louis Meyer, of California, took undisputed leadership of the automobile racing field in 1933, winning the Indianapolis 500-mile race on Memorial Day at an average speed of 104.162 m.p.h., and also taking

the A.A.A. title, with a total of 610 points. In winning the Indianapolis race, Meyer became the second man to win the race twice; Tommy Milton was the other double winner. Wilbur Shaw was second at Indianapolis and Lou Moore third. In the A.A.A. championship series, Moore was second with 530 points and Shaw third with 450.

Mark Biltman and Les Spangler, drivers, and G. L. Jordan, Spangler's mechanic, were killed at Indianapolis when their cars shot over the retaining wall after collisions. At Los Angeles in April, Bob Carey, A.A.A. winner in 1932, was killed when his car hurtled into the guard rail.

Sir Malcolm Campbell, on Feb. 22, 1933 at Daytona Beach, Fla., set a new world's speed record for automobiles by sending his 2500-horse-power car over the sand at 272.108 m.p.h., thus bettering his record of 253,968 m.p.h. made last year over the same course.

AUTOMOBILES. Accepted as one of the indices of general business conditions, automobile production is always regarded as significant. That the production of cars and trucks in 1933 (2,048,000 in the United States and Canada) was 43 per cent above that of 1932 indicated that the upturn had finally come after the most prolonged depression this country has ever known. The automobile industry was, in fact, a major influence in leading the country out of the depression because it is the largest purchaser of gasoline, rubber, alloy steel, malleable iron, mohair, upholstery leather, lubricating oil, plate glass, nickel, and lead.

Throughout the year there was high activity in the laboratories and on the proving grounds of the manufacturers, as was evident when the new models were revealed, but their announcements were nearly all withheld until at or just before the opening of the New York Show. Ford, for the first time, led in the introduction of new models, which were shown in the Ford Shows at Detroit and New York in December.

Aërodynamic body lines and independently sprung front wheels were the outstanding new features but there was considerable diversity in their application. For many years automobile body styles have followed the fashion, so to speak, and have been more or less standard for their period. Any departures from former styles either "took" or did not and usually were either abandoned the next year or generally adopted. The engineers long since established the so-called "tear-drop" design as the ideal for minimum wind resistance but it was considered too radical to be accepted by the motoring public unless it were reached by easy stages. The boldness of one or two manufacturers a year ago encouraged the industry and this year the transition is plainly in progress. Differing in their degree of daring has given the different makes enough individuality so that during this stage at least it will once more be possible to identify a car without reading its name plate or hub caps.

In general there is more pointing and sloping of the front radiator grille and more filling in of the troughs between the front fenders and engine hood. Most extreme in this regard were the Chrysler and De Soto which carry the hood contour across and down to the fenders, incorporating the radiator grille and head lights in the vertically rounded front. In practically all makes the rear treatment has done away with all vertical surfaces and angles, the profile curving downward from the roof and sloping off with a slight up-

curve to the rear fender tips, some including a luggage space or tire compartment, as in the Hudson, leaving the rear practically smooth except for the bumpers, the gasoline filler cap and the tail lights, and some of the latter have been nearly absorbed into the rear fenders.

Independent front wheel springing, described as "knee action" by General Motors, is either standard or optional equipment on about half of the 1934 lines. While new in American car design, it has been in use on European cars for several years and even longer in airplane landing gear. Means for accomplishing it differ but the effect is essentially the same in all, i.e. to allow either front wheel to ride over a bump without jolting the passengers. With most of these articulated front wheel suspensions, heavy coil springs replaced the conventional leaf springs; the Hudson and Terraplane, however, adhere to the latter in their "Axleflex" construction, as do also the Nash and the new LaFayette. Besides improving riding qualities, springing the wheels separately reduces the tendency for front wheels to shimmy or tramp or cause steering wheel reaction.

Reo, by its announcement in May of an automatic gear-shifting transmission, pioneered what may prove an epochal advance in automobile construction, although nothing of the kind was adopted by any other maker for 1934. It dispensed with the manual gear-shift lever, the mechanism automatically selecting the right gear for the speed, load, and grade conditions.

The new Graham had the distinction of being the first production car to apply the racing-car practice of using a supercharger—a device for augmenting the air-intake for the fuel mixture.

Among other improvements, or extended use of them, should be mentioned automatic chokes to facilitate starting, and doing away with a separate starting switch pedal, having it actuated by the depressing of the accelerator or clutch pedals, or by a button on the dash. Vacuum-operated brakes and clutches were shown on many makes. The use of larger, lower pressure tires was found to be more general, and nearly all makes had provision to effect ventilation without drafts. Free-wheeling appeared to be waning in popularity. Several cars dropped it, others furnished it only as an option at extra price and those that had it as standard equipment put little emphasis on that feature. Aluminum cylinder heads were new on several lines.

Ford, discontinued the four-cylinder models (making only the V-8), which left the Austin, Willys, and Continental as the only remaining fours. Continental dropped its sixes.

From the roster of car names, another old one disappeared—the Peerless, the manufacture of which was discontinued. Another old one reappeared but in a lower priced group—the La Fayette, once in the Cadillac and Lincoln class, was acquired by Nash a few years ago and subsequently discontinued. As an addition to its 1934 offerings, Nash has given the name to a line of shorter wheelbase sixes. Hupp and Oldsmobile were others of the older car builders to enter a six in the low-priced field. The industry as a whole showed effort to meet the increased demand for low-cost transportation caused by the depression and all 1934 models were priced surprisingly low considering the greater cost for materials and labor brought about by the N.R.A.

AUTO INDUSTRIES COMES. Under the National

Industrial Recovery Act the automobile industry was among the first to prepare a code which was signed by all of the car manufacturers except Henry Ford, who, however, complied in general with its requirements. It became effective September 5, 1933 and provided for an average maximum of 35 hours a week per person, with not more than 48 hours per week in any one week and minimum rates of 40 to 43 cents an hour according to the size of the city. Salaried workers receiving less than \$35 a week were to work a maximum of 40 hours weekly average and not more than 48 in any one week. The National Automobile Chamber of Commerce was named as code authority for the industry. The act provided that workers should have the right to organize and bargain collectively. This was the only code in which the constitutional right of employers to select, retain, or advance employees on the basis of individual merit was explicitly stated. The code was to remain in effect until Jan. 1, 1934 but late in December, the President approved its extension, including the much-discussed "merit" clause, until Sept. 4, 1934. There was also granted an increase of the average weekly hours from 35 to 40 per week which was made retroactive to Sept. 5, 1933 as the effective date.

The Motor Vehicle Retailing Trade Code developed by the National Automobile Dealers Association, was signed by the President, October 3. It applied to vehicle retail sales establishments, but provided for later submission of supplementary regulations for dealers engaged in service and repair work covering unfair and destructive practices. Establishments were to be kept open not less than 52 hours a week, unless shorter hours had been kept prior to July 1, 1933. Excepting outside commission salesmen, watchmen, and salaried employees receiving \$30 weekly or more, employees were placed on a maximum 44-hour week. Minimum pay was set between \$13 and \$15 weekly according to the size of the city, and not less than 40 cents an hour. Used car trading allowances were placed under N.A.D.A. regulation and penalties provided for misleading and unfair selling and advertising methods. A merit clause was not allowed but rules to prevent the cutting of selling prices were, which should stop one of the greatest trade evils.

In addition there were specific codes for various branches of the industry, those approved including Storage Battery, Automotive Parts and Equipment, Motor Bus Operators, Motor Fire Apparatus, Funeral Vehicle and Ambulance, Storage and Parking Trade, Rubber Manufacturing, Wholesale Automotive Trade, Automotive Maintenance Garage Trade and Brake-Lining Codes. Price fixing desired by some manufacturers was not obtained, but apparently minimum prices may be established in certain agreed instances. Other codes were pending at the close of the year for the Automobile Laundry Trade, Drive-It-Yourself Industry, Finance Companies, Retail Rubber Tire and Battery Trade, Taxicab Business, Trailer Manufacturing, and American Trucking Associations.

STATISTICS. Of the 2,048,000 total production of cars and trucks in the United States and Canada previously mentioned, 1,685,000 were passenger cars and 363,000 motor trucks. Of the passenger cars, 81 per cent, or 1,535,000 were closed models. The wholesale value of the passenger cars was \$795,200,000 and of the motor trucks, \$175,000,000, or a combined total of \$970,200,000. The

average factory price of cars was \$630 and of trucks \$645.

Tire factories, during the year, shipped a total of 43,000,000 casings. The wholesale value of rubber tires sold for cars in use, that is, not including those sold to car factories for new car equipment, was \$260,000,000. The wholesale value of parts and accessories for replacements and service equipment was \$425,728,000. The year's total business for the manufacturers of motor vehicles, accessories, service equipment and replacements of parts and tires was \$1,655,928,000, a better than 26 per cent increase over that of 1932. The retail value, including taxes, of the gasoline consumed by motor vehicles was \$2,227,000,000.

In spite of the increased production of motor vehicles, the registration of motor vehicles in the United States fell off from the 1932 figures, showing that cars were being worn out and discarded faster than they were being replaced and hence promising an increased market for the year ahead. The total registration at the end of 1933 was 23,720,000, made up of 20,525,000 cars and 3,195,000 trucks. This was 72 per cent of the estimated number of cars in use throughout the world—32,820,000. Over a quarter of the motor trucks in use in this country belong to farmers—830,000, and they own about a fifth of the passenger cars—four million, roughly.

A reflection of State and Federal efforts to give work to the unemployed was shown in the increased new road construction, the number of miles of surfaced highway having increased from 868,000 in 1932 to 920,000 in 1933. During the year there was spent on highways and streets, \$1,550,000,000. The total miles of highways in the United States now is 3,040,000.

Still mounting is the levy of taxes against motor vehicle users, the total of which in 1933 was \$1,170,000,000. Of this, \$716,000,000 was collected as Federal, State, and municipal gasoline taxes. Motor users paid 11 per cent of all taxes collected, including Federal, State, and local.

The automobile industry is one of the best customers of the railroads for in 1933 there was shipped 2,621,000 tons of automotive freight. Of the entire production of various commodities it is interesting to notice what large percentages in 1933 went to the automobile industry: 80 per cent of the rubber, 38 per cent of the plate glass, 15 per cent of the iron and steel, 14 per cent of the lumber and hardwood, 11 per cent of the copper, 10 per cent of the lead, 25 per cent of the aluminum, 28 per cent of the nickel, 85 per cent of the gasoline, and 59 per cent of lubricants. In barrels of 42 gallons each, motor vehicles consumed 320,000,000 of gasoline and 9,500,000 of lubricating oils and greases. The crude rubber used by the motor industry in 1933 was 716,800,000 pounds and of cotton fabric used in tires 185,000,000 pounds.

Of the three million odd trucks in use in this country, there are so many operated by fleet owners of as high as a thousand or more trucks, it is rather surprising to know that there are about two and a half million motor truck owners. Only about 5½ per cent of all trucks are operated as common carriers and of these, only 5 per cent do an inter-state business, 4.45 per cent being operated in the confines of one State. Contract carriers represent about 9 per cent of all trucks, and 86 per cent are privately owned and operated. The total of motor truck taxes was \$295,000,000 in 1933. Although representing only 13 per cent

of all motor vehicles, trucks pay 25 per cent of all motor taxes.

There was an increase of about 6000 in the number of motor busses in use during the year; the total reaching 105,000. Of these 45,000 were in revenue services. In local or transit service were 17,500. About 21,500 consolidated schools were using motor transportation, to the number of 60,000 busses. Sixty steam railroads and 235 street railways were operating motor busses, the latter having 12,225 busses.

The falling off in motor vehicle exports last year was happily reversed in 1933, there being a 29 per cent increase. The number of American motor vehicles sold outside of the United States, i.e. including United States exports and the output of United States owned Canadian plants, was 233,000. The per cent of the total production sold outside of the United States was 11.5. The value of motor vehicles, parts and tires exported from the United States and Canada was \$135,000,000.

There was only a very slight increase in mortality in the motor vehicle retail business during the year. The heaviest was among car and truck dealers, the number decreasing about three thousand, leaving 36,500 in business at the end of the year. Against this was some increase in the number of garages, service stations, and repair shops which reached 98,161. Supply stores were somewhat fewer—60,865 but the total of retail outlets, with all duplications eliminated, was 103,161 as compared with 103,005 in 1932. Wholesalers numbered 5465. Gasoline filling stations fell off in number from 350,000 in 1932 to 317,000 in 1933.

LEGISLATION. About 8500 bills affecting highway transportation were introduced at the regular sessions of the 43 State legislatures that sat in 1933. Between 1000 and 1200 of these became laws. In addition about 1000 bills relating to vehicles or their use were presented in the 43 special sessions held, of which approximately 100 were enacted into laws. Many bills that were regarded as inimical to the interests of car builders, the trade or users were lost. Probably most displeasing of the laws that passed were those that increased taxation. Anything that increases the cost of making, selling, or operating motor equipment is especially burdensome in difficult times and some States seemed to realize this. There appeared to be a trend toward the reduction of the fees for private passenger cars—only two increases out of 16 changes—and also a marked reduction in fees for light-weight property-carrying vehicles. Heavier property carriers fared not so well. Common carriers and contract carriers suffered increased fees in several States.

Only one State increased its gasoline tax, Oregon increasing from 4 to 5 cents, but four States replaced or continued expiring one-cent additional special taxes—Arizona, Florida, New York, and Tennessee. Most alarming was the increased diversion of these taxes to others than the one purpose for which motor interests concede them to be justified—road maintenance. Gasoline tax reductions were sought in many States but none obtained. The Federal gas tax of one cent was increased $\frac{1}{2}$ cent in the spring with the promise of its removal if the Prohibition amendment was repealed, giving the government new revenue from liquor taxes, and it was removed at the end of the year. Texas, the largest gasoline producing State passed a resolution asking for its entire repeal by June 1, 1934.

Also unpopular with highway users is restric-

tive regulation not required from safety considerations. There was considerable such legislation, especially against commercial vehicles and stimulated by those interested in competitive forms of transportation.

Throughout the country there was greater effort than ever before to classify all carriers as common, contract and private carriers and to bring as many vehicles as possible under the first two classifications for their more rigid regulation. Nearly every State that does not already regulate contract carriers introduced bills to do so, indicating a disposition to bring them under nearly as complete regulation as common carriers, even to the extent of fixing the rates that they may charge. Still more resented was the effort to extend regulation to private carriers. It was accomplished in Ohio, Oregon, and Washington, and that already in force in Oklahoma was broadened. Michigan, North Dakota, Oregon, Utah, Washington, and Wisconsin increased regulation or taxes on trucks. Oregon's new law particularly was regarded by many as unwarrantably rigorous.

In the matter of non-resident privileges there was some improvement in reciprocity enactments, but there was more or less curtailment of these privileges in nine States.

In size limitations five States reduced height limits, two increased allowable widths. Permissible lengths of single vehicles were shortened in four and extended in seven States. As to weight limitations there were some changes in laws with respect to distribution of load, but where the allowable gross weights were revised as many States raised the limit as lowered it.

Thirteen States restricted the working hours of truck drivers, ranging from eight in Indiana to 14 in Ohio. Nine States made the limit 12 hours.

Trailer use suffered further restriction. Connecticut barred, outside of municipalities, and South Carolina altogether, the operation of full trailers, i.e. those whose load is entirely borne on its own axles as distinguished from semi-trailers, part of whose weight is carried by the towing tractor or truck. Minnesota limited trailer gross weights to 6000 lbs., Tennessee to one ton, and Massachusetts to 1000 lbs. load capacity for full trailers after Jan. 1, 1936.

Four States enacted laws requiring use of safety glass. Nebraska and Pennsylvania made its use compulsory throughout for busses built after Jan. 1, 1934 and all vehicles built after Jan. 1, 1935. After that date New Jersey will require all new vehicles to have it where specified by the Commissioner of Motor Vehicles. All new vehicles in New York next year must have it throughout.

Minnesota and Washington adopted a uniform operators' license law. Altogether 27 States (besides the District of Columbia) now require the driver as well as the vehicle to be licensed. Several other States amended their operators license laws in respect to certain details such as the minimum and maximum age limits, nature of tests for driving ability, fees, or period of the license.

Five States enacted new laws relating to financial responsibility. Of the 22 States that now have some statute of this nature more than half follow the general lines of the Model Safety Responsibility Bill of the American Automobile Association which provides that upon establishment of certain violation of laws or regulations, operator's, chauffeur's, and car licenses shall be revoked and cannot be reinstated until the owner has estab-

lished financial responsibility, as by the taking out of liability insurance, and has settled any judgments against him for a motor vehicle accident.

AVIAN COCCIDIOSIS. See **VETERINARY MEDICINE.**

AVIATION. See **AERONAUTICS.**

AZERBAIJAN, á'zér-bá-é-ján'; á'zér-bí-ján'. On Apr. 28, 1920 the Azerbaijan Socialist Soviet Republic was formed, and on Jan. 16, 1923 united with Georgia and Armenia to form the Transcaucasian Socialist Federated Republic (q.v.) of the U.S.S.R. It is situated on the southwestern coast of the Caspian Sea and extends from the Caucasus Mountains in the north to Persia in the south. Area, which includes the Autonomous Nakhichevan Soviet Socialist Republic and the Nargorni Karabakh Autonomous Region, 32,686 square miles; population (Jan. 1, 1931), 2,510,800 of which about 70 per cent were Moslems. The capital Baku had a population of 453,000 in 1926.

Elementary and secondary schools had 335,000 students in 1932. The chief agricultural products are grain, cotton, vegetables, tobacco, and silk. Cattle breeding is carried on by the people in the mountain regions. The total area under cultivation in 1929-30 was 2,717,000 acres, and in 1932 the area devoted to cotton was 565,630 acres. The chief industry is the production of oil, principally around the city of Baku to which all the other oil fields are connected. Oil production in 1931 amounted to 13,443,000 tons (in 1929-30 it was 10,900,000 tons). The copper, salt, fishing, and textile industries, are also important; production of state industries (except oil) in 1929-30 was valued at 75,900,000,000 roubles (1 rouble equals \$0.5146 in the U.S.S.R.). See **UNION OF SOVIET SOCIALIST REPUBLICS.**

AZNAR, ADMIRAL JUAN BAUTISTA. A Spanish statesman and naval officer, died in Madrid, Feb. 19, 1933. Born in 1861, he attended the San Fernando Naval School and entered the Spanish Navy in 1874. While serving during the Spanish-American War he was taken prisoner on the sinking of the cruiser *Vizcaya*, of which he was lieutenant commander, by the American fleet in Santiago harbor, July 4, 1898. He was later promoted to the rank of captain-general in charge of the naval region of Cartagena, and in 1921 directed the naval operations on the coast of Morocco after the crushing defeat of the Spanish troops by Riff warriors at Anual. In December, 1933, he was appointed Minister of Marine in the cabinet of the Marquis of Alhucemas, resigning on the establishment of the dictatorship of Primo de Rivera in September, 1923.

Admiral Aznar became Premier Feb. 18, 1931, but though highly respected he was not equal to the impossible task of saving the monarchy in the face of dissatisfaction with the conditions of dictatorship under which Spain had labored for seven years and profound economic distress. The republic was accordingly proclaimed on Alfonso's abdication on April 14. At the time of his death he held the honorary title of captain-general of the Spanish fleet.

AZORES, á-zôrz'. An archipelago in the North Atlantic Ocean about 800 miles west of Portugal integral part. Area, 922 square miles; population (1930 census), 253,596. Angra, the capital, had 10,057 inhabitants in 1926.

of which country the Azores are politically an

BABBITT, IRVING. An American educator and critic, died in Cambridge, Mass., July 15, 1933. He was born in Dayton, O., Aug. 2, 1865, and received his education at Harvard University, graduating in 1889. After studying in Paris during 1891-92 he was appointed instructor in Romance languages at Williams College and in 1894 was called to Harvard as instructor in French. In 1902 he was made assistant professor and in 1912 professor of French literature. He also lectured after 1920 at Kenyon College, Yale University, Stanford University, Amherst College, and the University of Toronto, and in 1923 was Harvard exchange professor at the Sorbonne in Paris.

With Paul Elmer More, Professor Babbitt founded the modern humanistic movement, a form of pragmatism that attempted to counter-act the post-war ascendancy of naturalism or Rousseauism by glorifying the intellect and free will in terms of a universal animism and seeking to re-establish a spirit of individualism in American life. Its ideals were set forth in his *Literature and the American College: Essays in Defence of the Humanities* (1908); *The New Laokoon* (1910); *The Masters of Modern French Criticism* (1912); *Rousseau and Romanticism* (1919); and *Democracy and Leadership* (1924). He also contributed to numerous magazines and reviews and edited Taine's *Introduction à l'histoire de la littérature anglaise* (1898); Renan's *Souvenirs d'enfance et de jeunesse* (1902); Voltaire's *Zadig* (1905); and Racine's *Phèdre* (1910). In 1930 he was elected a member of the American Academy of Arts and Letters.

BADEN, bá'den. A component state of the German Republic, formerly a grand duchy in the German Empire, which was proclaimed a republic on Nov. 22, 1918, and continued as such until the spring of 1933 when Chancellor Hitler appointed a Commissary of Police in place of the regular republican officials. It occupies the southwest corner of Germany and is bounded on the west by France, and south by Switzerland; area, 5819 square miles; population, 2,429,977 (1933). In 1931 there were 40,687 births, 24,448 deaths, and 17,370 marriages. Capital, Karlsruhe, with 145,694 inhabitants in 1925; Mannheim, the largest city, had 247,486; and Freiburg, 90,475. The majority of the population is Roman Catholic; religious instruction is provided by the various denominations. Education is compulsory and under the authority of the state. For higher education there are two universities—Heidelberg and Freiburg.

The area under cultivation in 1932 totaled 2,063,710 acres. Among the agricultural crops are oats, barley, wheat, rye, vines, and vegetables. Area devoted to tobacco in 1932 amounted to 13,022 acres; and wheat production in the same year equaled 427,076 metric tons. There are numerous manufacturing industries; mineral products are salt, potash, and building stone. Reich Commissary of Police in Bavaria, Robert Wagner (Nazi), appointed Mar. 10, 1933.

BAHÁ'Í FAITH. A religious movement whose great principle is the oneness of mankind through the abolition of racial, patriotic, class, political, and religious prejudices, founded in Persia in 1844 by Mirza Ali Muhammed, known as the Báb (the Gate or Forerunner of the Cause), and promulgated over a period of 40 years by Bahá'u'lláh (the Author of the Cause). The head of the movement since 1921 has been Shoghi Ef-

fendî (the Guardian of the Cause), grandson of Abdu'l-Bahá (the True Exemplar and Interpreter of the Cause) and great-grandson of Bahá'u'lláh.

The administrative order of the Faith, which has no professional clergy, consists of an annually elected local spiritual assembly of nine members and a national spiritual assembly of nine members, elected at a national convention by delegates from the local communities. In 1933 there existed in some 80 cities of the United States, Canada, and the Hawaiian Islands 56 local assemblies and 24 groups. Throughout the world there were in the same year nine national spiritual assemblies and approximately 400 local assemblies and groups. The national spiritual assemblies will in future elect an international assembly, the chairman of which will be the Guardian.

The twenty-fifth annual convention of the Bahá'í Faith in the United States and Canada was held in Foundation Hall of the Bahá'í House of Worship at Wilmette, Ill., June 1-4, 1933. The principal event of the year was the completion of the contract for the external decoration of the dome of the House of Worship, the material selected being quartz with a medium of white cement, carrying an intricate design as delicate as lace. Great impetus was given during 1933 to the development of summer schools at Greene Acre, Eliot, Me.; Louhelen Ranch, Davison, Mich.; and Geyserville, Calif., where classes were held under the supervision of Bahá'í teachers. Official publications in the United States are the *Bahá'í News*, the *Bahá'í Magazine*, and the *Bahá'í World* (vol. iv of which, covering the period 1930-32, was issued in 1933). A national office is maintained at Evergreen Cabin, West Englewood, N. J. The world centre is at Haifa, Palestine.

BAHAMAS, bá-há'máz. A British colony consisting of an archipelago of coral islands extending from the east coast of Florida to Haiti. There are 700 islands (20 inhabited) and some 2000 rocks with a total area of 4404 square miles and a total population (1931 census) of 59,808. The estimated total population on Jan. 1, 1933, was 61,812. The population of each of the chief islands at the 1931 census was Abaco, 4233; Andros, 7071; Berry Islands, 222; Bimini, 736; Cat Island, 3959; Fortune Island Group (including Long Cay, Acklin's and Crooked Islands), 3238; Eleuthera and Harbour Island, 7527; Exuma and Cays, 3774; Grand Bahama, 2241; Inagua, 607; Long Island, 4515; Mayaguana, 518; New Providence, 19,756; Ragged Island Group, 424; Rum Cay, 252; San Salvador or Watling, 675. Nassau, the capital on the island of New Providence, had 19,756 inhabitants.

In the colony during 1932 there were 2251 births, 1226 deaths, and 462 marriages. In 1932 government primary schools totaled 55, assisted primary schools totaled 57; the number of enrolled pupils was 11,657. There were 4 schools for secondary education.

Excluding specie, imports for 1932 were valued at £940,063 and exports at £263,886. Spirits and wines, the leading imports, were valued at £290,152; imports of foodstuffs, £240,569. Imports from the United States were valued at £334,501; Great Britain, £228,336; Canada, £221,444. The chief exports of local products were tomatoes, cascarilla bark, lumber, tortoise shell, sponge.

During 1932, 1742 vessels with an aggregate tonnage of 3,263,311 entered and cleared the

ports. During the winter a daily air service between Miami and Nassau was maintained; in the summer a similar service was in operation twice weekly.

In the fiscal year ended Mar. 31, 1932, government revenue amounted to £386,374; government expenditure, £422,706; public debt, £180,000; sinking fund, £38,000. During 1932 the Imperial Preference Act was repealed and a tariff enacted to give to British Empire goods the preferences provided for by the terms of the Ottawa Agreement. The colony is administered by a governor who is assisted by an executive council and a legislative council, each of 9 members, and a representative assembly of 29 members, the franchise being based on a small property qualification. Governor and Commander-in-Chief in 1933, Captain B. E. H. Clifford.

BAHRAIN ISLANDS. See under ARABIA.

BALBO, GEN. ITALO. See AERONAUTICS.

BALG, GERHARD HUBERT. An American philologist, died at Mayville, Wis., Sept. 28, 1933. He was born at Efferen, near Cologne, Germany, Nov. 11, 1852, and received his early education at the Cologne Gymnasium. On emigrating to the United States in 1871 he attended the University of Wisconsin, from which he was graduated in 1881. He completed his studies at the Universities of Freiburg and Heidelberg, receiving the Ph.D. degree from the latter in 1883. On his return to the United States he was engaged for many years in private tutoring. He published several valuable philological works, notably *A Comparative Glossary of the Gothic Language, with Especial Reference to English and German* (1887-89); *The First Germanic Bible Translated from the Greek by the Gothic Bishop Wulfila in the Fourth Century, and the Other Remains of the Gothic Language* (1891); and an English edition of Wilhelm Braune's *Gothic Grammar* (1895). Also, he supplied Germanic etymologies for Funk and Wagnall's *Standard Dictionary of the English Language*.

BALL. See NETHERLAND INDIA.

BALKAN CONFERENCE. See GREECE under History; UNITED STATES OF EUROPE.

BALKAN STATES. The states of the peninsula south of the Danube, lying between the Adriatic, Aegean, and Black seas. See ALBANIA, BULGARIA, GREECE, RUMANIA, TURKEY, and YUGOSLAVIA.

BALL, LEWIS HEISLER. An American physician and Senator, died at Faulkland, Del., Oct. 18, 1933. Born near Stanton, Del., Sept. 21, 1861, he was graduated from Delaware College in 1882 and three years later received the M.D. degree from the University of Pennsylvania. He practiced medicine at Faulkland but on his election as State treasurer of Delaware in 1898 decided to enter politics. During 1901-03 he served as delegate-at-large to the national House of Representatives from Delaware and in 1903 was elected to the United States to fill a vacancy.

Again elected to the Senate for the term 1919-25, Dr. Ball was a staunch opponent to the entry of the United States into the League of Nations. In 1921 he served on the subcommittee which investigated the charges of Rear Admiral William S. Sims of grave errors on the part of the Navy Department in the management of United States naval operations during the World War. On the expiration of his term in 1925 he conducted a national survey of the facilities of the Veterans' Bureau.

BALTIC CONFERENCE. See *LATVIA* under *History*.

BANGKA. See *NETHERLAND INDIA*.

BANK DEPOSITORS' INSURANCE CORPORATION. See *BANKS AND BANKING*.

BANKERS' ASSOCIATION, THE AMERICAN. The dominant national organization of banks in the United States, having a membership of about 12,000 banks out of a total of 15,000. Its four major divisions are devoted to the special interests, technical advancement, and general welfare of the following classes of banks: National, savings, State, and trust company. There are also two sections devoted to general banking interests, the American Institute of Banking section and the State secretaries section. The former, which is the educational arm of the organization, has an enrollment of 36,000 students from banks in all parts of the country and a general membership of 65,000; the latter forms a link between the national organization and the 48 State bankers' associations.

The association's protective department prosecutes continually a nation-wide campaign of prevention, protection, and investigation for all member banks in respect to criminal operations. It has also a legal department which keeps bankers informed on developments in the field of banking law, while its State and Federal legislative committees and councils attempt to safeguard the interests of banking institutions and the public in both State and Federal banking legislation.

Through its economic policy commission the association conducted during the year studies of insurance and guaranty of bank deposits, branch banking, causes of bank failures, proposed remedial legislation, maintenance of the dual banking system under State and national charters, reconstruction finance proposals, and basic changes in bank credit conditions and methods. Its public education commission conducted lectures on banking in public and private schools and before civic clubs throughout the United States, and its bank management commission developed active studies and methods for more scientific bank management.

Pursuant to the National Industrial Recovery Act, the association in, August, 1933, formulated the Bankers' NRA Code of Fair Competition and organized a banking code committee to carry it into effect in every city, town, and country district. This action enabled the association to put into more active operation its experience and equipment regarding sound methods for co-operation, aimed to strengthen local banking conditions, which it had urged for many years.

The association held its 1933 convention in Chicago, Ill., September 4-7, the chief topics of discussion being Federal government insurance of bank deposits, government banking, and reconstruction policies, and the banking NRA code. The national officers elected for 1933-34 were: President, F. M. Law, president, First National Bank, Houston, Texas; first vice-president, Rudolf S. Hecht, chairman of the board, Hibernia National Bank, New Orleans, La.; second vice-president, Robert V. Fleming, president, Riggs National Bank, Washington, D. C.; treasurer, Hal Y. Lemon, vice-president, National Bank of Detroit, Detroit, Mich. National headquarters are at 22 East Fortieth Street, New York City; Fred N. Shepherd, executive manager.

BANK FOR INTERNATIONAL SETTLEMENTS. See *INTERNATIONAL BANKING*; *BANKS AND BANKING*.

BANK HOLIDAY. See *BANKS AND BANKING*; *UNITED STATES* under *Administration*.

BANKS AND BANKING. For a good many months prior to the advent of the National Administration which came into office at Washington in March, 1933, there had been the gravest anxiety regarding the future of American banking. Continuous bank failures, reaching a peak of about 2300, in 1931, had been somewhat reduced in number during 1932, but the total was still abnormally large; while general conditions suggested the probability of a widespread breakdown. It had been hoped that remedial legislation then pending in Congress might be adopted, in time to afford some relief, but as the short session which opened in December, 1932, drew toward a close, this hope gradually dwindled and collapse was seen to be inevitable. About the beginning of February, 1933, groups of banks in various parts of the country began to suspend specie payments, and about the middle of that month, so-called "bank holidays" were established in numerous localities. Such holidays rapidly spread throughout the country; and on the third of March, had practically isolated New York and a few other places on the Eastern seaboard. The question whether to extend the holiday to these cities was acute, but finally resulted in a disposition to suspend payments. President Roosevelt, after taking office, ratified the holiday by making it national in scope, and a general suspension ensued for some 10 days.

The reopening of the banks was effected during the latter part of March, resumption of payments being ordered in three general groups of banks, opening on successive days, but Congress, which had legislated on the subject meanwhile, provided that there should be no further gold payments, so that the Federal Reserve banks, through whom redemptions had been effected, remained in a state of suspension, making payments only in paper. The Act of Congress (March 10) authorizing the suspension moreover introduced many innovations into banking methods, so that in effect the entire system of eligibility of commercial paper for rediscount (which had underlain the basic banking system of the United States) was abandoned or so marred as to be unrecognizable. The reopening of the banks, moreover, left behind it a total of probably 4500 banks, or thereabout, which were so unsatisfactory in condition that they were either placed in the hands of so-called "Conservators" (a new name for what amounted to receivers), or were opened on a basis of restricted payment. At the end of August official count showed that of these banks, some 2800 remained closed, despite all effort to reopen them. During the latter part of the year, plans for the liquidation of the assets of these closed banks were adopted, and the assets of a considerable number were distributed or the banks were recapitalized and reopened. The number of banks in active operation at the beginning of 1933 was probably somewhat under 18,000, while at the close of the year this number had been reduced to about 13,500. Meantime, moreover, Congress had, on June 16, adopted the so-called "Glass bill" or Banking Act of 1933, as it was denominated in the statute creating it, and under its terms, many extensive changes in banking legislation had been introduced. Of

these, the most striking was the provision for a general guaranty of bank deposits, through an organization later known as the Federal Deposit Insurance Corporation. This concern was estimated to have at its beginning control over funds totaling perhaps \$450,000,000, with authority to obtain additional capital, through the issue of debentures. The guaranty provision was not, at first, included in the "Glass bill," but had been added as a result of the constant agitation which, for years, had demanded a step of the sort, and now culminated in an extreme proposal to which many of the participants in the framing of the measure only reluctantly acceded. Congress, too, had, during the spring, given up the gold standard, and had in the so-called "Inflation Act" (May 12) authorized the President, in his discretion, to print and issue three billions of legal tender notes, or to issue silver on a legal-tender basis, at a fixed ratio to gold, or to reduce the gold content of the dollar, or to resort to all of these measures when, as, and if, he felt disposed.

By an Act adopted June 5 Congress had revoked or nullified the gold clause in all contracts, cancelled the gold contractual obligation in Government bonds, and forbidden the future making of contracts in gold, while the Treasury, under the authority vested in the President, had instituted a strict control of foreign exchange, and had sought to restrain movements of gold, and of other funds, to foreign countries. Inasmuch as the hoarding or holding of gold had been made a criminal offense, and owners had generally been compelled to surrender such gold as they possessed, the nation had "gone off gold" with a thoroughness practically unexampled in monetary history. In these circumstances, the banks in general found themselves confronted by difficulties of an unprecedented sort, and continued throughout the year in a crippled condition largely aggravated by the various measures, and the immense expenditures, which appeared to be integral elements in the so-called "programme of recovery."

NATIONAL BANKS. The National system, as usual, constituted the nucleus upon which Congressional legislation was expected to take effect, and by whose use as a gathering point, it was expected to install the different devices which had been thought of by the politicians in the endeavor to rectify the financial situation. Investigation, at the time of the bank holiday, did not encourage the thought that the National banking system was materially better off, if at all, than was the case with the various State banking organizations. Subsequent attempts to better the conditions were more or less successful according to the condition of the banks upon which they were tried, but there was at no time definite indication that National supervision had been successful in bringing about a stronger or better state of affairs among the National than among the State, institutions. As the year progressed, it was apparently out of the question to restore the National banks to a position in which the writing down of their assets to an extent that would permit an accurate balance-sheet statement was possible, and accordingly considerable distrust continued to prevail on the part of depositors. In not a few cases, National banks, after being technically reopened, found it needful to close, as did not a few of the State banks, while the management of the Federal Deposit Insurance

Corporation thought it needful to inform inquirers that, although Congress had provided that no bank should be eligible for the guaranty unless it had unquestioned assets sufficient to meet demands of its depositors, and other creditors, this was not to be interpreted as signifying that its stockholders were to be included in the latter category;—notwithstanding that, in the past, the possession of an "unimpaired" capital had always been regarded as an indispensable pre-requisite for continuance in the "banking business." Extreme reticence characterized official outgivings regarding the banking situation, and it was deemed desirable by the Federal Reserve Board to suspend publication of the regular reports on bank failures, previously made public each month, while in the latter part of the year, the usual monthly discussion of banking and business conditions was suspended, as a concession to the wishes of the Administration. The National system, statistically viewed, suffered terribly from the bank holiday and failure situation, its membership falling by about 850 or 18 per cent while total loans and investments were off, at the middle of the year, by about \$2,000,000,000, the total being then \$15,460,079,000. Only 5152 active institutions remained on Jan. 1, 1934, and they had but \$17,115,367,000 of deposits, against a total a year earlier of \$18,301,916,000. These changes were the result not only of the immediate conditions of the year, but were in part the outcome of the long-concealed and gradually deteriorating condition of the banks growing out of bad management, lax supervision, and erroneous Governmental policies.

LEGISLATION AND DISCUSSION. Reference has already been briefly made to the remarkable volume of fundamental legislation on banking and monetary topics which reached the statute books during the year 1933. Further analysis of its major banking provisions is now necessary. The Glass bill, which became law on June 16, 1933, was originally intended to strengthen the provisions of the National and Federal Reserve Acts, at points where weakness had been demonstrated in the course of the collapse of 1929, and the financial troubles consequent upon that year. It had been bitterly attacked as a needless, trouble-making, bill likely to cause banking disaster. The Banking Committee of the Senate had replied to these assertions by instituting an inquiry into actual banking and financial transactions, centering around some of the main personalities in the banking community and these came to a head early in 1933, with revelations of irregularity, and betrayal of stockholders' interests, that caused a strong revulsion of feeling throughout the country. In such circumstances, the "Glass bill," when introduced in the new Congress after the exodus of many legislators repudiated by their constituents at the autumn election of 1931, found ready reception; indeed, receiving far less than the amount of legislative study which it should ordinarily have elicited. As finally adopted, it prohibited the further practice of investment banking, securities issue, and similar operations along with deposit banking, and ordered complete separation between the two types of business.

In addition, it decreed the surrender of the so-called "affiliates" (corporations jointly owned with National banks for the purpose of permitting securities transactions otherwise not permitted under the banking law) within a year

CHANGES IN NATIONAL BANK POSITION
[In thousands of dollars]

	June 30, 1926	Per cent in- crease (+) or decrease (-) since June 30, 1925	June 30, 1927	Per cent in- crease (+) or decrease (-) since June 30, 1926
Demand deposits	\$10,779,603	+ 3.34	\$10,928,729	+ 1.35
Time deposits	6,813,809	+ 6.57	7,315,324	+ 15.87
Loans and discounts *	13,417,674	+ 5.87	13,955,996	+ 4.01
United States and other bonds, stocks, etc.	5,842,353	+ 1.95	6,393,218	+ 9.43
Lawful reserve with Federal Reserve banks	1,351,171	+ 4.09	1,406,052	+ 1.80
	June 30, 1928	Per cent in- crease (+) or decrease (-) since June 30, 1927	June 30, 1929	Per cent in- crease (+) or decrease (-) since June 30, 1928
Demand deposits	\$11,003,795	+ 0.73	\$10,504,268	- 4.54
Time deposits	8,296,638	+ 13.41	8,317,095	+ 0.25
Loans and discounts *	15,144,995	+ 8.52	14,801,130	- 2.27
United States and other bonds, stocks, etc.	7,147,443	+ 11.80	6,656,535	- 6.87
Lawful reserve with Federal Reserve banks	1,453,383	+ 3.37	1,344,951	- 7.46
	June 30, 1930	Per cent in- crease (+) or decrease (-) since June 30, 1929	June 30, 1931	Per cent in- crease (+) or decrease (-) since June 30, 1930
Demand deposits	\$10,926,201	+ 4.02	\$10,105,835	- 7.50
Time deposits	8,752,571	+ 5.24	8,579,500	- 2.09
Loans and discounts *	14,837,753	+ 0.59	13,177,439	- 11.05
United States and other bonds, stocks, etc.	6,838,171	+ 3.43	7,674,837	+ 11.42
Lawful reserve with Federal Reserve banks	1,421,676	+ 5.70	1,418,096	- 0.25
	June 30, 1932	Per cent in- crease (+) or decrease (-) since June 30, 1931	June 30, 1933	Per cent in- crease (+) or decrease (-) since June 30, 1932
Demand deposits	\$ 7,940,653	- 21.42	\$7,880,836	- 0.08
Time deposits	7,265,640	- 15.31	6,199,806	- 15.29
Loans and discounts *	10,231,676	- 21.20	8,101,647	- 20.23
United States and other bonds, stocks, etc.	7,196,652	- 6.24	7,358,392	+ 0.02
Lawful reserve with Federal Reserve banks	1,150,175	- 18.89	1,412,127	+ 22.73

* Includes rediscounts and customers' liability under letters of credit.

from date of passage. It further forbade the payment of interest on demand deposits and gave to the Reserve Board the power to regulate interest on time deposits. It further prohibited joint service of bank directors upon boards of banks and (simultaneously) those of other financial corporations. Lending of money to brokers (the so-called "loans on behalf of others," which had been found the cause of so much difficulty in 1928-29) were prohibited for the future, while the Reserve Board was authorized to fix the amount of credit to be extended by banks on collateral security. As for the Reserve banks they were forbidden to lend on collateral to members, if the latter were increasing their market loans at the same time provided that such banks were, first of all, given due warning. A new constitution for the body which controlled open market operations was provided, and Reserve banks were directed to report to the Board their relations with foreign central institutions, in every case. The act by which this far-reaching measure was preceded (Act of March 10) had already permitted the rediscounting of practically any assets that banks might have, in cases of emergency wherever was required. It had thus still further modified the principles underlying the Federal Reserve Act already so gravely infringed by the legislation of 1932, adopted at the instance of President Hoover, and to which Chairmen Glass and Steagall had both assented.

When it is recalled that, beside these dras-

tic provisions, the new law called for a general guaranty of deposits it is easily realized that 1933 must be reckoned the most important year in American banking legislation since 1913. Other banking measures of an allied sort demanded by the new Administration, and adopted by Congress included home owners mortgage relief, through special institutions, and farm mortgage relief through a new organization termed the Agricultural Adjustment Administration, and numerous less important provisions. The immense broadening of the funds and powers of the Reconstruction Finance Corporation placed it in position to act as an intermediary for the government in the performance of functions hitherto unthought of, and established what was thought by many as a hazardous engine of emergency finance. The banking system did not respond in any satisfactory way to these acts of legislation. Constant complaint was heard that banks were refusing credit, and pressure of more or less effective sort was applied to them in the endeavor to induce the extension of loans to concerns and individuals requiring support for the purpose of compliance with the demands of the new recovery Administration. The banks tended to assume a cowed condition reluctant to make new commitments, and feeling themselves constantly under attack—an attitude greatly intensified by the Congressional investigations and revelations to which reference has already been made. Loans tended gradually to shrink, and as the year ad-

vanced, business men were less and less disposed to borrow, feeling doubt regarding their ability to repay.

The constant cry for more currency which is frequently heard on such occasions, was again raised, and served as an excuse for the efforts of the Administration to stimulate both member and Reserve banks to afford to customers larger supplies both of credit and of paper currency. There was a strong tendency to press upon the banks the necessity or duty of making "free loans," in order to facilitate the return of prosperity, and much effort to emphasize the disposition of the Government to assist the making of such loans by advances of long-term funds from the Reconstruction Finance Corporation, or through easy and cheap rediscounting at Reserve banks. As the year advanced, and as it became evident that the various institutions could not expect to restore their balance sheet situation to a condition of soundness, the Administration brought forward a proposal, which had been authorized in the relief Act of March 10, that the several banks issue "preferred stock." Although

various groups of banks, and all were shortly overwhelmed in the suspension movement.

During the discussion of the guaranty system, many State banks feared that they would be subjected to unfair competition, but Congress provided for the admission of all, even including the mutual savings banks. Many of the latter and others, later doubted the wisdom of accepting participation in the guaranty fund, and on Dec. 31, 1933, over 55 per cent of savings banks had failed to insure, legal authorities in some States held that such participation would be *ultra vires*—beyond lawful powers. The confusion and hysterical fears on the part of some State bankers had led to an unusual ingress of banks into the Reserve system, although not a few were inclined to express doubts as to the wisdom of their course as soon as admitted. It was a time of utmost confusion and question of all banking conditions. The changes in balance-sheet items undergone by these banks and trust companies, were not greatly different from those observed in the case of the National institutions. They may be surveyed generally in the accompanying table.

RESOURCES AND LIABILITIES OF ALL REPORTING BANKS OTHER THAN NATIONAL
[In millions of dollars]

	1926	1927	1928	1929	1930	1931	1932	1933
Loans	22,623	28,348	24,397	26,575	25,572	21,987	17,792	14,260
Investments	9,972	10,861	11,624	10,692	11,056	12,385	11,026	10,599
Cash	636	643	572	521	523	515	453	884
Capital	1,860	1,902	1,931	2,169	2,145	1,982	1,748	1,883
Surplus and undivided profits ..	2,858	3,130	3,394	3,742	3,986	3,865	3,212	2,430
Deposits	31,789	32,893	33,544	34,316	33,885	31,800	25,972	24,759
Resources	39,577	41,550	43,066	44,732	44,903	42,566	34,877	30,441

this proposal had originally contemplated such issue to new stockholders who would be induced to buy it by the grant of freedom from double liability, the Government, at the end of August, offered to purchase the stock itself out of Treasury funds either with or without proportionate contribution on the part of the public. Few subscribers offering, the banks, in some cases, were prone to ask the Reconstruction Finance Corporation to buy the stock, and at the close of 1933 over 3000 banks were reported to have received such aid, while the Reconstruction Finance Corporation was the proprietor of upward of \$900,000,000 of bank stock—assuming at the same time to name Government directors where the management was unsatisfactory.

STATE BANKS AND TRUST COMPANIES. Conditions among the State banks and trust companies were not far different from those existing among the member banks. It was the authorities of the several States that had started the bank holiday fashion, and had set the bad example of adopting laws during February and early March authorizing banks to continue in operation even though they might not be able to meet the payments to demand depositors, by getting the permission of State bank superintendents who were expressly permitted to grant such permission when needed. Even in New York such a statute had been hastily adopted and New Jersey had gone further, by authorizing her institutions to suspend payment yet keep open without the need of reference to the State Banking Department. The provisions of a similar sort in other States were numerous, though varying considerably in detail. The coming of the bank holiday, however, revealed little difference between the

FEDERAL RESERVE BANKS. With the advent of the bank holiday and the suspension of specie redemptions by the Reserve banks, it was the opinion of many that the development of the Reserve institutions would witness a gradual, perhaps rapid, expansion, and that the inflation demands of the nation would force the creation of a vast amount of fiat credit. The fact turned out differently from expectation, for it shortly appeared that the business public did not want more credit, while the rank and file of the people who had been hoarding money and currency, were willing, with the return of confidence, to redeposit it. The end of the year, accordingly, found the nation with a smaller volume of currency outstanding than at the beginning. Federal Reserve credit as computed by the Reserve Board, was but little increased, and loans of member banks, both on collateral and on commercial paper, were materially lessened. If by "inflation" was meant an increase of currency and credit the year's results were actually deflationary,—and in a high degree. The Reserve banks, moreover, sank ever deeper in the morass of Government credit, steadily absorbing more and more Government paper as the deficit expanded, while their balance sheets, when combined with those of the member banks, clearly revealed that the entire deficit of the nation was being dumped into the portfolios of the various institutions, under the guise of Treasury bills, and short-term notes, with some further purchases of long-term bonds in open market. Discount policies had ceased to play any important part, with the great changes in credit and banking conditions already introduced. The accompanying statement shows the change in the condition of Member banks as re-

flected in the weekly report of selected members in 90 principal cities.

WEEKLY STATEMENT OF REPORTING MEMBER BANKS. [Amounts given in millions of dollars]

	Jan. 3, 1934	Dec. 27, 1933	Jan. 4, 1933
Loans and investments, total	\$16,585	— \$ 81	— \$123
Loans, total	8,885	— 17	— 417
On securities	8,820	— 8	— 131
All others	4,765	— 9	— 286
Investments, total	8,200	— 64	+ 294
United States Government securities	5,205	— 62	+ 289
Other securities	2,995	— 2	+ 5
Reserve with Federal Reserve Banks	1,923	+ 9	— 21
Cash in vault	247	+ 11	+ 49
Net demand deposits	10,952	+ 86	— 161
Time deposits	4,351	+ 12	— 302
Government deposits	712	+ 113	+ 414
Due from banks	1,256	+ 59	— 369
Due to banks	2,828	+ 129	— 445
Borrowings from Federal Reserve Bank	25	+ 1	— 14

+ Increase. — Decrease.

Reserve discount policy during the year, in fact consisted entirely of an attempt to give the impression of ease of money—an effort hardly successful in view of the actual difficulty of borrowing even at high rates. The nominal rate of discount at the Reserve banks, however, was cut during the year to 2½ per cent in New York and at other banks generally, to 3 per cent. Open market purchases of Government bonds, which had been so prodigally made during 1932, were renewed, though on a smaller scale, during the summer and early autumn, but were later abandoned, as the Reserve banks began to assume a definitely "frozen" condition. One of the outstanding activities of the Reserve system for the year was the further amassing of a larger gold hoard. The adoption by Congress of laws making the holding of gold a crime led to the further concentration of the metal in the reserve institutions, with a net gain of some \$300,000,000 though the total stock of the nation remained practically unchanged. In order to hold these gains of gold, the Reserve system was authorized by the President to install a stringent system of foreign exchange control, designed to prevent transfers of private capital abroad. This, at once, sent the dollar to a discount in foreign exchange; and, when the President at the beginning of November announced the adoption of a plan of his own for the making of a gold market, whereby a fixed Government price was every day named, the reduction of the foreign value of the dollar was rapid. During the latter portion of the year, the functions of the Reserve system became little more than those of discounting and lending to the government, and assisting in this manipulation of exchange quotations, with a view to forcing the current value of the dollar to still lower levels. In this connection mention ought to be made of the London Conference on economic and financial questions which, although not shared in by the Reserve banks, nevertheless was expected to deal extensively with the problem of reserve credit. Although President Roosevelt himself had during the spring months foreshadowed much attention to central bank questions at London, a change of policy announced on July 4, in an unexpected message sent by him to the delegates of the United States at the conference practically nullified their efforts, and repudiated what they

had done. The conference was followed by a visit on the part of the Governor of the Bank of England for the purpose of discussing monetary stabilization and central bank policy, but this attempt proved ineffectual and the mission came to nothing. The Reserve banks were more and more isolated from other central banks, as the latter came more and more to regard the policy of the United States in relation to gold as inimical to the best interests of the other central institutions. As the commercial business of the Reserve banks declined, and as their function became more and more exclusively that of financing the needs of the Government, their prestige sank at home, while abroad, for reasons already set forth, they were never so low in standing as was the case during the latter part of the year. The President, however, having given his consent, a representative of the Reserve system became a member of the directorate of the Bank of International Settlements, a relationship previously forbidden by President Hoover. The accompanying table presents the changes in conditions of the Reserve banks during 1933. See next page.

BANK CREDIT. The growth of bank credit during the year was, as already noted, a subject of constant anxiety. Not only was it felt at the outset, that there was a "shortage of credit," but after the occurrences were over, it was easy to realize that what had been done in Washington regarding the closing of the banks had "tied up" a vast body of credit previously in a semi-frozen condition and now actually out of reach for an indefinite period. Despite the efforts to "release" some of this credit, there continued to be a decline during the year, and deposits of Member banks sank from about \$24,803,000,000 at the opening of the year, to about \$23,358,000,000 at the end of the fiscal year. Federal Reserve credit as computed in totals by the Reserve Board was more constant, being \$2,110,000,000 at the opening, and \$2,530,000,000 at the end of October. Still it remained further true that, in some parts of the country where bank closings had been numerous, the local supply of bank credit was almost entirely cut away. As a result, the quantity of notes out, although shrinking during the twelvemonth, did not contract to the extent that had been expected, owing to the fact that the notes took the place of the deposit credits that had been suspended or eliminated as already explained. It was notable, too, that due to the enlargement of speculative interest and activity there was a recovery of the advances of member banks based upon security. These loans at reporting member banks decreased only from a total figure of \$3,600,000,000 at the beginning of January to \$3,500,000,000 at the opening of December. At the same time brokers' loans moved as shown in the accompanying table.

BROKERS' LOANS, 1933

January 30	\$359,000,000	July 30	\$916,000,000
February 28	860,000,000	August 31	917,000,000
March 31	811,000,000	September 30	897,000,000
April 30	322,000,000	October 31	776,000,000
May 31	529,000,000	November 30	789,000,000
June 30	780,000,000	December 27	801,000,000

BANK FAILURES. Bank failure had become an especially sore subject with the Government authorities, particularly with those of the Comptroller's office, before the end of the Hoover Administration and they continued during the early

TWELVE FEDERAL RESERVE BANKS COMBINED
[In thousands of dollars—000 omitted]

RESOURCES			
	<i>Jan. 3, 1934</i>	<i>Dec. 27, 1933</i>	<i>Jan. 4, 1933</i>
Gold with Federal Reserve agents	\$2,618,124	\$2,595,043	\$2,344,625
Gold redemption fund with U. S. Treasury	44,540	44,739	40,496
Gold held exclusively against Federal Reserve notes	2,662,664	2,639,782	2,385,121
Gold settlement fund with Federal Reserve Board	626,653	648,843	342,098
Gold and gold certificates held by banks	279,594	280,661	446,137
Total gold reserves	3,568,911	3,568,786	3,173,856
Other cash *	226,799	209,856	262,482
Total gold reserves and other cash	3,795,710	3,778,142	3,435,838
Redemption fund—Federal Reserve bank notes	13,086	13,566	.....
Bills discounted:			
Secured by U. S. Government obligations	35,176	36,925	71,172
Other bills discounted	70,943	73,627	179,930
Total bills discounted	106,119	110,552	251,102
Bills bought in open market	121,062	111,083	32,617
United States Government securities:			
Bonds	442,817	443,166	420,901
Treasury notes	1,053,240	1,053,163	296,414
Certificates and bills	935,853	935,850	1,133,595
Total U. S. Government securities	2,431,910	2,432,179	1,850,910
Other securities	1,493	1,494	5,218
Total bills and securities	2,660,584	2,655,308	2,189,847
Gold held abroad .....	.....	.....	61,128
Due from foreign banks	3,333	3,333	2,977
Federal Reserve notes of other banks	18,541	16,739	17,785
Uncollected items	504,940	425,900	458,654
Bank premises	51,884	54,804	53,844
All other assets	45,491	45,414	39,606
Total assets	\$7,093,569	\$6,993,206	\$6,209,629
LIABILITIES			
Federal Reserve notes in actual circulation	\$3,071,762	\$3,080,948	\$2,737,656
Federal Reserve bank notes in actual circulation	208,014	210,298	.....
Deposits:			
Member bank—reserve account	2,709,919	2,675,153	2,514,451
Government	23,287	29,720	23,848
Foreign bank	4,492	5,110	18,853
Special deposits—member bank	46,394	48,091	.....
Non-member bank	9,692	10,011	.....
Other deposits	84,088	61,075	30,224
Total deposits	2,877,872	2,829,160	2,587,876
Deferred availability items	480,779	410,929	438,053
Capital paid in	144,903	144,684	151,332
Surplus	277,680	278,599	278,599
All other liabilities	32,559	38,588	16,613
Total liabilities	\$7,093,569	\$6,993,206	\$6,209,629
Ratio of total gold reserves and other cash * to deposit and Federal Reserve note liabilities combined	63.8%	63.9%	64.5%
Contingent liability on bills purchased for foreign correspondents ..	\$3,809	\$3,710	\$40,157

* "Other cash" does not include Federal Reserve notes or a bank's own Federal Reserve bank notes.

weeks of the bank holiday to be troublesome, notwithstanding that, in closing the banks, it had been announced that none would be allowed to reopen that were not sound. The confusion between banks caused by the grant in various States of permission to operate on a restricted basis, led to considerable doubt whether at any given time, a bank had in fact failed, and accordingly, the National authorities ceased to publish comparative statistics upon the same basis as in the past. An unsatisfactory statistical basis therefore was established; and it was not possible to trace the movement of failures by months as previously. The Comptroller's annual report (moved forward from the early part of December to the early part of January as a result of the constitutional change shifting the opening of Congress to January, afforded some figures that help to clarify the situation but the returns are likely to continue unsatisfactory for a good while. What can be said with assurance is that during the year there was a decrease in the number of banks open for

business by about 1900 the number at the end of the year 1932 being probably about 18,390 while of the latter figures about 6011 were National and the remainder State institutions including trust companies. At the end of 1933 the number was 16,212 of which 5619 were National. The failure situation continued to give anxiety since investigation had shown that many banks were seriously impaired and in any ordinary circumstance would have been placed in the hands of receivers. This situation may be expected to show itself definitely in the statistics of the coming year. Bank suspensions so far as data are available are set forth in table on page 84.

INTERNATIONAL RELATIONS. The subject of INTERNATIONAL BANKING (q.v.) has been dealt with in a special article, but at this point it is desirable to mention some of the international workings of the domestic banking situation. Of these, the most immediately significant was naturally the gradual cutting off of the United States from its position as the market in which inter-

BANK SUSPENSIONS

[Banks closed to public on account of financial difficulties by order of supervisory authorities or directors of the bank. Figures of suspensions include banks subsequently reopened]

Month	Number of banks					Deposits (in thousands of dollars)				
	1929	1930	1931	1932	1933 ^b	1929	1930	1931	1932	1933 ^b
January	54	99	202	342	237	16,418	28,908	78,180	219,071	142,719
February	80	85	77	121	148	21,746	82,800	85,123	57,237	72,870
March	51	76	86	48		9,002	23,769	35,285	15,448	
April	29	96	64	74		7,790	33,888	42,417	81,613	
May	112	55	89	82		24,090	19,315	43,968	84,865	
June	48	66	167	151		19,219	70,566	195,951*	182,580	
July	69	65	98	132		66,161	32,338	41,834	48,564	
August	17	67	158	85		8,532	21,951	185,902	80,291	
September	39	66	805*	67		10,050	32,666	237,061*	18,515	
October	43	72	512	97		13,153	24,599	566,686	21,899	
November	68	254	169	95		22,646	186,806	88,409	46,822	
December	52	344	353	153		15,780	867,119	319,289	88,333	
Year	642	1,345	2,290	1,453		234,532	864,715	1,759,484	730,426	

* Revised. ^b The Federal Reserve Board suspended its tables of bank failures in April, 1933 and has not resumed them.

national balances were placed or held. Ever since the close of the World War, there had been a tendency to send foreign balances both of central and private banks to the New York market. Secretary Mellon, in 1927, had estimated that total so held as high as two billions of dollars, and they probably reached an even larger total subsequent to that year. France's withdrawal of her funds in 1931 and 1932 constituted an important breach in this situation, and such withdrawal was followed by like action on the part of Switzerland and Holland, as well as of other countries, which were in a less liquid condition. When the United States "went off the gold standard," provision was made for the full payment of earmarked holdings in favor of foreign banks, and those balances not so earmarked were withdrawn as rapidly as conditions of foreign exchange control would permit, or were checked out in payment of indebtedness to American creditors while Americans also began leaving their funds abroad and transferring others as steadily to other markets as conditions would allow. Thus during the year, transfers roughly reckoned (semi-officially) at from one to two billions of dollars were shifted to London, Paris, and other centres. The New York market simply lost its commanding position as a money centre.

At the same time, due to the adoption of the so-called "Securities Act" which practically rendered impossible the successful flotation of new issues, or at least was so regarded, the offering of foreign issues came to be considered out of the question, and this type of business was shifted to London. Thus the unprecedented and profitable position of the New York banks occupied without intermission for nearly two decades, was lost, and they returned to their older position as a purely local market. The use of the dollar as a medium in which to draw bills for the financing of foreign trade was generally discontinued, owing to the uncertainty and fluctuating value of the dollar in current exchange operations. Some American banks definitely closed sundry of their foreign branches, and others reduced the activity of such branch institutions. Foreign banks with branches in the United States, likewise cut their commitments in New York, and reduced the scope of their transactions as far as possible. The decline of American export trade, which necessarily followed upon the monetary policy of the Roosevelt Administration effectively eliminated most of the foreign trade financing on short-term, which had previously been so im-

portant a factor in banking business at a number of the centres. See UNITED STATES under *Foreign Trade*.

BAPTISTS. In 1933 there were in the United States 14 groups comprised in the denomination known as Baptist, which maintains that baptism should be administered to believers only and generally by immersion. For the early history of the Baptists see THE NEW INTERNATIONAL ENCYCLOPEDIA, vol. 2, p. 646 ff. and THE NEW INTERNATIONAL YEAR BOOK for 1932.

NORTHERN BAPTIST CONVENTION. According to the *Annual of the Northern Baptist Convention*, 1933, this denomination was composed of 36 conventions in 33 States, the District of Columbia, and Puerto Rico; and reported 417 local associations, 7880 churches, nearly 9000 ordained ministers, 64,706 baptisms during the year, 1,489,836 members, 7155 Sunday schools, and 1,159,029 Sunday school pupils. Church property was valued at \$218,730,420, while contributions for current expenses amounted to \$17,130,357, and for beneficence to \$4,062,246.

The twenty-sixth annual meeting of the Northern Baptist Convention was held in Washington, D. C., May 23-28, 1933, the general theme being "The Challenging Christ." The Keynote address was delivered by Dr. C. Oscar Johnson, pastor of the Third Baptist Church of St. Louis, Mo. The officers elected for 1933-1934 were: president, William S. Abernethy, D.D., Washington, D. C.; first vice president, Pres. William G. Spencer, Franklin, Ind.; second vice president, Clarence W. Kemper, D.D., Charleston, W. Va.; corresponding secretary, Maurice A. Levy, D.D., Williamsport, Pa.; recording secretary, Clarence M. Gallup, D.D., Providence, R. I.; and treasurer, Orrin R. Judd, New York, N. Y. The next annual meeting was set for Rochester, N. Y., May 23-28, 1934.

In 1933 the Northern Baptist Convention maintained 55 educational institutions, including 10 theological seminaries, 6 training schools, 19 colleges, 7 junior colleges, and 13 academies. These institutions had 30,153 students, 2570 instructors, 573 buildings, property aggregating \$109,818,534 in value, endowments valued at \$150,684,305, and an annual income for the year of \$18,500,142. The leading denominational papers in 1933 were: *Baptist Banner* (Parkersburg, W. Va.); *Baptist Observer* (Indianapolis); *Baptist Record* (Pella, Iowa); *Baptist World* (Malden, Mass.); and *Watchman-Examiner* (New York City). In addition, most of the State

conventions issued monthly bulletins, and the various foreign-speaking bodies in the United States published their own periodicals.

The foreign mission field of the Northern Baptist Convention included Assam, Burma, South India, Bengal-Orissa, South China, East China, West China, Japan, Belgian Congo, and the Philippine Islands, with 681 missionaries. In 1933, churches numbered 3112 with 328,128 members; native workers, 10,514, Bible schools, 2910 with an enrollment of 127,694 pupils; and hospitals and dispensaries, 91, with a total of 22,949 inpatients and 313,248 out-patients. The field of the home mission societies included in addition to the United States and its dependencies, Mexico, the West Indies, Central America, the Canal Zone, and South America. Their greatest activity was among the Negroes, Indians, and new Americans. The denomination maintained also six hospitals, the largest being the New England Baptist Hospital in Boston and the Northwestern Baptist Hospital in St. Paul, 23 homes for the aged, and 13 children's homes.

General headquarters of the denominational organizations are at 152 Madison Avenue, New York City, with the exception of the Home Mission Society, which is at 23 East Twenty-sixth Street, New York City, and the American Baptist Publication Society, which is at 1701 Chestnut Street, Philadelphia, Pa. The unified missionary interests of the denomination are administered by the Board of Missionary Cooperation; and the principal convention affairs are conducted by the executive and finance committees, together with some 20 other committees. Two other major boards of the denomination are the Board of Education, which cares for the work and property of the denominational schools and colleges, with assets of approximately \$260,000,000, and the Ministers and Missionaries Benefit Board, which cares for the pension and emergency aid work for ministers, missionaries, and their dependents, with assets of nearly \$20,000,000.

SOUTHERN BAPTIST CONVENTION. According to the official *Handbook* for 1933 there were reported 18 State conventions, 24,035 churches, 22,801 ordained ministers, 226,855 baptisms during the year, 4,066,140 church members, 21,531 Sunday schools, 3,051,469 Sunday school pupils, and 29,203 Baptist Young People's Unions with a membership of 583,842. Contributions totaled \$27,341,488; church property was valued at \$209,719,089. Receipts of the boards of the convention in 1933 were as follows: Southern Baptist Foreign Mission Board (Richmond, Va.), \$792,829; Southern Baptist Home Mission Board (Atlanta, Ga.), \$396,462; Sunday School Board of the Southern Baptist Convention (Nashville, Tenn.), \$1,517,613; and Old Ministers Relief and Annuity Board (Dallas, Tex.), \$210,980.

The denomination maintained 72 schools and colleges, including five theological schools, 29 senior colleges, 21 junior colleges, and 17 academies, with a total enrollment of 25,101 students, 1638 ministerial students, and 1455 instructors. The educational endowment amounted to \$22,088,898, and property was valued at \$37,773,244. It reported also 28 hospitals (two fostered by the Southern Baptist Convention and 26 by the State conventions), valued at \$14,712,157 and accommodating 80,189 patients during the year; 19 children's homes with property value of \$5,979,731 and accommodating 4,729 children; and three homes for the aged.

The annual session of the Southern Baptist Convention was held in Washington, D. C., May 19-22, 1933. The various boards and agencies of the convention showed still further declines in receipts for the year, bringing about a critical situation. To meet this situation the Baptist 100,000 Club was organized and still further emphasis was given to the work of the Promotion Committee of Southern Baptists, uniting it with the executive committee with headquarters at Nashville, Tenn. The committee sponsored an "Every-Member Canvass" during the week of Nov. 26-Dec. 3, 1933, with the objective of securing weekly subscriptions for \$40,000,000, of which amount \$9,000,000 was to go to the support of the various missionary, educational, and benevolent enterprises of the convention, while the remainder was to care for the local work of the churches.

The following officers for the Southern Baptist Convention were elected: M. E. Dodd, D.D., of Shreveport, La., president; the Hon. Pat M. Neff, of Waco, Tex., and Chas. W. Daniel, D.D., of Richmond, Va., vice-presidents; Hight C. Moore, D.D., Litt.D., of Nashville, Tenn., and the Rev. J. Henry Burnett of Macon, Ga., recording secretaries; and Austin Crouch, D.D., 161-8th Avenue, North, Nashville, Tenn., executive secretary.

NATIONAL BAPTIST CONVENTION OF AMERICA (NEGRO). For the fiscal year ending Aug. 30, 1933, the National Baptist Convention of America reported 1341 associations, with 54 conventions affiliated with it through messengers and delegates represented in person or by letter at the 1932 convention. There were 21,542 ordained ministers and a membership or constituency of 3,591,412, showing an increase of 9100 over the previous year, by baptism and Christian experience. The organized Sunday schools had increased to 21,202, with an enrollment of 1,821,261 pupils. Contributions from all sources amounted to \$5,421,632. The next session of the Convention was to be held in Muskogee, Okla., in September, 1934. The president in 1933 was G. L. Prince, D.D., of Denver, Colo.; the secretary was C. P. Madison, D.D., of Norfolk, Va. Denominational headquarters are at the National Baptist Publishing Board, 523 Second Avenue North, Nashville, Tenn.

BAR ASSOCIATION, AMERICAN. A national organization, founded in 1878 to advance the science of jurisprudence, the administration of justice, harmony in legislation, and the observance of legal precedents throughout the United States, as well as to uphold the legal profession and promote good understanding among its members.

The association's fifty-sixth annual meeting was held in Grand Rapids, Mich., Aug. 30-Sept. 1, 1933. Clarence E. Martin, the retiring president, spoke at the opening session on "The Growing Impotency of the States." The other notable addresses were by Judge John J. Parker of the United States Circuit Court of Appeals for the Fourth Circuit, on "Is the Constitution Passing?"; Leonidas Pitamic, Minister to the United States from Yugoslavia, on "Some Aspects of the Problem of Interpretation"; Senator Patrick A. McCarran of Nevada, on "The Growth of Federal Executive Power"; Homer S. Cummings, Attorney-General of the United States, on "Modern Tendencies and the Law"; and Judge Martin T. Manton of the United States Circuit Court of Appeals for the Second Circuit, on "A 'New Deal' for Lawyers."

Preceding the annual meeting, on August 28-

29, there were held sessions of the following sections of the association: Criminal law and criminology; insurance law; international and comparative law; judicial; legal education and admissions to the bar; mineral law; patent, trade-mark, and copyright law; and public utility law. The Commissioners on Uniform State Laws, the Conference of Bar Examiners, the National Association of Attorneys-General, and the National Association of Legal Aid Organizations met also on this occasion. The Conference of Bar Association Officers formulated a programme to bring closer together the 1250 State and local bar associations in the United States, combining their working energy under the leadership of the national organization.

The membership of the association in 1933 was approximately 28,000. Its official organ is the *American Bar Association Journal*. Earle W. Evans of Wichita, Kan., was elected president for 1933-34; John H. Voorhees of Sioux Falls, S. D., was reelected treasurer and William P. MacCracken, Jr., of Washington, D. C., secretary. Headquarters of the association are at 1140 North Dearborn Street, Chicago, Ill. See LAW; CRIME.

BARBADOS, bār-dā'dōz. An island colony in the West Indies, east of the Windward Islands, with an area of 166 square miles and a population (Jan. 1, 1933 estimate) of 176,874; Bridgetown, the capital, had 13,486 inhabitants; Speightstown, 1500. In 1932 births numbered 5391, and death 3325. Education is under the authority of the government. In 139 primary and secondary schools 25,103 students were enrolled in 1932.

The chief product is sugar of which 102,309 long tons were produced in 1932 (115,000 long tons estimated for 1933). Rum production in 1932 was 241,309 gallons. In 1932-33, imports were valued at £1,656,876; exports, £1,379,006; revenue, £457,853; expenditure, £425,875; public debt £649,000 for which the sinking fund was £370,671. There were 1089 ships aggregating 2,069,255 net tons entered during 1932.

A governor administers the affairs of the island with the assistance of an executive council, an executive committee, a legislative council of 9 members appointed by the King, and an assembly of 24 members elected annually by the people. Governor, M. A. Young who assumed office in August, 1933, succeeding Henry S. Newlands who died on Mar. 12, 1933.

BARLEY. The 1933 barley production of 38 countries as reported to the International Institute of Agriculture amounted to 1,255,192,000 bu. or 80,049,000 bu. less than the production in 1932. The 1933 crop of Canada, estimated at 63,737,000 bu., was over 20 per cent below the 1932 crop of 80,773,000 bu. Argentina in the crop year 1933-34 produced 35,367,000 bu., an increase of 1 per cent over the preceding crop.

The barley crop of the United States in 1933, according to estimates published by the Department of Agriculture, amounted to 156,104,000 bu. which was 48 per cent less than the crop of 302,042,000 bu. harvested in 1932 and the smallest crop produced since 1922. The acreage harvested in 1933 was 10,052,000 acres as compared with 13,346,000 acres harvested in the preceding year. The average yield, estimated at 15.5 bushels per acre, was 7.1 bu. under the average yield in 1932 and 7.3 bu. under the ten-year average for 1921-1930 and was the smallest yield per acre

on record. The average yield per acre was only 68 per cent of the ten-year average and the total crop only 59.2 per cent of the average for the five years 1926-1930. The average farm price of barley on December 1, 40.7 cents per bushel, brought the farm value of the crop to \$63,486,000, or \$2,797,000 above the value of the much larger crop in 1932 when the corresponding price per bushel was only 20.1 cents. The leading barley producing States and their yields were reported as follows: Minnesota 28,675,000 bu., California 24,471,000 bu., North Dakota 18,300,000 bu., and Wisconsin 17,710,000 bu. These States produced 57 per cent of the country's crop as reported by 35 barley growing States. The United States, during the fiscal year ended June 30, 1933 exported 9,155,000 bu. of barley and 268,000 bu. of malt.

The resumption of the manufacture of beer in 1933 developed an interest in the production of malting barley and a possible premium price for the product. In this connection the Department of Agriculture pointed out that malting barleys can be grown profitably in certain favored localities in western New York and in parts of the northern Mississippi Valley and that out of the barley crop of 211,000,000 bu. in 1917 only about 72,000,000 bu. was used for malt. An investigation conducted at the University of Wisconsin showed that growth under conditions of adequately high soil moisture and atmospheric humidity tends to increase the permeability of the seed coat in barley which enhances its malting value.

BARNARD'S SPOT. See ASTRONOMY.

BARRY-DOYLE, THE RT. REV. MGR. RICHARD. A British Roman Catholic churchman, half-brother to Sir Arthur Conan Doyle, died at Leicester, England, Mar. 8, 1933. Born at Airdowns, Co. Wexford, Ireland, in 1878, he attended St. Peter's College, Wexford, and studied for the priesthood at St. John's College, Waterford, being ordained in 1905. While serving as chaplain with the British Forces in Egypt and Palestine during the World War, and with the Army of the Black Sea stationed near Istanbul for three years after the War, there was brought home to him an intimate realization of the misery among the expatriated Christian populations of Greece and Asia Minor. Known as "the Children's Crusader," he devoted his efforts to the establishment of orphanages, schools, a seminary, and other institutions in Athens and to the raising of funds for their support through the Catholic Near East Welfare Association, of which he was founder and first president. In 1926 the work of the association was brought under the immediate control of the Holy See and the American hierarchy but in recognition of the keen interest which he had aroused in it by his lecture tours in England and other countries he was appointed Domestic Prelate to the Vatican Court (1920), Archimandrite of Athens (1926), and Protonotary Apostolic (1928). At the time of his death he was rector of St. Peter's Church, Leicester.

BASEBALL. The New York Giants, spurned and scorned in 1932, furnished surprise after surprise in the 1933 professional baseball campaign, usurping first place in the National League at the outset of the pennant race in April and retaining the hold on the leadership through September. To cap the miracle, as the feat was called by experts who had unanimously picked the Giants to take sixth place for the second successive season. New York's team proceeded

to blast the Washington Senators, American League champions, apart in a five-game World Series. The Giants' feat of rising from the mediocrity of 1932 to the world's championship in one year was remarkable and after it was all over was hailed as such, and the team was lauded as one of the steadiest and most compact in the history of the game.

The Giants were led to their surprising triumph by Bill Terry, youthful manager serving his first full year at the helm. Midway through the 1932 campaign Terry had been named manager to succeed John J. McGraw, retired. In the winter months he bolstered his team by trades, called ineffective at the time, and from the opening game the Giants, a group of young players, beat back the challenges of the more seasoned and favored clubs. In Carl Hubbell, lefthander, the Giants possessed the most effective pitcher in the major leagues. In Gus Mancuso they had one of the steadiest catchers, the man mainly responsible for the brilliant pitching of Hal Schumacher and Roy Parmelee, untired youngsters, and the veteran Fred Fitzsimmons. Terry placed his faith in John (Blondy) Ryan, fresh from Holy Cross College, at shortstop, when Travis Jackson, veteran infielder, was injured and Ryan was the sensation of the league. The Giants fairly spread-eagled the field in the National League and were mathematical certainties to win in the first week in September. The Pittsburgh Pirates were second, the Chicago Cubs, defending champions, third, and the St. Louis Cardinals, fourth, a few points ahead of the strong Boston Braves, who challenged the Giants late in August.

The Washington Senators had an easy time in taking the American League pennant, topping the defending world champions, the New York Yankees, and the Philadelphia Athletics early in June and keeping the lead through the following months. They, too, had their pennant clinched early in September. The terrific batting power of the Senators coupled with expert pitching and the veteran experience in the line-up made them decided favorites to defeat the Giants in the World Series, but Hubbell won two games for New York, Schumacher one, and Adolpho Luque, forty-year-old Cuban, one (the fifth and deciding game). Mel Ott, right fielder, won the first and fifth games with home runs.

Jimmy Foxx, first baseman of the Philadelphia Athletics, was the premier batter of the season, leading the American League in batting and in home runs. Foxx hit forty-eight home runs, leading Babe Ruth, his closest rival, by fourteen. Ruth was pretty much in eclipse in the latter part of the season when his aging legs kept him out of the Yankee line-up. Chuck Klein, outfielder of the Phillies, led the National League in the same departments in which Foxx was supreme in the younger circuit. Klein led the league in batting and pounded out twenty-eight home runs. Carl Hubbell, who early in the summer compiled a record of forty-six scoreless innings, led the National League pitchers, and the American League hurlers were topped again by Bob Grove, of the Philadelphia Athletics.

The financial depression continued to exert its pressure on baseball as on other sports, but there was a decided increase in interest in the game. For the first half of the season the fans stayed away from the Giants' games but as they stayed in first place, the crowds flocked to watch them play. The Giants were money makers at home

and on the road, playing to huge crowds in Boston, in Pittsburgh, and Chicago. The World Series drew well, capacity in Washington for two of the three games there, and near capacity in the Polo Grounds in New York for the pair there. The losing clubs in the leagues suffered and all sorts of schemes were resorted to in an effort to snare the fan. In Brooklyn and St. Louis, particularly, scheduled weekday games were moved ahead to Sundays and holidays making synthetic double-headers, but even these failed to draw the crowds unless a winning team was the opponent.

Buffalo, after finishing fourth in the season play, won the play-off to be crowned International League champion, but lost to Columbus of the American Association in the Little World Series. Los Angeles won the Coast League race, and New Orleans took the honors in the Southern Association. San Antonio had an easy time in the Texas League but was beaten by New Orleans in the Dixie Series. Binghamton won the New York-Pennsylvania League flag.

Columbia University won the Eastern Intercollegiate League title, and Williams retained Little Three honors.

In early December the various league magnates met in Chicago and their meetings resulted in trades of truly momentous proportions and which are sure to affect the 1934 races. Connie Mack, veteran seventy-one-year-old manager of the Philadelphia Athletics, completed the wreckage of his team, pennant winner in 1929, 1930, and 1931, by selling Bob Grove, Rube Walberg, and Max Bishop to the lowly Boston Red Sox, George Earnshaw to the Chicago White Sox, and Mickey Cochrane to the Detroit Tigers. In one day Mack negotiated the biggest deals in years and focused attention upon the Red Sox, being built up by the new owner, Thomas Yawkey. Cochrane was made manager for 1934 of the Detroit Tigers replacing Bucky Harris, who was signed to manage the Red Sox in place of Marty McManus. Chuck Klein, great batting star of the Phillies, was sold to the Chicago Cubs for \$100,000 at the same meeting.

BASEDOW, HERBERT. An Australian anthropologist, died June 4, 1933, in Kent Town, Adelaide, Australia, where he was born Oct. 27, 1881. He attended Prince Alfred College and the University of Adelaide and pursued advanced studies for the M.D. and Ph.D. degrees at the Universities of Heidelberg, Göttingen, Breslau, and Zurich. At the instance of the University of Adelaide he led several exploring expeditions, on which important discoveries were made in Australian geography and natural history, and was attached to the vice-regal expeditions of Sir George Le Hunte, Sir Tom Bridges, and Lord Stradbroke. His public appointments included State and Commonwealth Medical Commissioner on Aborigines, Chief Medical Officer and Chief Protector of Aborigines for the Commonwealth in the Northern Territory, and Assistant Government Geologist in South Australia. He was also a past president of the Aborigines Protection League and of the Northern Territorians Association.

In 1927 Dr. Basedow entered politics, representing Barossa in the South Australian House of Assembly until 1930. He was also a director in several mining and commercial companies. His most important work, *The Australian Aboriginal* (1925), is a recognized authority on the primitive tribes of Central Australia.

BASKETBALL. Playing under rules radically changed at the end of 1932, basketball teams in

1933 furnished spectators with true spectacles, instead of the technically perfect but often dull exhibitions of the previous few seasons. The new rules, requiring that a team obtaining the ball in its back court advance it across the centre line within ten seconds, and also limiting the time the ball may be held in pivot to three seconds, placed a premium on a speedy attack and obviated the possibility of distasteful stalling in the back court. The regulations were popular in every part of the country and throngs turned out to watch the leading teams in action.

City College of New York, coached by Nat Holman, as usual produced one of the outstanding fives of the country as well as the best in the East. Beaten only once all season, the Metropolitan team easily earned the crown. The lone defeat was suffered at the hands of St. John's College of Brooklyn, another perennial basketball victor, but St. John's dropped four successive games in the last half of the season to lose all claim to titles.

Yale's team, coached by Elmer Ripley, who used to tutor the Georgetown University fives, surprised by taking the Eastern Intercollegiate title, displacing Princeton as titleholder. With a good offense, built around Earl Nikkel and Bob O'Connell, Yale won eight league games out of ten, topping Princeton by one victory. The Princeton veterans bogged down at the start of the season and after a strong mid-season display, were set back by Pennsylvania in the final game. Pennsylvania finished third; Dartmouth, fourth, Columbia fifth, and Cornell sixth.

Ohio State and Northwestern tied for the Big Ten title, succeeding Purdue as champion. Both Ohio State and Northwestern won ten games and lost two. Iowa and Michigan also finished ahead of the defending champion five. Kentucky, with a clean slate in league competition of eight victories and no losses, captured the Southeastern Intercollegiate Conference title, topping Alabama. Vanderbilt finished third with Louisiana State fourth. The University of South Carolina took the Southern Conference tournament, displacing Georgia as champion. Texas University had an easy time winning the Southwest Intercollegiate Conference and Kansas took the Missouri Valley championship.

Wyoming University downed Colorado Teachers in the playoff for the Eastern division of the Rocky Mountain Conference but bowed to Brigham Young University in the final. Brigham Young had won the Western division title by defeating Utah University in the playoff. Oregon State won the Pacific Conference title, downing Southern California in the playoff between the Northern and Southern divisions.

The Diamond D-X Oilers of Tulsa, Okla., took the national A.A.U. title at Kansas City, defeating the Rosenberg-Arvey five of Chicago in the final, 25-23. The Durant Cardinals of Durant, Okla. won the national women's national A.A.U. title.

BASQUE PROVINCES. The three Spanish provinces of Guipúzcoa, Alava, and Vizcaya (Biscay), adjoining the west coast of France at the Pyrenees Mountains. Total area, 2739 square miles. The total estimated population on Jan. 1, 1932 was 904,182. Navarra, which has a predominating Basque population, does not form a part of the Basque Provinces. Chief cities are Vitoria (40,942 inhabitants estimated on Jan. 1, 1932), San Sebastian (80,119), and Bilbao (166,758). Sea fishing, iron mining, and agriculture

are the principal industries. See SPAIN under *History*.

BATES COLLEGE. A nonsectarian college for men and women at Lewiston, Me., founded in 1864. The enrollment for the autumn term of 1933 was 655, of whom 403 were men and 252 were women. In the 1933 summer session there was a total of 205 students, of whom 107 were men, and 98, women. The faculty and administrative officers numbered 57. The permanent funds amounted to \$1,771,310; total expenditures for the fiscal year were \$297,053; and the budget involved an appropriation of \$300,900. The library contained approximately 64,194 volumes. President, Clifton Daggett Gray, Ph.D., LL.D.

BATTLESHIPS. See NAVAL PROGRESS.

BAVARIA. One of the component states of the German Republic; declared a republic on Nov. 22, 1918. On Mar. 10, 1933, the Nazis removed the existing republican cabinet from office and appointed Gen. Franz von Epp to be Police Commissary for Bavaria. The following executive appointments were made by the Police Commissary: Special Commissaries—Captain Boehm and Herr Esser; Commissary in the Ministry of Finance—Herr Siebert; Commissary in the Ministry of Justice—Dr. Frank. Area (excluding the Saar), 29,334 square miles; population (1933), 7,703,998. Munich, the capital, had 685,036 inhabitants in 1925; Nuremberg, 393,202; Augsburg, 165,522; Ludwigshafen, 101,869. In 1931, births numbered 137,056; deaths, 93,480; marriages, 55,256. Education is compulsory between the ages of 6 and 16. In 7704 elementary schools, on May 15, 1931, there were 942,141 scholars.

Agriculture and mining are the chief industries. About one-half the total area is under cultivation, the principal crops in 1931 with yields shown in metric tons were: Wheat, 597,888; rye, 589,284; oats, 636,620; barley, 639,164; potatoes, 5,822,663; hops, 5444. The wine yield was 19,270,702 gallons. The livestock census of Dec. 1, 1931 showed 376,296 horses, 3,964,522 cattle, 381,144 sheep, 2,560,819 pigs; 309,096 goats. The mineral output for 1931 in metric tons was: Coal, 1,677,150; iron ore, 293,393; pig iron, 222,575; cast iron, 98,640; sulphuric acid, 260,600. See GERMANY under *History*.

BEACH, HARLAN PAGE. An American missionary and educator, died at Winter Park, Fla., Mar. 4, 1933. He was born at South Orange, N. J., Apr. 4, 1854, and was graduated from Yale in 1878 and from the Andover Theological Seminary in 1883. A missionary to China for the American Board of Commissioners for Foreign Missions of the Congregational Church from 1883 to 1890, he had charge of the School for Christian Workers in Springfield, Mass., from 1892 to 1895, and was educational secretary of the Student Volunteer Movement for Foreign Missions from 1895 to 1906. He then became professor of the theory and practice of missions at Yale University, retiring as professor emeritus in 1921. Until 1928 he delivered lectures on missions at Drew Theological Seminary.

Dr. Beach's works include: *The Cross in the Land of the Trident* (1895); *Knights of the Labarum* (1896); *Dawn on the Hills of T'ang* (1900); *Geography and Atlas of Protestant Missions* (2 vols., 1901, 1903); *India and Christian Opportunity* (1904); *World Atlas of Christian Missions* (co-author, 1911); *Renaissant Latin America* (1916); *World Statistics of Christian*

Missions (co-author, 1916), and *Missions As a Cultural Factor in the Pacific* (1927). He also served as consulting editor of the *Missionary Review of the World*.

BEAUX-ARTS INSTITUTE OF DESIGN.

A school of fine arts in New York City, planned after the École des Beaux-Arts in Paris. For the early history of the Institute see THE NEW INTERNATIONAL YEAR BOOK, 1932. Working under the auspices of the Institute during the year 1932-33 there were 2200 architectural students, 135 students of sculpture, and 135 students of mural painting.

Prizes in architecture and sculpture are offered to students throughout the United States. During the year 1932-33, the committee on education in the department of architecture conducted 36 competitions for the study of architecture and six for the study of archaeology. The most important prize awarded to students through the Institute is the Paris Prize amounting to \$3600, given by the Society of Beaux-Arts Architects, which affords two and one-half years' study in architecture at the École des Beaux-Arts in Paris. There is also a traveling scholarship for sculptors amounting to \$1200, the winner being required to spend three months at the Fontainebleau School of Fine Arts and to travel abroad.

The Institute issues a monthly *Bulletin*. The officers elected at the annual meeting in November, 1933, were: Director, Whitney Warren; secretary, Henry R. Sedgwick; director of architectural department, Ely Jacques Kahn; director of department of sculpture, Gaetano Cecere; director of department of mural painting, Hildreth Meiere; director of the department of design, Eugene G. Steinhof; chairman of the board of trustees, Chester H. Aldrich; vice chairman, Philip L. Goodwin. Headquarters are at 304 East Forty-fourth Street, New York City.

BECHTEL, WARREN A. An American contractor, died in Moscow, U.S.S.R., Aug. 28, 1933. He was born on a farm near Freeport, Ill., Sept. 12, 1872, and after receiving a public school education engaged in cattle ranching near Peabody, Kans. During the '90s when the Chicago, Rock Island, and Pacific Railroad was constructing new lines westward from Chickasha, Okla., he hired out his mule teams at \$2.75 a day and was thus employed for several years as a day laborer. In 1900 he acted as foreman on the rebuilding of lines of the Union Pacific Railroad in Wyoming and during 1902-03 was estimator for the Southern Pacific Railroad in the construction of its Central Pacific division. After 1906 he received several important railroad, highway, and irrigation subcontracts from E. B. and A. L. Stone of Oakland, Calif., and the Utah Construction Co., including the construction of a branch of the Western Pacific Railroad, the Klamath River highway in northern California, and a highway through the San Gabriel canyon east of Los Angeles.

In 1914 Mr. Bechtel entered the contracting field for himself, forming in San Francisco, with his two sons and a brother, the firm of W. A. Bechtel Co., which specialized in railroad and public utility construction in the Southwest. Its principal contracts were received from the Santa Fe and Western Pacific railroads. It later became connected with the Transbay Construction Co., which built the foundations of the East Bay section of the projected San Francisco-Oakland Bay Bridge. In August, 1931, Mr. Bech-

tel succeeded to the presidency of the Six Companies, Inc., a syndicate of which his firm was one of the members and which earlier in the year had received the contract for the construction, within seven years at an approximate cost of \$49,000,000, of Boulder Dam, the largest hydraulic project attempted by the Federal government since the building of the Panama Canal. Also, he had been president of the Associated General Contractors of America after 1928. At the time of his death he was touring the Soviet Union, where he had gone especially to visit the Dnieprostroy Dam.

BECHUANALAND (bēch'ōō-ä'nä-länd') **PROTECTORATE.** A protectorate of Great Britain in South Africa, bounded west by South West Africa and east by Southern Rhodesia and the Transvaal. Area, about 275,000 square miles; population (1925 census), 152,983 including 1743 Europeans. The chief native village is Serowe with 25,000 (estimated) inhabitants. In the year 1931-32 there were 119 schools (107 Native, 10 European, and 2 Colored). Cattle rearing and agriculture are the main occupations; the agricultural crop production being dependent on the rainfall. Gold and silver production for 1931-32 was valued at £5507. Government revenues and expenditures amounted to £106,636 and £162,495 respectively for 1931-32; excess of assets over liabilities on Apr. 1, 1932 was £21,775. The protectorate is administered through the native chiefs by a resident commissioner (with administrative headquarters at Mafeking, Cape Province) under the British High Commissioner for South Africa. Resident Commissioner in 1933, Lieut.-Col. C. F. Rey.

HISTORY. On September 14 the native Acting Chief Tshekedi, ruler of the Bamangwato tribe, was tried before a British Court of Inquiry, at Palapye Road, headed by Vice Admiral E. R. Evans, and later sentenced to suspension and banishment because a native court under his direction had sentenced a white man to be flogged. Native courts had no legal right or jurisdiction to try Europeans. On October 4 Tshekedi was reinstated after his mother had made a special plea, and Vice Admiral Evans had felt able to advise the King of England to terminate the period of suspension. The white man who had been flogged for offenses against native women, and another white man, were ordered "banished" from all native territories in Bechuanaland.

BEER. See **TAXATION**.

BEHN, HERNAND. An American capitalist, died at St. Jean de Luz, France, Oct. 7, 1933. He was born at St. Thomas, Virgin Islands, Feb. 19, 1880, and attended St. Thomas's School at Ajaccio, Corsica, and Ste. Barbe's School in Paris. After 1906 he was president of the banking firm of Behn Bros., Inc., which he organized with his brother, Col. Sosthenes Behn, in San Juan, Puerto Rico, in 1904, later extending its operations to New York City. In 1920 he organized with his brother the International Telephone and Telegraph Corp., which, at the time of his death, operated telephone, telegraph, cable, and radio properties in 42 countries. Among its subsidiaries were the Radio Corp. of Cuba, Cuban Telephone Co., and Cuban-American Telephone and Telegraph Co. He was also chairman of the board of the International Marine Radio Co., Ltd.; vice-chairman of the International Standard Electric Corp., Mexican Telephone and Telegraph Co., Puerto Rico Telephone Co., International Com-

munications Laboratories, Inc., International Telephone and Telegraph Laboratories, Inc., and president of the Havana (Cuba) Subway Co.

In 1930 the International Telephone and Telegraph Corp. presented to and installed in Vatican City its telephone system, Pope Pius XI conferring on Mr. Behn, in recognition of this gift, a commandery of the Order of St. Gregory the Great and the Grand Cross of the Order of the Holy Sepulchre. As one of the principal donors of the Vatican City's wireless system, he received from the Pope in 1933 the Grand Cross of the Order of St. Gregory the Great. He was also the recipient of the Grand Cross of the Order of Isabella the Catholic for his services in modernizing the telephone system of Spain.

BELGIAN CONGO. See CONGO, BELGIAN.

BELGIUM. A kingdom of Western Europe. Capital, Brussels. Reigning sovereign in 1933, Albert I, who succeeded to the throne Dec. 17, 1909.

AREA AND POPULATION. Including the districts of Eupen and Malmédy, ceded to Belgium by the Treaty of Versailles, the area is 11,752 square miles. The population was estimated at 1,519,185 on Dec. 31, 1931, compared with 8,092,004 at the census of Dec. 31, 1930. The population per square mile in 1931 was 694. Foreigners in the country in 1930 numbered 316,982, with French, Dutch, Poles, and Italians predominating. The movement of population in 1931 was: Living births, 148,538; deaths, 108,017; marriages, 66,168; divorces, 2531. Emigration in 1931 was 19,252 (17,515 to European countries); immigration, 32,045. The chief cities, with estimated populations on Dec. 31, 1931, were: Brussels and suburbs, 834,522; Antwerp (Anvers), 284,811; Ghent (Gand), 170,576; Liège (Lutich), 165,657.

EDUCATION. In addition to the numerous private and free schools, mostly under ecclesiastical control, there were on Dec. 31, 1931, 8549 primary schools, with 917,122 pupils; 3972 infant schools, with 249,799 pupils; and 1357 adult schools, with 37,798 pupils. For secondary education there were 230 schools of various types, with 52,928 students; also 31 technical and commercial high schools and other vocational institutions. Enrollment in the four universities in 1931-32 was: Brussels, 2721; Ghent, 1881; Liège, 2734; and Louvain, 4071. Liège and Ghent are state universities. French and Flemish are the languages of instruction.

PRODUCTION. The census of 1920 showed 1,466,646 persons engaged in mining and industry, compared with 566,340 in commerce and transport, 477,658 in agriculture, 173,037 in the civil service, 116,017 in liberal professions, and 160,081 in domestic service. In 1931, 3,042,000 acres, or 40 per cent of the total area, was under cultivation; there were 1,327,000 acres of permanent meadows and pastures and 168,000 acres of orchards. The estimated production of the chief crops in 1932, with 1931 figures in parentheses, in quintals of 220.46 pounds, was: Wheat, 4,185,000 (3,761,000); rye, 6,010,000 (4,809,000); barley, 1,023,000 (875,000); oats, 7,604,000 (7,023,000); potatoes, 44,390,000 (35,769,000); sugar beets 17,361,000 (14,655,000); tobacco, 62,000 (66,000); beet sugar in 1932-33, 2,480,000 (2,006,000). Livestock at the beginning of 1932 included 241,989 horses, 1,767,536 cattle, and 1,235,214 swine.

The index of Belgian industrial production

(base: 1928 = 100) declined from an average of 100 for 1929 to 90 for 1930, 79 for 1931, and 68 for 1932. Mining and metallurgical (provisional) output in 1932, with 1931 figures in parentheses, was (in metric tons): Coal, 21,413,560 (27,035,560); briquettes, 1,320,750 (1,850,330); coke, 4,476,099 (4,931,060); pig iron, 2,783,500 (3,231,680); wrought iron, 35,480 (62,880); steel, 2,758,280 (3,056,450); wrought steel, 2,054,470 (2,350,600). The average number of workers employed by the coal mining companies in July, 1933, was 223,904. The totally unemployed on June 30, 1933, numbered 145,000; partially unemployed, 156,000. The percentage of unemployed workers in leading industries on Mar. 31, 1933, was: Building, 27.9; engineering and metallurgy, 21.6; textiles, 17.6; food, 9.7; mining, 4.5. The chief industries are iron and steel, rayon, glass, lace, linen, gloves, and automobiles. The effect of the world depression upon the Belgian price structure was to lower wholesale prices 40.8 per cent and retail prices 16.8 per cent between 1929 and March, 1933.

COMMERCE. Since the conclusion of the Customs Union with Luxembourg on Mar. 5, 1922, Belgian foreign trade statistics have been combined with those of Luxembourg. The decline in imports and exports during the period 1929 to 1932 is shown in the accompanying table.

BELGIUM: IMPORTS AND EXPORTS
[In paper francs worth \$0.0278 at par]

Year	Imports 1,000 francs	Exports 1,000 francs	Excess of imports 1,000 francs
1929 . .	35,623,791	31,879,905	3,743,886
1930 . .	31,047,016	26,151,571	4,895,445
1931 . .	23,964,566	23,235,797	728,769
1932 *	16,424,375	15,130,450	1,293,925
1933 *	15,217,000	14,328,000	889,000

* Figures are provisional

Of the 1932 imports, raw materials accounted for 7,203,147,000 paper francs; manufactures, 4,794,661,000; foodstuffs and beverages, 4,158,171,000; gold and silver in bullion and coin, 165,087,000; and live animals, 103,309,000. The distribution of exports by the same classes was: Manufactures, 7,928,652,000 paper francs; raw materials, 5,309,159,000; foodstuffs and beverages, 1,429,414,000; gold and silver, 310,833,000; and live animals, 152,392,000. The United Kingdom, France, Germany, the Netherlands, and the United States are Belgium's leading markets and sources of imports.

FINANCE. The ordinary budget for the fiscal calendar year 1931 showed a deficit of about 1,500,000,000 paper francs, with expenditures of 11,977,000,000 francs. The estimated deficit in the extraordinary budget was 713,000,000 francs. For 1932, there was a deficit of about 2,200,000,000 francs on the ordinary budget, with expenditures of 11,180,000,000 francs. A further deficit of 293,000,000 francs on the extraordinary budget was anticipated. The 1933 budget, as passed by parliament, anticipated a deficit of 622,000,000 francs, with total expenditures of 11,503,000,000 francs and total revenues of 10,881,000,000 francs.

The public debt on Dec. 31, 1932, totaled 55,852,000,000 Belgian francs (internal debt, 28,320,000,000 francs; external, 26,398,000,000 francs). In August, 1933, the government was authorized to raise 3,300,000,000 francs for unemployment relief works.

COMMUNICATIONS. Belgium in 1932 had 2995 miles of main railway line, owned by the state

but operated by a private company; 6438 miles of highways, 1030 miles of navigable rivers and canals, and about 497 miles of airways. In 1932, Sabena, the Belgian air system, transported 8478 passengers (7721 in 1931), 545,000 pounds of freight (680,000 in 1931), and 77,500 pounds of mail (98,100 in 1931). The Belgian merchant fleet on July 1, 1932, consisted of 240 vessels of 537,442 tons. Idle steam and motor shipping totaled 139,000 gross tons on July 1, 1933, and 187,000 gross tons a year earlier.

GOVERNMENT. Belgium is a constitutional monarchy, in which the King exercises the executive power through a ministry responsible to parliament. Legislative power is vested in the King and in parliament. Parliament consists of a senate of 159 members elected for four years partly by direct and partly by indirect vote and a house of representatives of 187 members elected for four years by direct suffrage. The composition of the Senate following the election of Dec. 4, 1932, was: Catholics, 75; Socialists, 65; Liberals, 18; Frontist (Flemish autonomists), 1. The House of Representatives elected Nov. 27, 1932, included 79 Catholics, 73 Socialists, 24 Liberals, 8 Frontists, and 3 Communists. The Liberal-Catholic coalition cabinet appointed Dec. 17, 1932, was headed by Count Charles de Broqueville (Catholic).

HISTORY

THE BUDGET PROBLEM. In Belgium, as in many other countries, the most pressing domestic problem confronting the government was that of balancing the budget. Successive budget deficits had been met by large foreign and domestic loans, raised at high rates of interest. When Parliament reassembled on Jan. 18, 1933, the government was running a monthly deficit of about \$9,000,000 and a serious financial crisis was in prospect, despite the heavy increases in taxation and reduction of expenditures initiated in 1932.

The de Broqueville Ministry attempted to bring the budget more nearly into equilibrium by imposing further taxes and by reducing unemployment benefits. These steps aroused widespread demonstrations by taxpayers on the one hand and by the unemployed, the Socialists and Communists on the other. In spite of higher taxes and economies, the government at the beginning of May reported that it faced a 600,000,000-franc deficit in the 1933 budget. It requested and obtained from Parliament on May 17 a law granting the Cabinet special powers for improving the financial situation and balancing the budget. Under this law the government on June 1 published a series of economy decrees, calculated to reduce expenditures by 800,000,000 francs. The decrees cut all government salaries and pensions by 5 per cent, reduced government subsidies by 20 per cent, changed the unemployment relief benefits and legislation and provided for compulsory work for the unemployed. These decrees aroused further criticism from various groups and when Parliament reassembled July 19, the government was forced to modify some of them to retain support. The ministry won a vote of confidence on its general economy measures July 23. Shortly afterward, Parliament adjourned, reassembling October 17 to discuss the complete budgets for both 1933 and 1934. The budget had not been adopted by the end of the year. In December a 35-year 600,000,000 French franc loan was successfully floated to retire 500,-

000,000 French francs in Treasury notes which fell due Jan. 5, 1934.

RELATIONS WITH GERMANY. As in previous years, Belgian relations with Germany had direct repercussions upon the financial problem. The Hoover Moratorium of 1931, indefinitely prolonged by the Lausanne Conference of 1932, deprived the Belgian budget of some 600,000,000 francs annually in German reparations. Due partly to this fact and to the critical budgetary position, the government in 1933 continued its refusal to pay war debt installments due the United States government (see **REPARATIONS AND WAR DEBTS**). The advent of the Hitler government aroused Belgian fears of a new German aggression. Despite its financial difficulties, the government authorized heavy financial expenditures for the fortification of the German frontier. On October 1, the Minister of War received Cabinet approval of a credit of 750,000,000 Belgian francs (about \$157,500,000) to carry out a two-year programme for improvement of fortifications and of the army. The activity of German Nazis along the frontier and in the districts of Eupen and Malmédy, ceded to Belgium by the Versailles Treaty, increased Belgian fears and enlisted the support of most parties for the defense expenditures.

Economic relations between Belgium and Germany showed improvement during October, following the German government's pledge to pay three-fourths of the annual sum due under the Young Plan for repayment of German paper marks left in Belgium after the armistice. Germany had suspended payments on this special account the previous spring.

COMMERCIAL POLICIES. In accordance with recommendations submitted by Georges Theunis, former Premier, the Belgian government in August adopted a policy of limiting imports from countries with which the balance of trade was unfavorable to Belgium. Attempts to negotiate a trade convention on this basis with Argentina broke down on November 30 after several months of discussion and Belgium proceeded to limit its heavy imports of meat, wheat, and other raw materials from Argentina. The balance of trade with that country was distinctly unfavorable, Belgian exports to Argentina amounting to about 350,000,000 Belgian francs, while imports from Argentina were about 1,100,000,000 francs. Similar negotiations were in progress with the Netherlands, Germany, the United States and other countries during the year.

OTHER DEVELOPMENTS. On Sept. 10, 1933, two tunnels connecting Antwerp with the left bank of the Scheldt were formally opened, one being for vehicles and the other for pedestrians.

BELGIUM EDUCATIONAL FUND. See **UNIVERSITIES AND COLLEGES.**

BELMONT, ALVA E. SMITH. An American feminist, died in Paris, France, Jan. 26, 1933. She was born in Mobile, Ala., Jan. 17, 1853, the daughter of Murray F. Smith, and was educated at a French convent. After her marriage in 1874 to William K. Vanderbilt, scion of the New York family of steamboat and railroad fame, she became a forceful leader in American social life. She was the mother of Consuelo (at one time, the Duchess of Marlborough) and Harold S. and William K. Vanderbilt, Jr. Following her divorce in 1895 she was married to Oliver H. P. Belmont, and after his death in 1908 became actively and generously interested in movements for social

betterment, such as the establishment of hospitals and children's homes, the abolition of child labor, and the improvement of working conditions for women in industry.

Mrs. Belmont was known preëminently, however, for her efforts in the cause of woman's rights, being an ardent suffragist and founder and later president of the Political Equality Association. She was also an organizer of the National Woman Party's Convention, held in San Francisco and Washington in 1915 and composed of delegates from the 12 States which had granted full suffrage to women. After the passage of the Nineteenth Amendment she devoted her efforts to obtaining legal equality for women, both nationally and internationally.

BENDIX TROPHY. See AERONAUTICS.

BENNETT CUP RACE. See AERONAUTICS.

BENSON, STELLA. A British novelist, died at Hongai, Tongking, French Indo-China, Dec. 7, 1933. Born at Much Wenlock, Shropshire, England, Jan. 6, 1892, she was educated privately, mostly in France, Switzerland, and Germany. In 1914 she took an inconspicuous part in the woman suffrage movement and during the War worked on London's East Side. In 1918 she went to the United States where, after engaging in many and varied occupations that ranged from proof-reading to stunt flying, she eventually made her way to San Francisco and from there sailed for China in 1921. In the latter year she was married to J. C. O'Gorman Anderson, an official of the Chinese Customs Service, and afterwards resided largely in China.

Miss Benson's most notable novel was *Tobit Transplanted* (1931, published in the United States as *The Faraway Bride*), a tale of expatriated White Russians in China which received the Femina Vie Heureuse Prize in 1932. Among her other works, all noted for their subtle blend of satire, were *I Pose* (1915); *This Is the End* (1917); *Twenty* (1918); *Living Alone* (1919); *The Poor Man* (1922); *Pipers and a Dancer* (1924); *The Little World: Sketches of Travel* (1925); *Good-bye, Stranger* (1926); *Worlds within Worlds* (1928); *The Man Who Missed the 'Bus* (1928); *Hope against Hope* (1931); *Christmas Formula* (1932); and *Pull Devil, Pull Baker* (1933).

BEREA COLLEGE. A nonsectarian, coeducational institution in Berea, Ky., founded in 1855 and designed to serve the educational needs of the mountain people of the Southern Appalachian region. The enrollment for the autumn of 1933 was 1511, distributed as follows: College, 642; academy, 518; foundation-junior high school, 316; nurses, 35. The enrollment in the summer session of 1933 was 302, of whom 205 were in the college, 76 in the academy, and 21 were nurses. The faculty numbered 109. The endowment amounted to \$9,063,022.77, and the income for the year ending June 15, 1933, was \$588,636.80. The library contained about 65,700 volumes. The college of arts and sciences is enriching its curriculum by the extension of the work in the Fine Arts to a full department, and by the addition of theory and practical work in music, making possible music majors in Piano, Violin, Voice, Pipe Organ, and Public School Music. President, William J. Hutchins, DD., LL.D.

BERGER, FRANCESCO. A British pianist and composer, died Apr. 26, 1933, in London, where he was born June 10, 1834. He studied with

Lickl in Vienna and with Hauptmann and Plaidy in Leipzig, and in 1855 became professor of piano at the Royal Academy of Music in London. He taught also until 1924 at the Guildhall School of Music and made frequent concert tours throughout the British Isles. For some years he was director, and from 1884 to 1911 honorary secretary, of the Philharmonic Society. In addition to many songs and pieces for the piano, violin, and 'cello Professor Berger composed the opera *Il Lazzarone* and the overtures and incidental music to *The Lighthouse* and *The Frozen Deep*, plays written by Wilkie Collins and acted by Charles Dickens and his friends at their famous private theatricals. He wrote *First Steps at the Pianoforte* and *Vocabulary of Musical Expressions* and published his memoirs under the title *Reminiscences, Impressions and Anecdotes* (1913).

BERMU'DA. A British owned colony in the North Atlantic about 580 miles east of North Carolina and 677 miles from New York, consisting a group of 360 small islands about 20 of which are inhabited. Because of its warm climate and picturesqueness it is a favorite resort for American tourists. Area, 19.3 square miles; civil population (1931 census), 27,789 including 11,353 white. Hamilton, the capital with 3250 inhabitants, is an important naval base.

In 1932 there were 55 schools; education of children from 7 to 13 years of age is compulsory. Government revenues and expenditures for 1932 were £462,607 and £443,501 respectively. The chief products are potatoes, lily bulbs, onions, and other vegetables which are raised principally for the United States and Canadian markets. Imports (excluding government stores) were valued at £1,891,526 in 1932; exports totaled £93,461. Shipping entered and cleared in 1932 aggregated 7,794,558 tons. The government is administered by a governor, assisted by an executive council of 7 members and a legislative council of 9 members both appointed by the Crown and an assembly of 36 members elected by about 1350 electors. Governor in 1933, Sir T. A. Cubitt.

BESANT, bès'ant, ANNIE (WOOD). A British Theosophist, died at Adyar, India, the world headquarters of the Theosophical Society, Sept. 20, 1933. Born in London, Oct. 1, 1847, the daughter of William Page Wood, she attended private schools in England, Germany, and France in 1867 was married to the Rev. Frank Besant, a Church of England clergyman. She was legally separated from her husband six years later, but on account of the agnostic views which she had acquired she was deprived of the custody of her two children. In 1874 she joined the National Secular Society, where for almost 15 years she was associated with Charles Bradlaugh, the Radical politician and social reformer, serving as vice-president of the society and co-editor of the *National Reformer*. Becoming interested in Socialism of a more revolutionary type, she joined the Fabian Society and the Social Democratic Federation in 1885 and took an active part in organizing trades unions among unskilled laborers. During 1887-90 she represented Tower Hamlets, as a Labor and Socialist member, on the London School Board.

Mrs. Besant next came under the influence of Helena P. Blavatsky, founder of the Theosophical Society, and in 1889 announced her conversion to that system of Neo-Platonism. Rising rapidly

in Mme. Blavatsky's favor, she was appointed on the latter's death in 1891 leader, with William Q. Judge, of the Esoteric Section, the inner body of the Theosophical Society. After 1907 she was president of the society, editing its organ, *The Theosophist*, and directing the propagation of its doctrines through branches in 48 nations. The core of these doctrines was belief in an unknowable, absolute, divine Principle as the source of the manifested universe and in the identity of all souls with a universal Oversoul, all pursuing their pilgrimage toward ultimate perfection through many lives on earth, in which each reaps the exact harvest of its own sowing. In 1910 Mrs. Besant founded the Order of the Star through which she wished to prepare the way for Jeddū Krishnamurti, an Indian youth who had been revealed to her as the "vehicle" of the World Teacher. Krishnamurti's action in renouncing the "mastership" after their tour of England and the United States in 1926-27 was said to have saddened her last years.

In India Mrs. Besant found fulfillment for her early desires as a social reformer. She early devoted herself to the spread of education, founding at Benares in 1898 the Central Hindu College and in 1904 the Central Hindu Girls' School and helping to found there the Hindu University. During the early part of the World War she identified herself with the Indian Nationalist movement, forming the Home Rule League for India, of which she was president in 1916, and editing the Madras daily *New India*, through which she expounded her views on Indian independence. For this action she was interned for a while by the government of Madras. She continued her nationalistic support on her release, however, serving in 1917 as president of the Indian National Congress which demanded home rule for India in 10 years. The following year, though, she dissociated herself from the Congress's extreme wing and supported the proposed Chelmsford-Montague reforms. In 1923 she was general secretary of the National Convention of India.

Mrs. Besant's influence waned after Gandhi's ascendancy, but she continued to write on India's political future, her last works being *India, Past, Present, and Future* (1926) and *A Bird's Eye View of India's Past as the Foundation for India's Future* (1930). Also she published such noteworthy books on Theosophy as *Reincarnation* (1892); *Seven Principles of Man* (1892); *Death and After* (1893); *Building of the Kosmos* (1894); *The Self and Its Sheaths* (1895); *Path of Discipleship* (1896); *Man and His Bodies* (1896); *Four Great Religions* (1897); *The Ancient Wisdom* (1897); *Three Paths to Union with God* (1897); *Evolution of Life and Form* (1898); *Esoteric Christianity* (1901); *Theosophy and the New Psychology* (1904); *The Wisdom of the Upanishats* (1906); *The Basis of Morality* (1915); *A World Religion* (1916); *H. P. Blavatsky and the Masters of the Wisdom* (1918); *Man's Life in Three Worlds* (1919); *The Riddle of Life and How Theosophy Answers It* (1922); and *Theosophic Christianity* (1922). Her autobiography appeared in 1920.

BESSARABIA, bēs'ā-rā'bl-ā. A territory joined to Rumania on Apr. 11, 1918, formerly a province of the Russian Empire. It occupies the northeastern portion of Rumania and has an area of 17,146 square miles; population (1930 census), 2,865,506. See **RUMANIA** under *History*.

BETHELL, UNION NOBLE. An American industrialist, died at Montclair, N. J., Jan. 13, 1933. He was born at Newburgh, Ind., Sept. 12, 1859, and was graduated from Hanover College in 1879. On receiving the LL.B. degree from Columbian (later George Washington) University in 1885 he practiced law for several years in Evansville, Ind. With his appointment in 1889 as secretary and treasurer of the New York and New Jersey Telephone Co. began his long association with the Bell Telephone System. In 1893 he was made general manager of the Metropolitan Telephone and Telegraph Co., and in 1896 vice-president and general manager of its successor, the New York Telephone Co. He later assumed not only the presidency of the New York Telephone Co. but that of various regional companies of the Bell System, including the Chesapeake and Potomac Telephone Co., operating in Washington, Baltimore, and surrounding territory; the Bell Telephone Co. of Pennsylvania; the Delaware and Atlantic Telephone and Telegraph Co.; and the Diamond State Telegraph Co. On the grouping of these companies in 1909 into one operating unit under the control of the American Telephone and Telegraph Co. he accepted the office of first vice-president of that organization. During the World War he was chairman of the operating board of the United States Telephone and Telegraph Administration.

Mr. Bethell served as adviser to various foreign telephone and telegraph administrations, and in recognition of his service in adapting the telephone to conditions in Japan was decorated with the Imperial Order of the Rising Sun. After his retirement in 1919 from the presidency of the New York Telephone Co., the vice-presidency of the American Telephone and Telegraph Co., and the directorship of several other Bell telephone companies throughout the United States he devoted himself to various civic and philanthropic projects. Among these was the chairmanship during 1921-22 of the executive committee of the American Committee for the China Famine Fund. During 1925-27 he was a member of the joint legislative commission of New York and New Jersey, appointed to determine the taxation of property in connection with the construction of the Holland Vehicular Tunnel.

BIBLE SOCIETY, AMERICAN. Organized in 1816, this society has steadily carried forward its specific purpose of "circulating the Holy Scriptures without note or comment" and without discrimination as to class, color, or creed. Bibles, Testaments, and Portions are sold without profit, and below cost or donated free when circumstances justify. During the 117 years of its existence the society has issued 246,046,560 volumes and participated in the translation, publication, and distribution of the Scriptures in more than 300 languages, dialects, and versions.

The work in the United States is carried on through 10 home agencies and some 100 auxiliary, State and local, Bible societies. Latin America and the Near East and Far East are covered by 12 additional agencies, while correspondents help carry on the work in other countries, especially in Europe and Africa. During 1932 the society issued 8,067,156 volumes in 180 languages. The number issued in the United States was 3,815,966 and in foreign lands 4,251,190. Engaged in this distribution were 3645 agency secretaries, sub-agents, colporteurs, correspondents,

and volunteers, of whom 1618 worked in the United States and 2027 in foreign lands.

In the translation field during 1932 an entire book of the Bible (the Gospel according to St. Matthew) was for the first time translated into the language of the Keres Indians of New Mexico and into the dialect of the Kalajiski gypsies of central Bulgaria. The Gospel according to St. John was published in parallel columns in Valiente and Spanish for a tribe of Indians in Panama. The revision of the Turkish New Testament was completed, while revision of the Old Testament was inaugurated with the publication of the Psalms. In Siam the Tai Lu New Testament translation was nearly completed. In the Philippines work proceeded on the translation of the Samaritan Old Testament, the Psalms being published in Manila, and the revision of the Ilocano Old Testament and the Ibanag New Testament.

The budget of the society for 1932 was \$1,180.-248. The officers in 1932-33 were: J. Frederick Talcott, president; the Rev. Eric M. North, Ph.D., D.D., and the Rev. George William Brown, D.D., general secretaries; the Rev. Lewis B. Chamberlain, D.D., recording secretary; Gilbert Darlington, treasurer; and Charles W. Fowle, assistant secretary. Headquarters of the society are in the Bible House, Astor Place, New York City.

BICYCLING. See CYCLING.

BIGGERS, EARL DERR. An American author, died in Pasadena, Calif., Apr. 5, 1933. He was born at Warren, O., Aug. 26, 1884, and was graduated from Harvard University in 1907. From 1908 to 1911 he was identified with the Boston *Traveler* as conductor of a humorous column and as dramatic critic. He removed to New York City in 1911 and turned his talents to fiction and play-writing, making his debut in 1912 with the comedy, *If You're Only Human*. The following year he published *Seven Keys to Baldpate*, the dramatic version of which, with George M. Cohan in the lead, was an outstanding success. There was also produced in 1913 *Thieves*, which he wrote in collaboration with Grover Harrison. In 1914 appeared his novel *Love Insurance* and the following year the play *Inside the Lines*, which achieved a record run of 500 performances in London. In collaboration with William Hodge he wrote *A Cure for Curables* (1917), in which Hodge starred for two years. His last productions on Broadway in 1919 were the musical comedy *See-Saw* and the farce *Three's a Crowd*, which he wrote with Christopher Morley.

On removing to Hollywood to engage in scenario writing Biggers turned his skill to the development of mystery plots, several of which centred about the fictional Chinese detective, Sergeant Charlie Chan. These included *The House without a Key* (1925); *Fifty Candles* (1926); *The Chinese Parrot* (1926); *Behind That Curtain* (1928); *The Black Camel* (1929); *Charlie Chan Carries On* (1930); and *Keeper of the Keys* (1932).

BILES, SIR JOHN HARVARD. A British naval constructor, died in London, Oct. 27, 1933. Born at Portsmouth, England, Jan. 6, 1854, he attended the Royal School of Naval Architecture and Marine Engineering and the Royal Naval College at Greenwich, and in 1877 entered the service of the British Admiralty as naval constructor. Four years later he became naval architect and manager to the Clydebank shipyard and was

elected Master of the Worshipful Company of Shipwrights. In 1891 he was called to the chair of naval architecture at Glasgow University, where he remained until 1921. During this period he served on various departmental committees of the Admiralty, including mercantile auxiliaries (1901), torpedo boat destroyer (1902-03), and warship designs (1905), and in 1905-06 was a member of the departmental committee on tonnage of the British Board of Trade. In 1911 he was president of the engineering section of the British Association for the Advancement of Science, in 1912 an assessor in the investigation of the *Titanic* disaster, and in 1913 British delegate to the International Conference on Safety of Life at Sea.

During the World War Sir John designed and supervised the construction of river craft for the British Expeditionary Force in Mesopotamia and in 1917 was chairman of the Admiralty committee on submarine cargo vessels. In 1923 he was appointed a member of the Indian Mercantile Marine Committee, serving at the time of his death as consulting naval architect to the High Commissioner for India. He was also a member in 1925 of the committee on Royal dockyards and their organization and during 1925-26 was chairman of the Engineering Joint Council. In 1929 he served as a witness before the Board of Trade to determine the cause of the sinking of the *Vestris*. He was knighted in 1913 and was created a Knight Commander of the Indian Empire in 1922. His publications included *The Marine Steam Turbine* (1906) and *Design and Construction of Ships* (1908).

BILLIARDS. The downfall of Ralph Greenleaf, perennial holder of the world's pocket billiard championship, as he sought his thirteenth title, was the highlight of the 1933 billiard campaign. Undeclared in 1931 and 1932 Greenleaf met with defeat seven times in the tournament at Chicago in December and yielded his crown to Erwin Rudolph, of Cleveland. Greenleaf had been dethroned before but never in recent seasons had he suffered as disastrous a session of play as in the Chicago championship tournament. Rudolph and Andrew Ponzi of Philadelphia met in the final and the former triumphed, 125 to 113, to regain the title he last won in 1930. The three-cushion championship also changed hands, Welker Cochran of San Francisco succeeding Augie Kieckhefer of Chicago. The other two major professional billiard titles, the 18.2 balkline and the 18.1 balkline, remained in the possession of their holders, as no tournament play was scheduled because of lack of competitors as well as lack of money with which to stage the tournaments. Willie Hoppe is 18.1 champion and Jacob Schaefer Jr., titleholder at 18.2. Cochran is also national professional 18.2 champion, having taken the title in 1930.

In a professional cushion-carom match, the first played since 1883, Willie Hoppe defeated Schaefer, 1500 to 1012. Hoppe also won a three-cushion challenge match, downing Cochran, 600 to 567.

There were few changes in the amateur billiard championship roster. Albert Poensgen of Germany, who had captured the world's 18.2 balkline championship in New York in 1932, lost his laurels to Edmond Soussa of Egypt at Berlin. Edgar T. Appleby of New York, became the first American ever to annex the world's 18.1 balkline title by triumphing in an international field at New York in March. A. Robyns of Holland was

not called upon to defend his world's three-cushion crown. Appleby won the title by turning in five victories in the six matches, and his brother, Francis, finished in a triple tie for second place with Edmond Soussa of Egypt and Theodore Moons of Belgium, each of whom won four and lost two. Edgar Appleby succeeded Albert Corti of France as champion.

The national amateur pocket billiard championship was taken by J. Howard Shoemaker of Bridgeton, N. J. for the eighteenth time since 1913. His 1933 victory came after a challenge match. Ed Fagan of New York toppled Shoemaker in the regular tournament but the loser took advantage of an opportunity to challenge for the title and defeated Fagan. Edward L. Lee of the New York Athletic Club retained his national three-cushion title and Charles Shongood, Jr., successfully defended his snooker laurels. Lester Fischer of Brooklyn won the Poggenburg Memorial Cup as well as the class B pocket billiard crown. The national 14.2 tournament was not held, Orlando C. Bennett, of New York, retaining his title.

BILLITON. See NETHERLAND INDIA.

BIOGRAPHY. See LITERATURE, ENGLISH AND AMERICAN; FRENCH LITERATURE; GERMAN LITERATURE, ETC.

BIRDS. See ZOOLOGY.

BIRMINGHAM-SOUTHERN COLLEGE.

A coeducational institution for higher learning in Birmingham, Ala., founded in 1856. The enrollment for the autumn of 1933 was 742 full-time students, and 387 part-time students, and for the summer session 369. There were 57 faculty members. The endowment amounted to \$783,011, and the income for the year was \$242,644. There were 40,000 volumes in the library. President, Guy Everett Snavelly, Ph.D., LL.D.

BIRRELL, AUGUSTINE. A British barrister, politician, and author, died in London, Nov. 20, 1933. He was born at Wavertree, near Liverpool, Jan. 19, 1850, graduated in 1872 from Trinity Hall, Cambridge, and in 1875 was admitted to the bar at Lincoln's Inn. On being made Queen's Counsel in 1893 he practiced for a time in the Chancery courts, and from 1896 to 1899 was Quain professor of law at University College, London. In 1903 he was appointed a bencher of the Inner Temple. His Parliamentary career began in 1889 when he was returned to the House of Commons as Liberal member for West Fife. Defeated in the election of 1900, he was returned for North Bristol in 1906 and continued to represent that constituency until 1918.

Birrell was president of the Board of Education in the cabinet of Sir Henry Campbell-Bannerman during 1905-07, achieving distinction for the successful passage in the House of Commons of an Education Bill designed to settle the question of religious instruction. In 1907 he was appointed chief secretary to the Lord Lieutenant of Ireland and immediately after taking office prepared the Irish Councils Bill in an attempt to placate the Nationalists. The bill, however, was strongly opposed by the Sinn Fein. The following year he drew up the Irish Universities Act, under which Queen's University at Belfast, the National University at Dublin, and the Queen's colleges at Cork and Galway came into existence. In 1911 he prepared the third Home Rule Bill which called for a bicameral Irish Parliament, with an executive responsible to it and with full representative powers and

control over purely Irish concerns. This bill was introduced by Asquith in the Parliamentary sessions of 1912-14, but in spite of successive amendments no agreement was reached between John Redmond, leader of the Nationalists, and Sir Edward Carson, leader of the Ulster Unionists. Civil war seemed imminent when a truce was declared by both parties as a result of Great Britain's entry into the World War. Birrell tendered his resignation after the suppression of the Easter rebellion of 1916, led by extremists of the Sinn Fein who held that Ireland should no longer wait for Home Rule as a gift from the British Parliament.

As a man of letters, Augustine Birrell achieved a unique place with the publication in 1884 of his first volume of essays, *Obiter Dicta*. His power of analysis, his epigrammatic wit, and his urbanity combined to form a style whose easy grace evoked the word "birrelling." A second series of this title appeared in 1887 and in 1924 a third, entitled *More Obiter Dicta*. Other volumes of this nature were: *Res Judicatae* (1892); *Men, Women, and Books* (1894); *Collected Essays* (1900); *Miscellanies* (1901); and *Et Cetera* (1930). He wrote several biographies, including *Life of Charlotte Brontë* (1885); *Sir Frank Lockwood* (1898); *William Hazlitt* (1902); *Andrew Marvell* (1905); and *Frederick Locker Lampson* (1920). Among his publications on legal topics were *Lectures on the Duties and Liabilities of Trustees* (1896) and *Seven Lectures on the Law and History of Copyright in Books* (1899). He also held high honors in the educational field, being honorary fellow of Trinity Hall, Cambridge, after 1899 and Lord Rector of Glasgow University after 1911.

BIRTH RATES. See FRANCE, GERMANY, GREAT BRITAIN, SPAIN, ITALY, and JAPAN, and the other principal countries under *Area and Population*; *VITAL STATISTICS*.

BISMARCK ARCHIPELAGO. See NEW GUINEA under *Territory of New Guinea*.

BLACK, MAJ.-GEN. WILLIAM MURRAY, U. S. A., RET. An American soldier and civil engineer, died in Washington, D. C., Sept. 24, 1933. Born at Lancaster, Pa., Dec. 8, 1855, he attended Franklin and Marshall College and in 1877 was graduated from the United States Military Academy. After acting as assistant instructor in practical military engineering at the Academy he became engaged on various river and harbor improvement works under the auspices of the Engineers' Corps, rising to the rank of colonel. Transferred to Washington as assistant in the office of the chief of engineers in 1895, he was credited with introducing into the United States the use of reinforced concrete in defense construction. While acting as engineer commissioner of the District of Columbia during 1897-98 he prepared and secured the adoption of plans for the abolition of railroad grade crossings in the district.

During the Spanish-American War General Black was chief engineer of the American forces in the Puerto Rican campaign, commanding the Third Army Corps on its landing at Guanica. Subsequently he was commissioned chief engineer of the Fifth Army Corps. After the war he served as chief engineer first of the Department of Havana and then of the Division of Cuba, having charge of such improvements as the cleaning of streets and parks and the rehabilitation of public buildings which contributed to the eradication of yellow fever in the island. He prepared

also a code of sanitary regulations which was later incorporated in the general law of the republic. On his return to the United States he was appointed commanding officer of the Engineering School of Application in Washington, introducing there a system of industrial training. In 1903 he was named by the Isthmian Canal Commission observer on the construction work of the Panama Canal.

General Black next had charge of river and harbor improvements and fortifications in Maine, but in 1906 he was recalled to Cuba as adviser to the department of public works of the provisional government. From 1909 to 1916 he was principally engaged as chief engineer of the Eastern Department in supervising river and harbor improvements and fortifications along the Atlantic coast. He served also during 1910-13 as senior member of the board of engineers, charged with raising the wreck of the *Maine* from Havana harbor, and sat on the Army and Navy board appointed to determine, if possible, the cause of the vessel's explosion. According to the board's report proof of external explosion was beyond question.

In 1916 General Black was appointed chief of engineers of the United States Army, with the rank of brigadier-general. The following year he was promoted to major-general. He was active in the organization of the Engineer Officers Reserve Corps, and after the entry of the United States into the World War took personal charge of the mobilizing of the first engineer units of the National Army. The engineering branch of the Army was expanded under his direction to a war-time strength of 350,000 troops, a portion of which were used as the transportation regiments of the American Expeditionary Forces. In recognition of this service he was awarded the Distinguished Service Medal in 1918. He served also as chairman of the advisory committee on inland water transportation, first under the Council of National Defense and later under the Federal Railroad Administration, as a member of the military section of the National Research Council, and as chairman of the port and harbors facilities commission of the United States Shipping Board.

On his retirement in 1919 General Black became a member of the consulting engineering firm of Black, McKenney, and Stewart in Washington. He was a past president of the Society of American Military Engineers and with Earle B. Phelps invented a method of purifying sewage by aeration.

BLACKHEAD OF TURKEYS. See VETERINARY MEDICINE.

BOBSLEDDING. The sport of bobsledding, which received much notice in the Olympic year of 1932 when the sport was the main attraction at the winter games, continued in popularity in 1933. At the Mt. Van Hoevenberg bob run at Lake Placid, N. Y., the team of J. Hubert Stevens, John Shene, E. D. C. Cameron, and Donald DeLoria won the North American four-man event with a total for four heats of 7m: 12.51s, of which the fastest heat was 1m: 46.16s. J. Hubert Stevens and DeLoria won the North American two-man event with a total time for four heats of 8m: 00.21s.

The National A.A.U. four-man bob crown was taken by Curtis Stevens' team, composed of himself, Charles Devine, Robert Martin, and E. H. Varno. The two-man title went to the Hubert Stevens and DeLoria. The Junior four-man cham-

pionship was taken by Raymond Stevens steering Crawford Merkel, Vincent Stanley, and Sherwood Ernenwein as his crew. The World's two-man laurels were won in Germany by the Rumanian team of Capt. Dmitri Hubert and Lieut. Al Papana.

BOHEMIA. A province occupying the western part of Czechoslovakia; formerly a crownland of Austria. Bohemia is represented in the Czechoslovak legislature by 9 deputies and 5 senators. See CZECHOSLOVAKIA.

BOILERS. Steam boilers and their appurtenances have steadily improved in reliability and a recent survey of a large number of central-station boilers disclosed an average availability factor of 80 to 82 per cent. Such reliability has had much to do with the trend toward unit layout, as embodied in the designs of several of the latest stations under construction or projected, that is, one large boiler per turbine.

Aside from a new steam generator, incorporating water-cooled furnace walls and floor or ash screen, as an integral part of the boiler circulatory system, and the installation of the largest single-pass boiler in the world at the Duluth plant of the Minnesota Power and Light Company, the year just ended saw little new in boiler design. Fusion welding continued to gain in favor and there was a trend toward larger air preheaters.

Tests on two of the largest boilers in existence at the Hell Gate Station in New York showed an over-all efficiency of 88 per cent while generating over a million pounds of steam per hour in each unit. These boilers are fired with pulverized coal and have slag-tap furnaces.

The feedwater problem continued to occupy the attention of research laboratories. At the New Brunswick Experiment Station of the United States Bureau of Mines investigations were made on "Solubility of Sodium Sulphate in Boiler Water Salines as Related to Prevention of Embrittlement" and at the University of Michigan studies were conducted on "Determination of Dissolved Oxygen in Boiler Feedwater." Also, at the Naval Experiment Station, Annapolis, after extensive experiments, a new form of feedwater treatment was evolved for Naval boilers.

Other research included "Studies on the Removal of Ash as Molten Slag from Pulverized-Coal Furnaces" and "The Effect of Preheated Air on Fuel Beds" at the Pittsburgh Station of the United States Bureau of Mines; "The Burning Characteristics of Pulverized Fuels and Radiation from their Flames," at Battelle Memorial Institute, Columbus, O.; Smoke Abatement research at Stevens Institute of Technology, Hoboken, N. J.; and several independent investigations on the Grindability of Coal, Related to the boiler field, as well as that of turbines and piping, was the research on "Creep of Metals at High Temperatures," conducted jointly by the American Society of Mechanical Engineers and the American Society of Testing Materials. Several manufacturers also conducted investigations in this line.

In the field of fuel-burning equipment, new designs of small and medium-sized stokers of the underfeed type have been brought out to handle low-grade coals, and large stokers have been redesigned to use higher air preheat and zoned control of combustion air. After some modifications, the world's largest stokers at the Hudson Avenue Station in Brooklyn, N. Y., successfully

met the guaranteed steam output from their respective boilers of 530,000 pounds of steam per hour. In pulverized-coal firing the capacity of mills has been increased and one station has adopted the practice of using one pulverizer per burner. Pulverizers are also being improved to lessen maintenance and to reduce their power consumption. Preheat temperatures with pulverized coal and with oil increased to a maximum of 600° F., whereas with stokers 500° F. has been employed successfully, although 350 to 400° is the more common.

During the year many plants changed over from coal to oil or gas firing because of favorable oil and gas prices. With the NRA Codes now applicable to all fuel industries it is possible that the present year may see a change in the competitive fuel situation.

Because of the depression, with some factories shut down and a curtailment of certain forms of expenditure on the part of municipalities, enforcement of smoke-abatement ordinances was allowed to lag in a number of localities. In England, however, the movement was carried forward to the end that practically all the new power stations have been equipped with smoke and cinder, or fly-ash, arresting devices and some are removing the sulphur fumes from the stack gases.

Early in January the United States Department of Commerce released figures on the production of steel boilers for the first eleven months of 1933. The total number, including power, heating and marine boilers, was 3787 compared with 3437 for the same months of 1932. The corresponding heating surface sold was 4,508,194 and 3,344,870 sq. ft., respectively. Of the 3787 steel boilers built in 1933, 2101 were for heating, 1506 for power service and 180 for marine use. From the same source and for the same period, the number of stokers for power boilers is given as 1422 in 1933 and 1189 in 1932; and the number of coal pulverizers as 141 and 88, respectively. These figures indicate a substantial increase in boilers and fuel-burning equipment for 1933 as compared with 1932.

BOLIVIA. A landlocked Andean republic of South America. Capital and largest city, La Paz; seat of the Supreme Court, Sucre.

AREA AND POPULATION. The area of Bolivia is uncertain, due to the unsettled boundary dispute with Paraguay. Exclusive of the Chaco territory under dispute, the area is estimated by one official source at 506,467 square miles; including the Chaco, 626,517 square miles. The population on Jan. 1, 1932, was estimated at 3,014,069, with Indians constituting about 57 per cent of the population, mestizos 30 per cent, and whites 13 per cent. The educated classes speak Spanish; the natives, Quechua and Aymara. La Paz on Dec. 31, 1932, had 150,898 inhabitants (142,549 in 1928), including 60,094 whites, 47,245 mestizos, and 41,077 Indians. The estimated population of the other towns in 1932 was: Cochabamba, 49,612; Potosí, 36,348; Sucre, 26,439; and Santa Cruz, 31,691.

EDUCATION. Elementary education by the municipalities and the state is nominally free and compulsory, but the native and mestizo classes are largely illiterate. In 1932, there were 2033 primary schools, with 143,017 pupils, and 39 secondary schools (19 national), with a total of 4402 students. There were 22 special schools, with 2033 students and 18 institutions offering university instruction, with 1745 students. The Uni-

versities of La Paz and Sucre are the principal institutions of higher education.

PRODUCTION. The bulk of the native population exists by primitive agriculture. Mining, and particularly the production of tin, is the only important industry. Bolivia normally supplies about one-fourth of the world's tin requirements and the economic condition of the country is determined largely by the prevailing world prices and demand for tin. After some six years of declining tin prices, which plunged Bolivia into the depths of economic depression, the government on June 1, 1932, signed an agreement with other tin-producing countries restricting production. The Bolivian output was fixed at 14,087 tons annually during 1932 and 1933. The metal content of tin ore exported in 1932 was 20,918 metric tons, valued at 37,122,307 bolivianos (1 boliviano, equal to \$0.365 at par, exchanged at \$0.2122 in 1932). This compared with exports of 31,600 tons, valued at 48,386,220 bolivianos in 1931. Most of the ore was shipped to Great Britain for refining. A rise in tin prices was noted in 1933. Exports of other leading minerals in 1932 were: Zinc, 12,968 metric tons valued at 2,292,372 bolivianos; silver, 128 metric tons worth 3,312,468 bolivianos; copper, 2017 tons valued at 758,774 bolivianos; lead, 5488 tons valued at 661,742 bolivianos; antimony, 1469 tons valued at 459,364 bolivianos; wolfram, bismuth, gold, etc. Petroleum output was 44,000 barrels. Total mineral exports were valued at 44,884,462 bolivianos. The chief crops are potatoes, cacao, coffee, corn, highland rice, and rubber. Some 6,500,000 acres were under cultivation in 1931.

COMMERCE. Due to the outbreak of war with Paraguay in 1932, few statistics for 1932 or 1933 were available. Imports in 1932 were estimated at 20,000,000 bolivianos and exports at 47,500,000 bolivianos, compared with 1931 imports and exports of 29,821,000 and 60,014,000 bolivianos, respectively. Minerals are the chief exports, while sugar, flour, coal, iron, and steel products, machinery, textiles, and apparel are normally the leading imports. In 1932 and 1933, arms and ammunition and other war supplies were imported in large quantities. United States trade statistics showed exports to Bolivia of \$2,160,000 in 1932 (\$1,775,000 in 1931) and imports from Bolivia of \$6000 (\$43,000 in 1931). However, many products destined for or exported from Bolivia were credited to Chile and other neighboring countries through which goods were transhipped. Exports to the United Kingdom (mostly tin) in 1932 were £1,879,573; imports from the United Kingdom, £194,218.

FINANCE. The financial condition of the government became rapidly worse following the outbreak of the undeclared war with Paraguay in June, 1932. The budget for 1932, as revised in June of that year, estimated revenues at 27,355,826 bolivianos and expenditures at 43,957,991 bolivianos. The real deficit was much larger than the estimated deficit of 16,602,165 bolivianos, collections for the first 10 months of the year being some 9,000,000 bolivianos under estimated receipts. The 1933 budget, decreed early in the year by the President, provided for expenditures of 21,050,000 bolivianos, excluding the ordinary and extraordinary expenses of the War Department. Ordinary revenues for 1933 were expected to total less than 17,000,000 bolivianos. The deficits were met in part by heavy borrowing from the Central Bank and other large domestic loans.

On Oct. 31, 1932, the public debt amounted to 242,433,180 bolivianos, of which 172,179,105 represented external indebtedness, 26,958,719 internal funded indebtedness, and 42,695,355 internal floating debts. Service on the public debt was suspended indefinitely in 1931. In these figures the external debt is given in bolivianos at par value. The total would be considerably greater if stated in bolivianos at the current exchange value. The public debt at the end of May, 1933, was reported by the Central Bank at 299,652,536 bolivianos.

COMMUNICATIONS. Railways in operation in Bolivia in 1932 had about 1384 miles of line. There were about 1360 miles of permanent highways (excluding some 1166 miles passable only part of the year). A network of airlines operated by the Lloyd Aereo Boliviano connected the principal cities. A steamer service was in operation on Lake Titicaca.

GOVERNMENT. The Constitution of 1880 vests executive power in a President, elected for four years by direct popular vote and ineligible for reelection. One vice president is similarly elected. There is a Congress of two chambers, the Senate of 16 members elected for six years, and the Chamber of Deputies of 72 members elected for four years. One-third of the Senate and one-half of the Chamber retire every two years. The President selects a Cabinet of six members, which is responsible to Congress. President in 1933, Dr. Daniel Salamanca, who assumed office Mar. 5, 1931.

HISTORY

THE CHACO WAR. The war between Bolivia and Paraguay for possession of the Chaco Boreal continued throughout 1933. (For background of the dispute, see 1932 and previous YEAR BOOKS.) Unceasing efforts by the Commission of Neutrals at Washington, the ABCP group (Argentina, Brazil, Chile, and Peru), the League of Nations, and many of the individual American republics were all unsuccessful in terminating hostilities. By the end of 1933, the bloody struggle had been in progress for a year and a half, on a scale unprecedented for South American warfare.

Fighting and disease were conservatively estimated to have caused more than 30,000 deaths, while the number rendered ineffective through wounds and disease was placed at 50,000 or more. The task of maintaining their armies in the field was exhausting the slender economic resources of both countries and their public debts, already in default in the case of Bolivia, were rapidly increasing (see BOLIVIA and PARAGUAY under Finance).

The Peace Negotiations. Having rejected the peace formula submitted to both Bolivia and Paraguay on Dec. 15, 1932, by the Commission of Neutrals (United States, Cuba, Mexico, Colombia, and Uruguay) sitting at Washington, Paraguay withdrew its representative before the Commission on Dec. 31, 1932. The Commission of Neutrals immediately cabled the governments of Argentina, Brazil, Chile, and Peru, asking them to suggest ways of ending the Chaco war. The Chilean reply was the only one to contain a concrete proposal. After preliminary explorations, the Chilean and Argentine Foreign Ministers met at Mendoza, Argentina, Feb. 1 and 2, 1933, and drafted a peace formula. This was approved by Brazil and Peru and then submitted to the disputants on February 25. Meanwhile the Com-

mission of Neutrals withdrew, leaving the field clear for the ABCP mediation effort.

The Mendoza formula provided for the withdrawal of both Bolivian and Paraguayan troops a given distance from the battle front pending a decision of the fundamental question by arbitration. Previous arbitration proposals had failed because of the impossibility of agreeing upon the zone to be arbitrated. To avoid this pitfall, the formula provided that any such differences between the two disputants would be submitted to the World Court. Both Bolivia and Paraguay accepted the Mendoza formula "in principle" but hedged their acceptance with conditions. Paraguay was finally induced to withdraw its reservations, but Bolivia refused to accept the formula unless a previous agreement was reached upon the exact territory to be arbitrated. In response to appeals from Argentina and Chile, the La Paz Foreign Office emphatically protested against attempts to "impose" a peace settlement by "diplomatic pressure."

Irritated at Bolivia's action, the Argentine and Chilean governments now withdrew from the negotiations. On May 5 Bolivia requested the Commission of Neutrals and the ABCP countries to continue their mediatory efforts. The Commission of Neutrals on May 9 called a meeting in Washington to consider joint action with the ABCP group on the Bolivian suggestion, but the representatives of Argentina and Chile declined the invitation to attend. The next day (May 10) Paraguay formally declared that a state of war existed with Bolivia, a move which reinforced the jurisdiction of the League of Nations in the dispute. Accordingly the Commission of Neutrals and the ABCP group allowed the League to assume sole direction of the peace efforts.

The League on January 27 had suggested directly to Bolivia and Paraguay that a League commission of inquiry be sent to the Chaco, but both countries withheld their consent pending the outcome of the ABCP negotiations. On March 2 the League Council, on motion of Great Britain and France, proposed a world-wide arms embargo on Bolivia and Paraguay, but this action was frustrated, chiefly through the refusal of the United States Congress to authorize the President to declare an embargo.

A League formula for settlement of the dispute was submitted to the belligerents at a public session of the Council on May 20. It provided for cessation of hostilities, withdrawal of the declaration that a state of war existed, an inquiry on the spot by a League commission, and arbitration. Paraguay immediately accepted this proposal without reservations. Bolivia, in a note of May 27, accepted on condition that peace was not imposed but negotiated freely and that a definite arbitration agreement be agreed upon before an armistice was declared. The note declared that it was desirable for the Commission of Neutrals to continue its efforts. These reservations led to protracted League negotiations which ended on July 26, when Bolivia and Paraguay, at the instance of the Brazilian Foreign Office, unexpectedly requested the League to transfer its jurisdiction over the dispute to the ABCP group. The League, which had on July 19 appointed a commission of inquiry to report on the dispute, reluctantly consented.

Brazil played the leading rôle in the new ABCP peace parleys, but with no better success. After two months of negotiation, accompanied by often

contradictory reports of new peace formulas and by much criticism in the South American press, the Brazilian Foreign Minister formally notified the League on September 30 that the ABCP efforts again had failed. The League of Nations now took up the task of conciliating the belligerents once more.

The League's commission of inquiry arrived in Asunción, Paraguay, November 18 to commence its study of the problem. It consisted of Julio Alvarez del Vayo (Spain), chairman; General Freydenberg (France), General Robertson (Great Britain), Count Aldovradio (Italy), and Col. Rivera Flandes (Mexico). The military members visited the Paraguayan front. On December 8 the commission arrived in La Paz for a similar study of the Bolivian side of the dispute. Meanwhile the seventh Pan-American Conference (q.v.) had convened in Montevideo, Uruguay, and brought added pressure to bear for a cessation of hostilities. As a result of the efforts of President Terra of Uruguay, Secretary Hull of the United States, and other delegates to the conference, a truce was arranged between Bolivia and Paraguay. Originally extending from midnight, December 19, to December 30, the truce was later extended to midnight on Jan. 8, 1934. The League commission returned to Montevideo December 25 and took charge of the negotiations for a permanent termination of hostilities.

Military Developments. While the various peace agencies were striving to end the conflict, the armed struggle in the Chaco continued under arduous and discouraging conditions. The Bolivian counter-offensive, commenced Dec. 10, 1932, continued with considerable success during the first half of 1933. The Bolivian drive was directed by General Kundt, the Commander-in-Chief, at the Paraguayan Fort Nanawa (Ayala), the nerve centre of the Paraguayan defense system. In Bolivian hands, it would have opened the way for a Bolivian advance to the Paraguay River.

The Bolivians gained important victories in the capture of Fort Alihuata (March 12) and of Campo Jordán (Kilometer Seven) on March 18. These advances enabled them to invest Nanawa more closely and a series of savage attacks and counter-attacks followed in a desperate struggle for this key position. The Paraguayan defenders clung to the fort with grim determination against which the Bolivian offensive finally wore itself out. Their army reduced by casualties and sickness, the Bolivians called out additional reserves from classes of men 32, 33, and 34 years old. The Paraguayans, aided by some newly arrived airplanes, improved their positions. Another Bolivian offensive, launched against Nanawa with some 25,000 troops on July 6, was repulsed after heavy fighting. The Paraguayans, under Colonel Estigarribia, followed up their advantage and drove the Bolivians back at several points.

Heavy fighting continued, with occasional lulls, until the truce of December 19. The severe heat and drought of the summer favored the Paraguayans, whose lines could be more easily supplied with water. The action of the Argentine government in closing its frontier to Bolivian traffic further handicapped the Bolivians, who were thus cut off from a convenient source of supplies. During October and November, the Paraguayan communiqués reported important advances.

Early in December the progress of the Paraguayan military plan for bringing the war to a conclusion was aided by heavy rains, which flooded

large areas in the rear of the Bolivians and hindered troop movements. The Paraguayans seized the opportunity to launch smashing blows at the Bolivian defenses in the Gondra-Alihuata sector. With the fall of Fort Alihuata on December 10, the Paraguayans were able to roll up the Bolivian lines to the south, taking thousands of prisoners and capturing with little difficulty key positions which had resisted the Paraguayan offensive a year earlier. Fort Samaklay (Agua Rica) fell on December 12, Forts Murguia and Saavedra on December 13, Fort Cuatro Vientos December 14, and on or about December 19 the important Forts Muñoz—Bolivian headquarters in the Chaco,—Sorpresa, and Corrales. (The Bolivians charged that these latter forts were captured after midnight on December 19, when the truce became effective.)

These sweeping Paraguayan victories were estimated to have cost Bolivia two-thirds of her army in the field. Paraguayan estimates placed the Bolivian dead, wounded and prisoners for the month ended December 19 at from 10,000 to 15,000. It was reported that only the Seventh Division of some 5000 troops and scattered remnants of two other Bolivian divisions remained to oppose a further Paraguayan advance. Gen. Hans Kundt, the Bolivian commander-in-chief, was replaced about December 14 by Col. Enrique Peñaranda.

OTHER FOREIGN RELATIONS. The declaration by Paraguay that a state of war existed was primarily designed to force neighboring countries to declare their neutrality. It was believed in Asunción that the neutral countries would forbid shipments of arms and other war supplies through their territory, thus isolating Bolivia, which was forced to import all war materials through Chile, Peru, or Argentina. Paraguay, on the other hand, could not be prevented from importing war material by the international Paraguay River. Argentina, Uruguay, and Chile declared their neutrality on May 13, Peru on May 14, and Brazil on May 25. Chile and Peru offered no objection to the continuance of Bolivian war imports, however. Argentina, after some delay, closed its frontier with Bolivia along the Pilcomayo River, shutting off large imports of food supplies, war materials, and apparel. This action aroused much hostility toward Argentina in Bolivia. Argentina protested the Bolivian aerial bombardment of the Paraguayan town of Puerto Casado, in which the property of an Argentine citizen was damaged. The claim for damages was refused by La Paz authorities, who offered to submit the matter to the World Court.

INTERNAL CONDITIONS. The strain upon Bolivian finances and economic resources of the Chaco war, as well as the heavy losses in killed and wounded, aroused a demand for peace in some circles. President Salamanca, in his address at the convening of Congress on August 6, defended the government's policy and urged the continuance of the struggle "for the very existence of Bolivia, its full sovereignty, its dignity as a nation, its honor." An increasing shortage of foreign exchange developed during the year, hindering the purchase of necessary supplies abroad. In the middle of September, 1933, exchange was available to cover only the July allocations of the exchange control board. Beginning in December, 1932, the government ordered the banks, as well as certain foreign mining com-

panies operating in Bolivia, to turn over to it specified amounts of their gold and foreign-exchange holdings in return for bolivianos at the current exchange rate.

A cabinet crisis involving the conduct of the war and of Bolivia's foreign relations came to a head with the resignation on November 15 of Foreign Minister Demetrio Canelas. Negotiations for the formation of a coalition cabinet of national defense were started immediately but it was not until December 1 that the new ministry was formed, the former cabinet resigning the same day. The new government was headed by Dr. Carlos Calvo (Liberal), who assumed charge of the Foreign Office also. Other members were: Government and Justice, Rafael de Ugarte; Finance and Industry, Joaquín Espada; National Defense, Zacarias Benavides; War and Colonization, Juan Antonio Quiroga; Public Works and Communications, José Salinas; Public Instruction and Agriculture, Juan Manuel Sainz.

Gen. Ismael Montes, twice President of Bolivia, died Nov. 18, 1933, and Dr. Daniel Sánchez de Bustamante, noted Bolivian jurist and statesman, died Aug. 5, 1933. See their biographies.

See ARGENTINA, CHILE, BRAZIL, PERU, PARAGUAY, under *History*; LEAGUE OF NATIONS.

Consult John W. White, "Warfare in the Chaco Jungle," *Current History*, April, 1933; John C. DeWilde, "South American Conflicts," *Foreign Policy Reports*, May 24, 1933.

BOLLWEEVIL, BOLLWORM. See COTTON; ENTOMOLOGY, ECONOMIC.

BONDS. See UNITED STATES under the *Treasury*.

BONFILS, FREDERICK G. An American journalist and publisher, died in Denver, Colo., Feb. 2, 1933. He was born at Troy, Mo., Dec. 21, 1860, and entered the United States Military Academy in 1878, resigning in 1881. Returning to the West, he joined the Oklahoma land rush in 1889 and was active in the development of that territory, particularly Guthrie and Oklahoma City. Later he moved to Kansas City and was associated with a lottery company. He disposed of his interests upon the enactment of the Federal anti-lottery law in 1890 and went to Denver. There he met Harry H. Tammen, a bartender and publisher of a small weekly newspaper called the *Great Divide*. The two men bought the *Denver Post* and began a career of journalistic crusading that brought them and their newspaper into great prominence. Above the door of the *Post* building was carved the inscription, "O, Justice, when expelled from other habitations, make this thy dwelling place."

The rigorous search for truth which actuated Bonfils and Tammen kept them in constant turmoil. Both were shot by an irate lawyer in 1899, and they were frequently involved in legal suits. Tammen died in 1924, at a time when the *Post* was active in uncovering the Teapot Dome scandal, and left a fortune of \$6,000,000 to charity. In 1904 the partners bought the Sells-Floto Circus and continued its ownership until 1921. In 1909 they bought the *Kansas City Post*, reselling it in 1922. Bonfils maintained the direction of the *Denver Post* until a few days before his death. He was one of the last survivors of the period of personal journalism.

BOOTS AND SHOES. See SHOE INDUSTRY.

BOB/NEO. See NETHERLAND INDIA, BRITISH NORTH BORNEO, SARAWAK, and BRUNEL.

BOSTON. See AQUEDUCTS; FOUNDATIONS; RAPID TRANSIT.

BOSTON UNIVERSITY. A nonsectarian institution of higher education in Boston, Mass., founded in 1869. The enrollment for the autumn session of 1933 was 8950, distributed as follows: College of Liberal Arts, 537; College and Extension Courses, 308; College of Business Administration, 2739; College of Practical Arts and Letters, 564; College of Music, 139; School of Theology, 243; School of Law, 463; School of Medicine, 249; School of Education, 1964; School of Religious Education and Social Service, 93; Graduate School, 474. The enrollment for the 1933 Summer Session was 1163. The faculty numbered 529. The endowment amounted to \$4,338,383. In the libraries of the University there were more than 150,000 volumes. President, Daniel L. Marsh, Ph.D., Litt.D., L.H.D., LL.D.

BOTANY. It is significant of modern scientific tendencies that taxonomy, less than half a century ago the leading department of botany, now attracts but a minor proportion of students. Interest during the past year has been largely centered in genetics, although physiology also received much attention. As in previous issues of the YEAR BOOK, the subject is discussed under appropriate headings.

GENETICS. Undoubtedly the researches of Prof. A. F. Blakeslee and his associates on the cytology of the jimson weed (*Datura*) are of paramount scientific as well as economic importance. In the case of this plant he has discovered a method of synthesizing pure breeding types with distinctive characters (*Proc. Nat. Acad. Sci.* 19: 115-122, 1933). Evidently, therefore, it will be possible with further investigation to synthesize a considerable number of pure breeding types with different kinds of extra chromosomal material, and accordingly with different external characters. The value of such knowledge to both plant and animal breeders is apparent.

In addition to clarifying our understanding of heredity, the study of chromosomes has revolutionized earlier concepts of cytology. Many investigators have prosecuted this study with vigor. Thus George M. Darrow and A. E. Longley (*Journ. Agric. Research* 47: 315-330, 1933) examined the chromosomes of the wild trailing blackberries of the Pacific Coast with reference to the origin of cultivated varieties, especially the Logan. A. E. Longley (*loc. cit.* 217-228) studied the chromosomes of the cotton plant (*Gossypium*) and related genera, and Thomas H. Goodspeed (*Proc. Nat. Acad. Sci.* 19: 649-652, 1933) those of tobacco (*Nicotiana*), of which, as a result, he recognizes 40 species. Prof. H. Ruggles Gates (*Am. Nat.* 67: 352-364, 1933), discussing the general bearing of recent research in the evening primrose (*Oenothera*) pointed out that this genus afforded the starting point for much modern work on mutational changes in chromosome numbers, catenation, and the vast subject of polyploidy. In this connection J. Theron Illick (*Bot. Gaz.* 94: 1-50, 1933) made a study of the chromosomal configuration of *Oenothera* species and crosses and their probable significance. D. T. Killough and W. R. Horlacher (*Genetics* 18: 329-334, 1933) discussed the inheritance of virescent yellow and red plant colors in cotton. E. W. Lindstrom (*Journ. Hered.* 24: 129-138, 1933) described 6 heritable recessive variants in the tomato induced by radium treatment. M. Demerec (*Journ. Hered.* 24: 369-378, 1933) gave

an explanation of the gene and commented upon the discoveries which have increased our knowledge of it. He visualized the gene as a single organic molecule possessing the power of self-propagation, these molecules being held together in the form of a string by some unknown force.

PHYSIOLOGY. A large proportion of research in this department of botany was devoted to phytochemistry. Norwood C. Thornton (*Contr. Boyce-Thompson Inst.* 5: 371-418. 1933) tested the influence of carbon dioxide on oxygen uptake and on the acidity of plant tissues. Experiments were conducted with various concentrations of CO₂ and with various lengths of storage periods. He found that the rate of uptake was increased by high percentages of CO₂ in the case of potatoes, onions, beets, and tulips, but was decreased in asparagus and lima beans. As to acidity, it was found that the treatment of various types of plant tissues resulted in a decided decrease in the hydrogen ion concentration of the extracted sap. Zimmerman, Crocker, and Hitchcock (*loc. cit.* 195-212) proved that carbon dioxide in general causes growth vigor and loss of sensitiveness to external stimuli, as shown by retardation of stem elongation, small size of new leaves, abnormal yellowing, etc. On the other hand (*loc. cit.* 1-18) they found that the gas induced definite rooting responses in 27 species of plants. Experiments conducted by Aual Hester Brown (*Bot. Gaz.* 94: 755-770. 1933) on the action of sulphuric acid in delinting cotton seeds before planting showed that in 6 varieties tested there was a higher percentage as well as an increased rate of germination. Lloyd B. Wilson (*Journ. Agric. Research* 46: 889-900. 1933), examining the effects of haloids upon tobacco, found that they cause the leaves to become thickened by enlargements of the cells, which is correlated with increased osmotic concentration. Albert Saeger (*Am. Journ. Bot.* 20: 234-245. 1933) discovered that manganese is essential for the growth of five species of Lemna, as growth ceases when this element is absent. A supply of .001 mg. per liter proved sufficient to maintain vigorous growth.

Paul J. Kramer (*Am. Journ. Bot.* 20: 481-491. 1933) demonstrated that water absorption is not stopped by death of the roots, as considerable quantities are absorbed through dead root systems, while transpiration is rapidly decreased. Whitaker and Chester (*Am. Journ. Bot.* 20: 297-308. 1933) tested 75 graft combinations for representatives of 10 genera and 24 species of Solanaceae for the presence of acquired precipitins after grafting. Not a single case was discovered in which the reaction was approximately greater, and there is accordingly no indication that there is any acquired immunity of stock to cion or of cion to stock demonstrable by the precipitin method. A. F. Camp, Harold Mowry and K. W. Loucks (*Am. Journ. Bot.* 20: 348-357. 1933) detected considerable variation in the effects of soil temperature on the germination of citrus seeds. The minimum was below 15° C., the maximum a little below 40° C., and the optimum between 31° and 35° C. Kenneth V. Thimann and Folke Skoog (*Proc. Nat. Acad. Sci.* 19: 714-716. 1933) continued their studies on the growth hormone of plants and its inhibiting action on bud development. Ferdinand W. Haasis (*Am. Journ. Bot.* 20: 85-91. 1933), experimenting with the dendrograph upon the Monterey pine, showed that fluctuations in stem diameter may occur, one

part of the bole increasing by growth while another is shrinking.

Research was continued upon the physiological variations following seed exposure to high voltage X-rays. Charles A. Shull and John W. Mitchell (*Plant Physiol.* 8: 287-296. 1933) showed by experimentation on wheat, corn, oats, and sunflower seedlings that X-rays tend to stimulate plant growth. H. W. Popp and Florence Brown (*Bull. Torr. Bot. Club* 60: 161-210. 1933) reviewed recent work upon the effects of ultra-violet radiation upon seed plants.

ECOLOGY. R. E. Moreau (*Journ. Ecol.* 21: 415-435. 1933) discussed the climatic changes and distribution of life in East Africa, stating that in the Kamasian epoch, some 400,000 years ago, communication existed between the present forest islands of this region and the West African forest. As recently as 22,000 years ago montane forest species were dominant throughout the East African interior, and it is only within this period that isolation favorable to race differentiation has developed. The author considers that an increase of 15 to 20 inches in rainfall would be sufficient to cover all the continent with forest. Clare Francis Cox (*Ecol. Monog.* 3: 301-372. 1933), with reference to alpine plant succession on James Peak, Colo., pointed out that the alpine flora consists (1) of alpine species which have probably originated in the Rocky Mountains; (2) of disjunct species, some of which originated in the Arctic and others in high mountains of Europe or Asia, and (3) of species the centre of origin of which is doubtful on account of their continuous range. A similar study on the ecology of the vegetation of the Pike's Peak region was conducted by C. J. Whitfield (*Ecol. Monog.* 3: 75-106. 1933).

L. Cockayne (*Am. Journ. Bot.* 20: 545-551. 1933) described an interesting example of epharmony in a New Zealand blackberry (*Rubus cissoides*), in which plants exposed to sunshine or dry ground produce leaves only of midrib form and do not flower, while those in the forest develop laminate leaves and flower freely. L. J. Pessin (*Ecology* 14: 1-14. 1933), investigating the forest associations in the uplands of the lower Gulf coastal plain region, found them, as might be expected, determined largely by prevailing edaphic conditions. The cypress-gum association is generally regarded as climax vegetation. R. W. Butcher (*Journ. Ecol.* 21: 58-91. 1933) found in connection with the ecology of river vegetation that the chief factor governing the distribution of macrophytes in running water is the current, which exerts a mechanical strain and also determines the nature of the river bed. According to P. S. Gupta (*Journ. Ecol.* 21: 452-474. 1933) cultural experiments with beans and oats prove that denser soils produce smaller and stronger root systems but have little effect with regard to extent of growth of tops and assimilating surface.

G. Fenzel (*Lignan Journ. Sci.* 12: 11. 1933) gave an account of the little known vegetation of Manchuria.

PATHOLOGY, MYCOLOGY. It is of interest to note that at the twenty-fourth annual meeting of the American Phytopathological Society held at Atlantic City, Dec. 28, 1932, 10 new or little known plant diseases were reported affecting flowers and fruits in various parts of the United States.

L. K. Henry (*Bot. Gaz.* 94: 791. 1933), from an examination of the trees and shrubs of But-

ler County, Pa., found 60 species with mycorrhiza, 26 of which were additional records. Endotrophic and ectotrophic types frequently occurred on the same plant. Investigations by H. H. Flor (*Journ. Agric. Research* 47: 193-214. 1933) and W. K. Smith (*loc. cit.* 89-106) showed that one of the major contributing factors in the prevalence of bunt or stinking smut, the most important disease of wheat in the Pacific Northwest, has been the appearance of new physiologic forms of the fungus. E. C. Tullis (*Journ. Agric. Research* 46: 779-806. 1933) found that a disease infesting the rice growing section of eastern Arkansas is caused by *Ophiobolus oryzae*, discovered originally in the Philippines. The rot disease of rice seeds and seedlings has been a serious problem in the Orient. Experiments were conducted by Ito and Nagai (*Journ. Agric. Hokkaido Imp. Univ.* 32: 201-228. 1933) on this disease, which is caused by several species of *Pythium* and by various saprolegniaceous fungi.

Many students continued work on the mosaic diseases of tobacco and other plants. In view of the prevalence of mosaic disease of dahlias throughout the East, this and other dahlia diseases were investigated by Philip Brierley (*Contr. Boyce-Thompson Inst.* 5: 235-288. 1933), who suggested that control might be effected by selection and by isolation of healthy plants. W. R. Tascher (*Journ. Agric. Research* 46: 909-916. 1933), experimenting on the control of seed-borne diseases by X-rays found the results scarcely conclusive and requiring further research. G. R. Bisby (*Am. Journ. Bot.* 20: 246-253. 1933) contributed some observations on the distribution of fungi. Although in our present state of knowledge the phanerogams outnumber the fungi by almost two to one, it is probable that the fungi are actually far more numerous. Saprophytes are in general more widely distributed than parasites.

Spread of the Dutch elm disease, caused by the fungus *Ceratostomella ulmi* (*Graphium ulmi* in the conidial stage), has been a serious problem occupying the attention of government pathologists.

TAXONOMY. Revisions of various groups of plants were published during the year. H. A. Gleason (*Brittonia* 1: 127-184. 1933) presented a synopsis of the Melastomataceae of British Guiana; Lily M. Perry (*Ann. Missouri Bot. Gard.* 30: 239-362. 1933) revised the North American species of *Verbena*; Carroll W. Dodge (*loc. cit.* 373-467) the lichens of Costa Rica; and E. B. Copeland (*Philippine Journ. Sci.* 51: No. 2. 1933) the Old World species of *Trichomanes*. Josephine E. Tilden (*Bot. Gaz.* 95: 59-77. 1933) offered a classification of the algae based on evolutionary development with special reference to pigmentation. Dr. I. V. Newman (*Journ. Linn. Soc. London* 49: 133-172. 1933) began a comprehensive study of the Australian acacias based on features of the inflorescence rather than on foliar or other vegetative characters, the aim being to formulate a phylogenetic classification.

BIBLIOGRAPHY. Among the numerous books issued during the year relating to various branches of botany the following may be noted: *Recent Advances in Agricultural Plant Breeding*. By H. Hunter and H. Martin Leake. P. Blakiston's Son & Co.; *Plant Sociology*. By J. Braun-Blanquet, translated and revised by George D. Fuller and Henry S. Conrad. McGraw-Hill Co.; *Recent Advances in Cytology*. By C. D. Darling-

ton. P. Blakiston's Son & Co.; *Flora of South Dakota*. By William H. Over. University of South Dakota; *Ferns of Florida*. By John K. Small. Science Press; *Monograph and Iconograph of Native British Orchidaceae*. By M. J. Godfrey. Cambridge University Press.

NECROLOGY. Arthur Hollick, Ph.D., associate in paleobotany at the New York Botanical Garden, formerly Director of the Staten Island Institute of Arts and Sciences, March 11, aged 76. Otto Stapf, Ph.D., F.R.S., former Keeper of the Herbarium at Kew, author of many important taxonomic papers, August 3, aged 76. Arthur B. Seymour, Ph.D., cryptogamist of the Harvard University Herbarium, March 29.

BOULDER DAM. See ELECTRIC LIGHT AND POWER INDUSTRY; DAMS; WATER POWER.

BOUNDARY DISPUTES. See BOLIVIA, COLOMBIA, PERU, GUATEMALA, under *History*.

BOWDOIN COLLEGE. An institution of higher education for men in Brunswick, Me., founded in 1794. The enrollment of the autumn session of 1933 was 580. There were 53 faculty members. The productive funds of the college amounted to \$6,441,195, and the income for 1932-33 was \$404,190. There were more than 160,000 volumes in the library. President, Kenneth Charles Morton Sills, LL.D.

BOWKER, bou'kér, RICHARD ROGERS. An American editor, author, and publisher, died near Stockbridge, Mass., Nov. 12, 1933. He was born in Salem, Mass., Sept. 4, 1848. On his graduation from the College of the City of New York in 1868 he became literary editor of the *New York Evening Mail* and in 1875 accepted a similar position with the *New York Tribune*. The following year, with Melvil Dewey and Frederick Leyboldt, he founded the American Library Association and after that date was editor of the *Library Journal*. He became a contributor to the *Publishers' Weekly* about the same time and after the death of Mr. Leyboldt in 1884 also edited that periodical. During 1880-82 he was British representative of Harper and Bros., starting in London an English edition of *Harper's Magazine*. He entered the industrial field in 1890, serving until 1899 as first vice-president of the Edison Electric Illuminating Co. of New York (later the New York Edison Co.). He was also vice-president for about a score of years after 1901 of the DeLaval Turbine Co. and from 1902 to 1931 of the DeLaval Separator Co. In 1911 the R. R. Bowker Co. was incorporated as publishers of the *Library Journal*, *Publishers' Weekly*, and other periodicals, books, and material of interest to librarians and booksellers.

During the latter part of the nineteenth century Mr. Bowker gained considerable prominence as a political agitator. The Independent Republican or "Mugwump" movement which he started in 1879 originated as a protest against the methods of the political machine controlled by Roscoe Conkling in forcing the Republican candidacy and consequent election of Alonzo B. Cornell as Governor of New York. At the Republican National Convention of 1880 the Independent faction played a large part in thwarting the efforts of Conkling to secure Grant's nomination for a third term in the presidency. Four years later its adherents, mostly from New York, Connecticut, and Massachusetts, refused to ratify the nomination of James G. Blaine for president on account of alleged political and personal dishonesty and in the ensuing election cast their

ballots for Grover Cleveland, the Democratic candidate. In 1896 the movement became affiliated with the National Democratic party, which favored adherence to the gold standard in opposition to the demand of the regular Democratic party for the free coinage of silver at the ratio of 16 to 1.

Mr. Bowker served for many years as a member of the council of the American Library Association and in 1926 was named its honorary president. From 1884 to 1910 he edited the *Annual American Catalogue* and from 1892 to 1904 the *Annual Literary Index*. He was also active in the copyright movement, serving as vice-president of the American Copyright League, championing the cause of an international copyright, and publishing *Copyright, Its Law and Its Literature* (with Thorvald Solberg, 1886) and *Copyright, Its History and Its Law* (1912). After founding the Society for Political Education in 1880, he became active in the Civil Service Reform Association and was instrumental in procuring the passage in 1883 of the first civil service reform bill in the New York Legislature. He was also one of the early advocates of the Australian ballot, publishing in 1889 *Electoral Reform*. In 1930, with Norman H. Davis, he initiated the Council for Tariff Reduction, a successor to the American Free Trade League of which he had served for many years as honorary secretary. Among his other publications were: *Of Work and Wealth* (1883); *Economics for the People* (1886); *The Arts of Life* (1900); *Problems of the Infinitely Little* (1910); *Economic Peace* (1923); and *From Years That Are Past* (verse, 1923).

BOWLING. Gil Zunker of Milwaukee topped the 1933 American Bowling Congress field of almost 5000 bowlers in the thirty-third annual tournament at Columbus, O., winning two championships. He succeeded Hughie Stewart of Cincinnati as all-events champion with an average of 228.8 for nine games and paired with Frank Benkovic to take the doubles crown, with a new all-time high of 1415 pins. Benkovic had won in 1932 paired with Charley Daw with 1385. Earl Hewitt of Erie, Pa., won the singles title with 724; and the team honors went to Flagg's Opticians of Covington, Ky., with 3021 pins.

In an eighty-game match for the national match play title at Chicago, Joseph Miller of Buffalo defeated Stewart Watson of Chicago, 16,660 to 15,191.

Women bowlers were also active, Miss Sally Twyford, of Aurora, Ill., winning the women's all-events with 1765 and the singles with 628.

BOXING. Primo Carnera's rise to the heavyweight championship of the world was the highlight of the 1933 boxing season. The mastodonic Italian, who had toured the world for three years, knocking over set-ups and becoming tainted with suspicion, turned on Jack Sharkey, defending champion, in the Madison Square Garden Bowl, Long Island City, in June and stopped him in the sixth round with a series of right swings and pushes. Carnera appeared a greatly improved pugilist in many ways, stepping around the ring in almost approved fashion and shooting his blows with precision and a certain amount of cleverness. As Carnera became champion, his reputation was a bit tarnished by other boxing events of the year. Two weeks before he defeated Sharkey, Max Baer, Livermore, California heavyweight, who had slowly improved over a stretch of three years,

knocked out Max Schmeling, German, who lost the heavyweight title to Sharkey in 1932. Thus Baer became the hero of the boxing world, through the despatch and manner of his triumph over the German. He displayed a lethal blow and an attitude of cheerfulness that endeared him to fans who still waited for "another Dempsey." Incidentally the Baer-Schmeling fight, which was held at the Yankee Stadium in New York City and promoted by Jack Dempsey, drew the largest fight crowd of the year in the United States. More than 50,000 persons watched Baer in action as against 31,000 who sat in on Carnera's victory over Sharkey. Baer cast Carnera into a shadow and the Italian's championship was further belittled later in the year when Sharkey, attempting a comeback, succumbed to King Levinsky in Chicago and then lost to Tommy Loughran in Philadelphia. Three years before Sharkey had disposed of Loughran in four rounds.

The clamor immediately started for a bout between Carnera and Baer, but at the close of the year no agreements had been reached. Carnera was under contract to fight his next bout under the auspices of the Madison Square Garden Corporation and Baer was signed to perform for Dempsey and the promoters were having difficulty in getting together. Baer turned his back on the ring for a time and made a huge success in the motion pictures as well as in night clubs and vaudeville. Carnera defended his crown against Paulino Uzcudun, the Basque, in a "command" performance before Premier Mussolini in Rome in September before 70,000 persons, in the first heavyweight championship bout ever held in Italy. His showing was not impressive and he was booed by the throng for not knocking out the Basque. Carnera received the decision.

A new star appeared in the lightweight firmament in the person of Barney Ross of Chicago, almost unknown at the start of the year. Ross took the measure of Tony Canzoneri, champion, in Chicago, and then duplicated the feat two months later for the benefit of Eastern unbelievers in New York. The Chicago bout was at ten rounds, the New York one at fifteen.

The middleweight division furnished considerable activity through the year. Ben Jeby, New Yorker, earned the championship recognition in January by stopping Frank Battaglia and then defended his claim successfully before Vince Dundee and Young Terry. Lou Brouillard, left-hander, knocked Jeby out in August but ten weeks later yielded the crown to Dundee. Dundee held the championship at the end of the year after a successful defense against Andy Callahan. Jimmy McLarnin, popular battler from Vancouver, finally broke into the championship records, winning the welterweight championship in May in California. He stopped Young Corbett, who had taken the title from Jackie Fields on a decision in February, in one round. Busiest of all titleholders was Maxie Rosenbloom, light heavyweight champion, who in addition to engaging in over-the-weight bouts once every fortnight, defended his crown three times, defeating Adolph Heuser, Bob Godwin, and Mickey Walker.

Kid Chocolate retained his featherweight championship against Seaman Tom Watson of England, but was knocked out by Canzoneri and Frankie Klick in over-the-weight bouts. Al Brown, continued his mastery over the bantamweight division by downing Johnny King of England.

Ernie Schaaf, Boston heavyweight of promise, died after a bout with Carnera at Madison Square Garden in the winter. Young Stribling, Georgia heavyweight, lost his life in an automobile accident in the fall. Other boxing figures who died in the year were James J. Corbett, former world's champion, Lou Magnolia, famous referee, and William Muldoon, boxing commissioner in New York.

Syracuse University retained its Eastern Intercollegiate team championship in March, gaining four individual championship berths. The Eastern intercollegiate winners were: 115-pounds, John Napoleon, Penn State Univ.; 125-pounds, Al Wertheimer, Syracuse; 135-pounds, John McAndrews, Penn State; 145-pounds, Nick Del Genio, Yale; 155-pounds, Joe Moran, Syracuse; 165-pounds, Anthony Balash, Syracuse; 175-pounds, Bernard Kaplan, Western Maryland; heavyweight, Joe Vavra, Syracuse. The national amateur championship winners were: 112-pounds, Tony Valore, Cleveland; 118-pounds, Angelo Tardugno, Washington; 126-pounds, Louis Barisano, Boston; 135-pounds, Frank Eagan, Buffalo; 147-pounds, William Celebron, Chicago; 160-pounds, T. Chester, New York; 175-pounds, Max Marek, Chicago; heavyweight, Izzy Richter, Philadelphia.

BOY SCOUTS OF AMERICA. An organization incorporated in 1910, and chartered by Congress in 1916, to develop the character of boys and train them for the duties of adult life by influence brought to bear in their work and play. Its national constitution declares the intention to "promote the ability of boys to do things for themselves and others, to train them in scout craft, and to teach them patriotism, courage, self-reliance, and kindred virtues." Each boy, on joining the organization, takes the scout oath, admonishing him to keep himself "physically strong, mentally awake, and morally straight." The movement is nonsectarian and without military or political connection.

The membership as of October, 1933, numbered 840,879, of whom 618,170 were scouts (boys 12 to 21) 30,643 cubs (boys 9 to 12), and 183,168 Scouters and Cubbers (adults connected with the movement, whether as scoutmasters, counselors, or committee members). There were 12 regional districts under the direct supervision of the national scout executives and subdivided into 554 local councils.

There are three plans of organization: a scout troop, a farm or home patrol, and a lone scout tribe. A scout troop consists normally of 32 members, each troop being made up of patrols of eight or less members under a boy leader. A scoutmaster and one or more assistant scoutmasters are provided for each troop. Troops are usually organized in connection with an existing institution, such as a church or school. A farm or home patrol may be organized with as few as two boys; it is intended for boys in rural areas. Boys who live too far away from a community to join a scout unit may become lone scouts and carry on the scout programme through correspondence, or they may meet occasionally with other boys who are carrying on the scout programme in patrols or as lone scouts.

Among the foremost scout activities are camping and hiking, nature study, sea scouting, and many kinds of athletics, and crafts, such as swimming, first aid, signaling, knot-tying, and bridge making. Successive ranks in membership—tenderfoot, second, and first class—are achieved

by passing tests, graded in difficulty. Merit badges, about 100 in number, may be attained by the scout of first class rank by meeting requirements for each; they cover proficiency in pursuits both of the useful and the hobby type. In order to attain higher ranks in scouting the boy must meet requirements for length of service, develop his leadership ability, and maintain his scout obligations. These and his earning a certain number of merit badges entitle him to the ranks of star, life, and eagle scout.

In 1933 the organization provided opportunity for over 300,000 boys to spend a week or more in boy scout camps. There were approximately 600 camps conducted by local councils. In its community service the boy scout movement coöperates with the U. S. Forestry Department in fighting and preventing forest fires and in conserving wild life, and planting trees. It renders services in local campaigns of various sorts, such as clean-up and safety-first campaigns, and coöperates with many national societies and movements.

The official magazine for boys is *Boys' Life*, and for scout leaders, *Scouting*. The national officers in 1933 were: president, Walter W. Head; treasurer, George D. Pratt; national scout commissioner, Daniel Carter Beard; chief scout executive, James E. West; deputy chief scout executive, George J. Fisher. Headquarters of the national council, the governing body, are at 2 Park Avenue, New York City.

BRAZIL. A federal republic of South America. Capital and largest city, Rio de Janeiro.

AREA AND POPULATION. With an area of 3,286,170 square miles, Brazil had a population estimated at 44,002,000 on Jan. 1, 1933 (30,635,005 at the census of 1920). The estimated population of the chief cities in 1930 was: Rio de Janeiro, 1,468,621; São Paulo, 879,788; Recife (Pernambuco), 340,543; São Salvador (Bahia), 329,898; Belém (Pará), 279,491; Porto Alegre, 273,376; Nictheroy, 108,233; Maceió, 103,930; Fortaleza, 98,848; Manaus, 88,736; Parahyba, 74,104; São Luiz, 62,895. Immigrants in 1931 numbered 31,410, including 8152 Portuguese, 5632 Japanese (22,310 in 1933), 2914 Italians, 1315 Poles, and 2621 Germans. Portuguese is the language of the country, but Italian and German are widely used in the south.

EDUCATION. In January, 1931, there were 35,435 schools (33,049 primary, 1145 high schools, 87 colleges, 211 teachers' colleges, and 943 special schools) with 73,555 teachers and a total enrollment of 2,284,883.

PRODUCTION. Agriculture is the main occupation, although only about 17,387,000 acres were under cultivation in 1932, compared with 1,236,000,000 acres of forests. Coffee is the chief crop and the main support of the national economy; in 1932 it constituted 71 per cent of the value of all exports. A preliminary official estimate placed the 1933-34 coffee crop at 2,112,000,000 pounds, compared with 3,941,520,000 pounds (provisional) in 1932-33, 3,458,400,000 in 1931-32, and 2,184,864,000 in 1930-31 (see *History*). In 1932-33 production of cane sugar was 2,138,500,000 pounds; cacao, 171,959,000 pounds; cotton, 166,344,000 pounds; rice, 36,743,000 bushels. Rubber exports (1932) were 14,381,000 pounds. Other crop yields (1930-31) were: Wheat, 4,980,000 bushels; rye, 660,000 bushels; corn, 200,144,000 bushels; potatoes, 18,172,000 bushels; tobacco, 178,153,000 pounds; alfalfa, 114,000 metric tons. Livestock

estimates as of Jan. 1, 1932, were (in thousands): Cattle, 47,492; swine, 22,099; sheep, 10,702; goats, 5,267; horses, mules, and asses, 9,618.

Mineral output in 1932, with 1931 figures in parentheses, was: Gold, 115,259 troy ounces (115,473); silver, 24,078 troy ounces (24,199); coal, 322,131 metric tons (461,500); manganese ore, 20,885 metric tons (147,349); zirconium sand (exports), 815 tons; mica (exports), 92,593 pounds (119,048); rock crystal (exports), 309 metric tons (538). Diamonds and other precious stones are produced. Cotton weaving is the principal manufacturing industry. In 1931 there were 347 cotton mills, with 2,620,500 spindles and 79,000 looms, employing 130,000 operatives. Production in that year was 688,905,000 yards of cloth, valued at \$70,300,000 (average exchange rates). The output of green silk cocoons in 1932 totaled about 600,000 kilograms. Silk factories (1931) numbered 59, with 4773 workers, the value of production totaling \$4,744,257 at the current exchange rate. The state of São Paulo, the leading industrial area, had an output in 1931 as follows (in thousands of dollars): Textiles, 38,233; leather, 3098; lumber, 6706; metal working, 19,100; ceramics, 1604; construction, 2902; chemicals, 12,395; foodstuffs, 10,261; clothing, etc. 20,990.

COMMERCE. Brazilian foreign trade during the years 1929-32 is shown in the accompanying table from the 1933 U. S. *Commerce Yearbook*. Conversions of milreis to dollars were made at the average exchange rates of \$0.1181 in 1929, \$0.1071 in 1930, \$0.0703 in 1931, and \$0.0712 in 1932. One conto equals 1000 milreis.

BRAZILIAN FOREIGN TRADE, 1929-32

	Imports (in contos)	Exports (in contos)	Imports (in dollars)	Exports (in dollars)
1929	3,527,738	3,860,482	416,626,000	455,928,000
1930	2,343,705	2,907,354	251,011,000	311,502,000
1931	1,880,934	3,398,164	132,230,000	238,891,000
1932	1,518,694	2,536,765	108,131,000	180,618,000

The principal import items in 1932 (value in thousands of dollars) were: Foodstuffs and beverages, 27,829 (including wheat, 18,043); machinery, apparatus, utensils, and tools, 13,901; iron and steel manufactures, 6706; coal, coke, and patent fuel, 5616; chemicals and drugs, 5086; gasoline, 3839. The principal exports (in thousands of dollars) were: Raw coffee, 129,865 (165,000 in 1931); cacao, 8106 (6903); Brazilian tea, 6194 (6583); edible fruits and nuts, 4965 (5892); chilled and frozen beef, 4346 (7107). The United States in 1932 purchased 46.3 per cent of Brazil's exports (43.8 per cent in 1931) and supplied 30.1 per cent of the total imports (25.1 in 1931). Other export markets were Germany, which took 8.8 per cent of the total in 1932; France, 8.9; United Kingdom, 7.0; and Argentina, 5.9 per cent. The United Kingdom supplied 19.2 per cent of the 1932 imports (17.4 per cent in 1931); Germany, 9 (10.4); Argentina, 7.4 (14.7); and France, 5.1 (4.6).

FINANCE. Brazil's budget operations during the period 1930-33 are shown in the accompanying table, in contos of 1000 milreis. The gold milreis was equivalent to 4.987 paper milreis in 1930 and to 7.792 paper milreis in 1931.

The external debt on Dec. 31, 1931, was: £97,137,000; 228,989,000 gold francs; 96,182,000 paper francs; 144,618,000 United States dollars. The internal funded debt amounted to 2,590,000 paper contos and the floating debt (excluding special

BRAZIL: FEDERAL BUDGETS

	Revenues		Expenditure	
	Contos (gold)	Contos (paper)	Contos (gold)	Contos (paper)
1930	120,983	1,074,746	127,123	1,820,635
1931	79,785	1,180,980	89,742	1,335,074
1932* ...	109,536	1,392,751	84,406	1,894,255
1933* ...	87,756	1,502,678	84,265	1,861,976

* Budget estimates.

funds totaling 1931 gold and 203,740 paper contos) to 4,202,000 paper contos. The Federal government suspended sinking fund payments on its foreign bonded debt, with the exception of the funding loans of 1898 and 1914, on Aug. 31, 1931. Interest payments thereon were suspended Sept. 19, 1931. Under a decree of Mar. 2, 1932, a scrip plan was adopted under which 20-year funding bonds were issued in lieu of interest payments in cash. The milreis (par value, \$0.1196) is the unit of currency.

COMMUNICATIONS. The Brazilian railways on Jan. 1, 1932, had 22,279 miles of line. The federal-owned Central Railway of Brazil (2082 miles) is the principal system, linking Brazil with the railways of Paraguay, Uruguay, and Argentina. In 1929 all lines carried 163,275,000 passengers and 25,764,000 metric tons of freight, the gross receipts equaling \$111,925,000. There were 90,644 miles of highway in 1932. Air lines connect the chief cities with the principal centres of South and North America. The Brazilian merchant marine in 1932 comprised 309 vessels of 496,130 gross tons. In 1931 the capacity of vessels entering Brazilian ports in foreign and coastwise trade aggregated 46,198,000 net registered tons (47,767,000 in 1930).

GOVERNMENT. The Constitution of 1891, modified in 1926, was suspended by the Provisional government of Dr. Getulio Vargas established Nov. 3, 1930. A new Constitution was being drafted by a Constituent Assembly in 1933 (see *History*).

HISTORY

DOMESTIC AFFAIRS. Definite progress toward the restoration of constitutional government in Brazil, suspended since the successful revolution of 1930, was made during 1933. The long delayed election of members of a Constituent Assembly to draft a new Constitution was held on May 3, 1933, Provisional President Vargas being obliged to yield to the overwhelming pressure of the Brazilian states. Only about 1,000,000 voters participated in the elections, partly because the electoral code required that voters be fingerprinted, photographed, and otherwise identified. The commission appointed by Provisional President Vargas to draft constitutional proposals completed its work on November 6, after many months at the task. These proposals were submitted to the Constituent Assembly, which convened in Rio de Janeiro on November 15.

The Vargas régime controlled a large majority of the 254 members of the Constituent Assembly, 214 of whom were elected on May 3. The other 40 members represented labor, trade, and professional organizations. Antonio Carlos de Andrada, former Governor of the state of Minas Geraes, was elected President of the Assembly on the first ballot. In his address before the opening session, President Vargas indicated that the demand of the São Paulo and some other state delegations for a political amnesty would be granted. He reported that the condition of the Treasury was excellent and that negotiations for adjustment

of the external debts of the Brazilian states and municipalities were proceeding satisfactorily. The total foreign debt he placed at \$237,262,553 gold.

The President urged quick action on the draft Constitution, which would leave the way open for the selection by the Assembly of a constitutional President. It was generally expected that Dr. Vargas would be chosen to succeed himself. The Assembly, however, paid little heed to the President's request. The draft Constitution proved a highly controversial document. More than 1000 amendments were proposed by Assembly members and shortly before Christmas the Assembly adjourned for one month in order to give the drafting committee time to whip the amendments into shape.

The Assembly had divided into three factions, with diverse ideas on the form and substance of the new Constitution. The younger and more progressive elements, who staged the 1930 revolution, wanted to scrap the Constitution of 1891 entirely. The older, conservative group wished to strike a compromise between the principles of the first Constitution and the proposals of the progressives. A third group, representing the labor and more radical elements, desired a constitution which would abolish capitalism in Brazil. Conflict between these groups and the alleged conservative tendencies of some members of the provisional government led to a serious Cabinet crisis during December, 1933.

The specific cause of the dispute was the appointment of a Federal Interventor for the state of Minas Geraes. The proposal to appoint a conservative to this important post led to the resignation on December 29 of Osvaldo Aranha, Minister of Finance and a leader in the 1930 revolution, and Foreign Minister Afranio de Mello Franco. The progressive group in the Assembly demanded the restoration of the two Ministers to office and that the government be retained wholly in the hands of the revolutionary groups who seized control in 1930. Negotiations for a solution of the crisis were under way at the end of the year.

President Vargas staved off repeated threats of revolt by concessions to his opponents, the chief of these being the holding of the elections and the convening of the Constituent Assembly. Another such step was the appointment on August 16 of a new Federal Interventor in the state of São Paulo. The new appointee was Armando Salles Oliveira, São Paulo newspaper owner. He immediately appointed a commission to investigate the São Paulo Coffee Institute, certain transactions of which had aroused criticism. On December 22 President Vargas signed a decree extending full amnesty to all officers and soldiers who participated in the São Paulo revolt of 1932.

In the economic field, the Vargas government carried out a programme of agricultural and industrial rehabilitation which resembled in some respects that of President Roosevelt's administration in the United States. The central feature of agricultural relief was the continuance of the plan for maintaining the price of coffee through the destruction of the surplus, the plan being financed by an export tax on coffee. The tax was reduced from \$4.23 to \$3.74 per bag in December, 1932. On Feb. 10, 1933, the Federal government took over complete control of the coffee defense scheme, abolishing the National Coffee Council and creating in its stead a National Coffee Department, subordinate to the Ministry of Finance. Between June, 1931, and the end of

1933, 26,177,000 bags were destroyed, coffee being burned at the rate of 750,000 bags monthly during 1933. Coffee in storage in Brazilian warehouses declined from 27,999,000 bags in October, 1931, to 25,048,000 in October, 1932, and to 15,500,000 in October, 1933. There was a definite upturn in coffee prices and exports in the fall of 1933, largely due to increased demand in the United States.

Similar steps were taken to protect other Brazilian producers. The output of sugar was limited and restrictions on imports of sugar, wheat, and wheat flour were imposed to raise domestic prices. On Dec. 2, 1933, President Vargas signed an act which reduced by 50 per cent the agricultural debts and mortgages in national money incurred by farmers up to June 30, 1933. Provision was made for the reimbursement of creditors through the issuance of 30-year 6 per cent tax exempt Treasury bonds, accepted as legal tender. Decrees also were issued reducing the working hours of banking establishments to 36 hours (November 3) and making similar reductions in other occupations; nullifying all clauses in contracts and other agreements stipulating payment in gold or otherwise tending to restrict the forced circulation of paper milreis (November 28); abolishing the practice of collecting taxes and customs duties in gold milreis and fixing eight paper milreis as the equivalent of the former gold milreis for tax payments (November 23). The effect of the decree was to increase customs duties and taxes, since the former ratio had been about six paper milreis to one gold milreis.

On Dec. 30, 1933, a decree was published authorizing the Minister of Finance to contract a two-year credit with the Bank of Brazil for 300,000 contos (about \$25,260,000 at current exchange) to offset an unspecified budget deficit in 1933. Early in 1933 the government announced that the fiscal year would begin on Apr. 1, 1934, for budget purposes, instead of January 1. By a decree of Aug. 2, 1933, the government made obligatory in all official publications the use of a new spelling based on phonetics rather than on etymology.

FOREIGN RELATIONS. The principal event in Brazilian foreign relations during 1933 was the visit of President Augustín Justo of Argentina and his entourage to Rio de Janeiro in October and the signing there on October 10 of 11 treaties and conventions which will draw closer the political and economic ties of the two countries. The first Argentine President to visit Brazil since 1908, General Justo was received with great public enthusiasm. Perhaps the most important treaty signed was the Anti-War Treaty of Conciliation and Non-aggression, drafted by Foreign Minister Saavedra Lamas of Argentina. For a description of these treaties, see ARGENTINA under *History*. Reciprocal most-favored-nation commercial treaties were concluded with Portugal (August 27) and with Uruguay (August 25).

Foreign Minister Mello Franco played an important part during 1933 in the negotiations for settlement of the Leticia and Chaco disputes and in the proceedings of the Pan American Conference at Montevideo in December. Capt. Alberto Lemos Basto of the Brazilian Navy represented his country on the League of Nations' commission appointed to assume control over the Leticia Corridor pending a direct settlement of the dispute. Negotiations between Peru and Colombia for a direct settlement were opened in Rio de Janeiro

on October 25 (see PERU and COLOMBIA under *History*). Also see BOLIVIA under *History* for Brazil's part in the Chaco negotiations; PAN AMERICAN CONFERENCE.

The friendly relations between Brazil and the United States were further cemented by Secretary of State Hull's visit to Rio de Janeiro and São Paulo while he was en route to the Montevideo Conference. Secretary Hull's policies at the Pan American Conference and his coöperation with the Brazilian Foreign Minister furthered this friendly feeling. A tariff war with France resulted from Brazil's exchange restrictions which tied up French funds in Brazil. Failing to secure modification of the restrictions, France in July raised her duties on Brazilian coffee and other products. President Vargas retaliated on October 24 by doubling the duties on all imports of French products. On October 31 he withheld payment of an instalment of 9,149,187 gold francs due on the Brazilian public debt to French bondholders. The same day France trebled her duties on imports from Brazil, from which country France bought 90 per cent of her coffee.

BRÉMOND, brá'mond, ABRE HENRI. A French historian and critic, died at Pau, Aug. 17, 1933. He was born at Aix-en-Provence, July 31, 1865, and attended the Catholic College there. Entering the Jesuit Order in 1882, he served his novitiate in England, where he came under the influence of Cardinal Newman, and was ordained ten years later. On his return to France in 1899 he became a teacher of classics for his order and literary critic for its paper, *Les Études*. After 1905 he contributed to *La Revue des deux mondes* and *Le Correspondant*.

Brémond's masterpiece was *L'Histoire littéraire du sentiment religieux en France depuis la fin des guerres de religion jusqu'à nos jours*. On the publication of the sixth volume in 1923, which brought the history down to the close of the seventeenth century, it received the Grand Prix de Gobert of the Academy and caused his election to that body in the same year. The eleventh volume appeared a short time previous to his death. His vast amount of knowledge gave the work a cultural solidity, while his sympathy with the subject, the freshness of his point of view, and his flowing, delicate style added a mellow charm.

Brémond's other works include: *Ames religieuses* (1902); *L'Enfant et la vie* (1902); *Newman, essai de biographie psychologique* (1907); *La Provence mystique au XVII^e siècle* (1908); *Apologie pour Fénelon* (1910); *Le Bienheureux Thomas More* (1913); *Sainte Catherine d'Alexandrie* (1917); *Les deux musiques de la prose* (1924); *Le Roman et l'histoire d'un conversion* (1925); *La Poésie pure* (1926); and *Prière et poésie* (1926). In recognition of his brilliance and liberalism his work was crowned by the Academy on four occasions. In 1928 Oxford University conferred on him the honorary D.Litt. degree.

BRETHREN, CHURCH OF THE. A church established in the United States in 1719 at Germantown, Pa. It originated at Schwarzenau, Germany, in 1708 and is the largest of the five branches of the denomination formerly known as the German Baptist Brethren or Dunkers. Other churches of the group are: The Church of God (New Dunkards); Brethren Church (Progressive Dunkers); German Seventh-day Baptists; and Old Order German Baptist Brethren.

The policy of the Church of the Brethren corresponds more nearly to the Presbyterian than to any other specific ecclesiastical form. It comprises 49 district conferences in North America and six abroad, and holds a general conference annually.

In 1933 there were in the United States and Canada 1030 churches and 1464 meeting houses, with a membership of 149,914, and 1160 Sunday-schools, with an enrollment of 121,636. Foreign missionary work was carried on in India, China, and Africa, the total membership in the mission field being 6459. Expenditures for the year ending Feb. 28, 1933, totaled \$172,164. The denomination maintained eight colleges and one theological seminary and training school, with an enrollment of 4199 students. Dr. D. W. Kurtz was installed as president of the seminary to succeed Dr. A. C. Wieand who had served in that capacity for 27 years. The last of the academies, Daleville, closed its doors in 1933. The *Gospel Messenger* is the official organ.

At its meeting in June, 1933, the general conference of the Church of the Brethren appointed a committee on fraternal relations, whose special aim was to cultivate a coöperative attitude on the part of the several branches of the denomination. The following officers were elected: Moderator, the Rev. Charles D. Bonsack, Elgin, Ill.; reading clerk, the Rev. H. K. Ober, Elizabethtown, Pa.; and secretary, the Rev. J. E. Miller, Elgin, Ill. The Rev. J. W. Lear of Elgin, Ill., was executive secretary of the council of boards; the Rev. Otho Winger of North Manchester, Ind., president of the general mission board; the Rev. C. S. Ikenberry of Daleville, Va., president of the board of Christian education; the Rev. H. L. Hartsough of North Manchester, Ind., president of the general ministerial board; and Dr. C. C. Ellis of Huntingdon, Pa., president of the general education board. The headquarters of the boards are at Elgin, Ill.

BRIDGE. See CONTRACT BRIDGE.

BRIDGES. Bridge building operations in the United States, although undoubtedly adversely affected by the depression, received a very considerable impetus from federal financing, and there has been considerable activity throughout the year. The great Golden Gate Suspension and the unique San Francisco-Oakland bridges naturally drew attention to these Pacific Coast structures, but there are several other works which, although smaller in size, are not lacking in interest.

GOLDEN GATE. As soon as the final legal difficulties had been cleared up in February, 1933, this work went rapidly forward. By the close of the year about 20 per cent of the total project had been finished and contracts for most of the remainder had been let. It is planned to complete the structure in 1936 at a cost now estimated at \$32,000,000, the R.F.C. participating in the financing.

The main dimensions of this bridge, which will be the world record for span, are as follows: Main span, 4200 feet. Clearance, 220 feet. Side spans, 1125 feet. Length including approach viaducts, 9217 feet. Total length, including ramps and roadways, four and one-half miles. Width between stiffening trusses, 90 feet, giving a 60-foot roadway and two 11-foot sidewalks. Cables thirty-six and one-half inches in diameter, and 7660 feet between anchorages.

By the end of the year, the tower foundations, involving 90 by 185 foot caissons and fender cas-

ings around the piers 27½ feet thick, had been completed. The steel work of the towers had also been begun and was rapidly approaching roadway level.

At this stage of the work, the tower construction is undoubtedly the most interesting feature. These towers represent a completely different design than the braced column plan used on the George Washington Bridge in New York. Each tower is composed of two cellular shafts tied together by crossed braced frames. It would seem probable that this type of construction would involve considerably more field riveting than the Hudson Bridge type, and would thus normally cost more per ton in place. Under present conditions, however, the low steel prices reflect no such difference.

A complete model of one of these towers, one fifty-sixth actual size, has been built in stainless steel and has been under exhaustive tests at Princeton University. These tests confirm the principles used in their design, and the model indicates that the towers will be most monumental and imposing in appearance.

SAN FRANCISCO-OAKLAND. Work on this combination of suspension and cantilever spans is also progressing rapidly, following a grant and loan of the R.F.C., and it is planned to be completed in 1937.

The towers on the unique twin suspension spans of 2310 feet over the West Channel are similar in type to the Golden Gate Bridge, but with different bracing, and were finished during the year. The large section highway tunnel through Yerba Buena Island was well under way.

The main bridge structure will have two decks—an upper one of 58 feet for six-lane passenger and light motor truck traffic. The lower deck is to carry three lanes of heavy truck traffic on a 31-foot roadway and two interurban lines. Welded trusses for reinforcing the novel concrete decks are provided.

In the construction of the centre or common anchorage of the two suspension spans, a record caisson was used (see **FOUNDATIONS**) and the concrete plant with a capacity of 400 cubic yards per hour furnished another example of the ability of the American engineering-contractor to handle such large-scale operations. (See also *Cantilevers* in next column.)

TRIBOROUGH BRIDGE, N. Y. On August 24th the P.W.A. announced that it would participate in the construction of the combination of bridges over the East and Harlem Rivers in New York which are known collectively as the Triborough Bridge. The foundations for this structure were completed several years ago (see 1931 **YEAR BOOK**) but, due to lack of funds, work had practically ceased. The project, however, again got under way with the letting of contracts for the towers and anchorages on November 16th.

STEEL ARCHES. The 780-foot tied arch over the Ohio at Pittsburgh is, of course, not a record-breaking span, but it is of interest because of the use of wire rope hangers, similar to those used on the famous Bayonne Arch (see 1929 **YEAR BOOK**), but using cables of the unusual size of four inches.

Among the smaller bridges of this type, the new French King Bridge built by the Massachusetts Department of Public Works on the Mohawk Trail Highway, again emphasizes the inherent beauty of the arch form. Its graceful 460-foot main span with similarly arched ap-

proach spans shows the spandrel braced arch at its best.

TRUSSES. The development of the continuous truss idea was marked by the construction of a small, light, three-span truss of this type over the Missouri north of Helena, Montana. The total length of this bridge is only 450 feet but its construction shows the growing confidence of American engineers in the continuous truss.

It would appear at first sight that the five spans of the Little Belt Bridge now being constructed to join the Island of Fyen with the Jutland Peninsula, Denmark, were also a continuous truss form. Actually this 2706-foot bridge consists of five cantilevers, having an almost horizontal top chord throughout. The design is unusual but has been adopted as most economical and satisfactory for this site.

CANTILEVERS. Under this heading we should note the 1400-foot cantilever of the East Bay Crossing of the San Francisco-Oakland or Bay Bridge. This will be a notable cantilever span—only 400 feet less than the record of the famous Firth of Forth and the Quebec cantilevers.

Another important development in this type of construction is the New Orleans Public Belt Railroad Bridge over the Mississippi River which, after much delay, was at last under way as the year came to a close. The War Department permit covering this work having expired, in the new permit issued in 1932 the required clearance was increased from 117 to 135 feet. As redesigned, the bridge consists of a 790-foot cantilever with two 530-foot approach spans. The R.F.C. has stepped in to lend the first mortgage bonds, on January 20 the first foundation pile was driven, and on December 30 the contracts for the bridge were let.

On Oct. 21, 1933 the Red River Bridge at Shreveport, Louisiana, a 520-foot steel cantilever, was dedicated. These activities show that the cantilever type has held its position in recent bridge construction as a basic and economical form.

VIADUCTS. The need for special traffic facilities in and near large cities, which has led to notable viaduct constructions such as the \$21,000,000 work over the Newark Meadows near New York, and other structures of this type, continued to be pressing. In Kansas City, Kansas, the new Seventh Street Trafficway is under construction. Richmond, Virginia, with aid from the R.F.C., is starting a new traffic outlet over the James River which, although it can be classed as a multiple concrete arch structure, is essentially a relief viaduct. The East 6th Street Viaduct, Los Angeles, was opened June 16.

Perhaps one of the most unique structures of this type, however, is a railroad work—the new viaduct of the New York Central Lines on the lower West Side in New York. In one case this heavy freight viaduct was carried through an existing building, the Bell Telephone Laboratories, during occupancy and so as to avoid vibration from train operation.

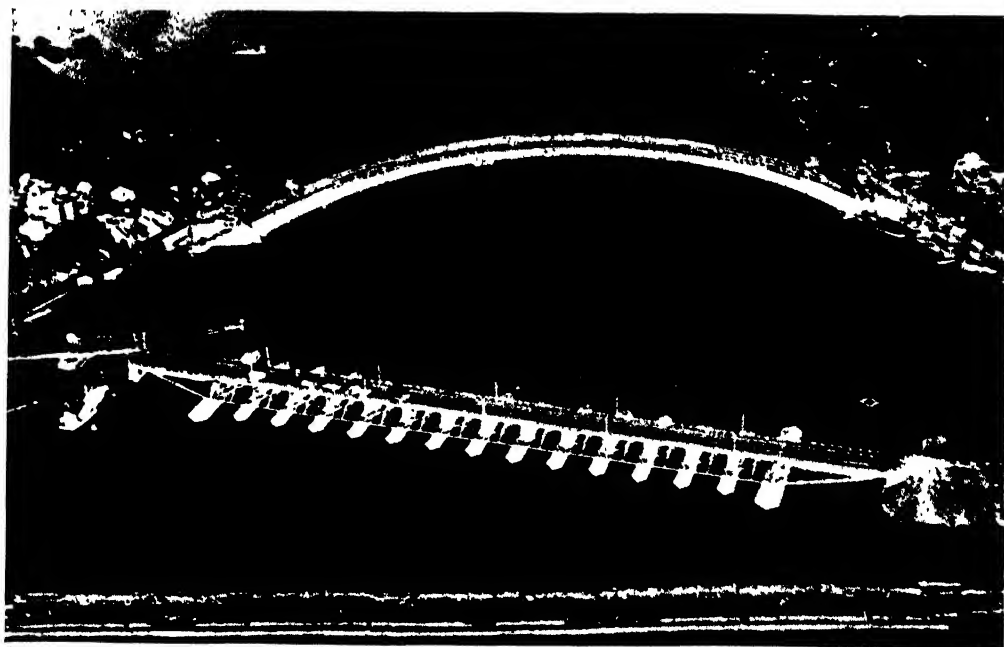
LIFT BRIDGES. After fifty years of service the old highway bridge over the Hudson between Albany and Rensselaer, New York, has been replaced by a new structure having a vertical lift span of 341 feet. By using silicon steel, the weight of the span was kept down to 2730 tons. The operating mechanism (electric with gasoline engine in reserve) is of interest. A duplicate of this bridge is now under construction between Troy and Menands, New York.



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GOLDEN GATE BRIDGE

Spanning Entrance to San Francisco Bay
Artist's Conception of the Completed Project



Acme

TRANEBERG ARCH

Bridging Harbor at Stockholm, Sweden
One of the World's Longest Concrete Arches (585-foot span), Under Construction in 1933

BRIDGES



Acme

ILLINOIS SHIP CANAL

Opening in May, 1933, of 60-Mile Waterway Connecting Lake Michigan with the Mississippi, via Chicago Drainage Canal



Copyright, Underwood

BOULDER DAM, COLORADO RIVER

Partly Filled Form of the Base of the Dam, Showing Progress of Work on Sept 22, 1933

CANALS AND DAMS

Due to the financial difficulties of the British government, which have almost eliminated grants for public works, there are no outstanding bridge works to record for the British Isles in 1933. In fact, the most important British work of the year is the Tees lift bridge, to be opened early in 1934. Crossing the Tees at Middlesbrough the lift span of 250 feet, not a remarkable span, provides a clear headroom of 120 feet.

CONCRETE BRIDGES. The George Rogers Clark Memorial Bridge at Vincennes, Ind., a handsome structure of moderate spans (max. 180 ft.) was dedicated September 3. An unusual construction feature involved the use of one form with which the ribs were built successively. The Gavioto Canyon (Colorado) arch is notable for its unprecedented skew of 57°.

Recalling the American record span of the George Westinghouse Bridge at Pittsburgh (460 feet), these concrete arches of 1933 appear to be unimportant. It is interesting to note, however, that while American engineers in the past have generally built their concrete bridges of very massive and monumental form, the engineers on the Pacific Coast, at least, are turning to the more daring, slender construction characteristic of many European concrete arches. This is well illustrated by the 320-foot Bixby arch on the scenic California Coast highway about fifteen miles south of the Monterey Peninsula. Its slender ribs form a beautiful open spandrel arch which supports the floor, 265 feet above the creek bottom.

In the field of concrete bridge construction, however, European engineers still hold the records. Indeed, the outstanding bridge accomplishment of 1933 is probably the Traneberg Arch which must be credited to Swedish designers.

This beautiful concrete structure, spanning the harbor of Stockholm, Sweden, in one graceful arch of 585-foot span, ranks not only as one of the greatest concrete arches in the world (span only exceeded by Plougastel Bridge at Brest, France) but has several interesting design features.

The structure consists of two huge reinforced concrete ribs which were erected on a steel arch centring. After being used for one rib, this centring was moved laterally and used again for the second rib. The bridge carries a roadway and two tracks of suburban electric railway. Inasmuch as its alignment is almost due east and west, so that the south rib may be subjected to greater temperature ranges than the north, special articulation of the road surface was provided. (See *The Engineer* (London) Sept. 15, 1933.)

Bridge Floors. One of the most talked of items among bridge engineers in recent years has been the matter of bridge floors. Reinforced concrete, special light concrete, steel plates, steel gratings, and other forms have been designed and tested with the object of securing a suitable floor and floor finish for motor traffic, which will be lighter than many existing bridge floors, and will thus result in a reduction of dead load. This item of bridge design promises to show interesting developments in the near future.

In this connection the removal of the old floor of the Smithfield Bridge at Pittsburgh and its replacement by a light, high-strength aluminum alloy construction, is of interest. Opinion seems to differ as to the qualities of aluminum for such

work, but the saving in dead load will give a new lease of life to this historic structure.

BRIDGE PROPOSALS. The very substantial list of proposals for 1934 give promise of a continued activity in this field in the new year. Plans for a span of 1200 feet at Tacoma, Wash., a new bridge at Lachine west of Montreal, the high-speed viaduct between Camden and Philadelphia, the Tampa Bay Crossing in Florida, the two latter stimulated by R.F.C. loans, indicate that interesting and important work will be under way in 1934.

BRIGHAM YOUNG UNIVERSITY. A co-educational institution in Provo, Utah, founded in 1875 and maintained under the auspices of the Church of Jesus Christ of Latter-day Saints. It comprises a graduate school; colleges of arts and sciences, education, commerce, applied science, fine arts; and a division of research and extension. In the 1933 summer session 532 students were enrolled; the autumn session enrollment was 1607. The faculty numbered 115 members. The library contained 86,000 volumes and 50,000 pamphlets. The budget for the year was \$267,000. President, Franklin Stewart Harris, Ph.D.

BRITISH ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE. An association founded in York, England, in 1831, and incorporated by Royal Charter in 1928, for the purpose of fostering the interests of workers in all branches of science and to give a stronger impulse to scientific research, both theoretical and practical.

The annual meeting was held at Leicester, Sept. 6-13, 1933, under the presidency of Sir Frederick Gowland Hopkins, professor of bio-chemistry at the University of Cambridge. In accordance with the provisions of the association's new statute he had been installed at a joint meeting of the organizing sectional committees held at Birkbeck College, London, Jan. 6, 1933. His address at the meeting's opening session was entitled "Some Chemical Aspects of Life." Among the other speakers at the general sessions were Sir Henry Fowler whose topic was "Transport for a Century," Julian Huxley who spoke on "Ants and Men," and Sir Josiah Stamp whose address was entitled "Must Science Ruin Economic Progress?"

Of equal importance were the section presidential addresses. They included "Seasonal Weather and Its Prediction," delivered by Sir Gilbert T. Walker (mathematical and physical sciences); "Natural Coloring Matters and Their Analogues," by Robert Robinson (chemistry); "A Correlation of Structures in the Coalfields of the Midland Province," by William George Fearnside (geology); "The Mechanical View of Life," by James Gray (zoology); "Geography as Mental Equipment," by Lord Meston (geography); and "The Gold Standard," by J. H. Jones (economic science and statistics). Richard W. Allen (engineering) spoke on "Some Experiences in Mechanical Engineering"; Lord Raglan (anthropology), on "What Is Tradition"; E. D. Adrian (physiology), on "The Activity of Nerve Cells"; F. Aveling (psychology), on "The Status of Psychology as an Empirical Science"; Francis Ernest Lloyd (botany), on "The Types of Entrance Mechanisms of the Traps of Utricularia"; J. L. Holland (educational science), on "The Development of the National System of Education"; and Alexander Lauder (agriculture), on "Chemistry and Agriculture."

The Association's 1934 meeting was to be held at the University of Aberdeen under the presidency of Sir William Bate Hardy, director of food investigation for the Department of Scientific and Industrial Research. The other officers elected for 1933-34 were: General secretaries, F. J. M. Stratton and P. G. H. Boswell; general treasurer, Sir Josiah Stamp; and secretary, O. J. R. Howarth. Headquarters are at Burlington House, London.

BRITISH CAMEROONS. See under CAMEROON.

BRITISH COLUMBIA. A maritime province of Canada on the Pacific Ocean, having Alberta as its eastern boundary. Area, 355,855 square miles; population (1931) census, 694,263 compared with 524,582 in 1921. Victoria, the capital, had 39,082 inhabitants in 1931 (38,727 in 1921); Vancouver, 246,593 (163,220); New Westminster, 17,542 (14,495); North Vancouver, 8510 (7652); Trail, 7573 (3020). In 1931 births totaled 10,404; deaths, 6114; marriages, 3879. Education is free and non-sectarian since 1872 and school attendance is compulsory for children from 7 to 15 years of age. In 1931 there were 1038 elementary schools with 91,173 students and 91 high schools (11 were junior high schools) with 22,007 students. The University of British Columbia (Provincial) had 2309 students (including 265 at Victoria College), and 2 normal schools had 456 students, in 1930-31.

The area sown to field crops in 1932 totaled 437,700 acres and these crops were valued at \$10,714,000. The estimated gross agricultural revenue for 1932 was \$29,031,000; the production of the principal crops in bushels was: Wheat, 1,408,000; oats, 4,422,000; barley, 288,000. The potato crop amounted to 2,297,000 cwt.; turnips, etc., 1,062,000 cwt.; hay and clover, 276,000 tons; grain hay, 104,000 tons. Livestock (1931 census), horses and mules, 57,366; cattle, 233,923; sheep, 146,577; goats, 5676; swine, 51,756; poultry, 4,371,685. Mineral production for 1932 was valued at \$26,855,997 of which gold equaled \$3,742,274; silver, \$2,429,938; copper, \$3,798,216; lead, \$5,808,640; zinc, \$3,214,200; coal, \$7,273,800. The production of fish for 1932 was valued at \$9,914,071 and amounted to 3,450,409 cwt.; salmon accounted for \$7,592,460 of the total value. Raw furs and skins taken in the year ended June 30, 1932, totaled 201,522 and were valued at \$576,102. Lumber and other sawmill products were valued at \$26,989,000 for 1931. The gross value of manufactured products of British Columbia for 1932 amounted to \$241,121,932. The 1933 salmon pack was 1,247,471 cases of 24 pounds each.

For the fiscal year ended Mar. 31, 1932, provincial revenue amounted to \$28,088,696 and expenditures to \$28,080,030; gross funded debt was \$116,060,611; sinking funds amounted to \$21,519,601. Revenue was estimated to total \$20,500,000 and expenditure \$22,700,000 for the year 1933-34. There were 4097 miles of steam railroads in operation during 1931. Government is under a lieutenant-governor and a legislative assembly of 48 members elected for five years. The 18th legislative assembly elected early in November, 1933 consisted of the following: Liberals, 34; Coöperative Commonwealth Federation, 7; others, 6. Only 1 Unionist a former Conservative was elected. Lieutenant-Governor in 1933, John W. F. Johnson. Premier T. D. Pattullo (Liberal) succeeded S. F. Tomlie as a result of the November election. See CANADA.

BRITISH COMMONWEALTH RELATIONS CONFERENCE. See CANADA under History.

BRITISH EAST AFRICA. The British sphere in East Africa comprising KENYA Colony and Protectorate, UGANDA Protectorate, and the mandated territory of TANGANYIKA. See these articles.

BRITISH EMPIRE. An empire comprising (1) GREAT BRITAIN and NORTHERN IRELAND, CHANNEL ISLANDS, and ISLE of MAN; (2) the IRISH FREE STATE, INDIA, and the various British Dominions, Colonies, Protectorates, and Dependencies. Including the mandated territories of PALESTINE, SOUTH WEST AFRICA, CAMEROONS, TOGOLAND, WESTERN SAMOA, and NAURU, the British Empire had a total area of 13,355,426 square miles and a population (1931 census figures used where available) of 449,583,000. Consult these articles.

BRITISH FILMS. See MOTION PICTURES.

BRITISH GUIANA, gë-ä'nä. A British colony on the north coast of South America between Surinam (Dutch Guiana) and Venezuela. The territory includes the counties of Demerara, Berbice, and Essequibo; each named after one of three rivers. Total area, 89,480 square miles; population (1931 census), 310,933 (excluding 7379 aborigines). The total estimated population on Jan. 1, 1933 was 317,813, including 10,732 Europeans, 134,059 East Indians, 126,077 Blacks, and 8430 aborigines. Georgetown, the capital, had 62,690 inhabitants in 1931. In 1932, births numbered 10,825; deaths, 6694; marriages, 1157. There were 230 elementary schools with 45,391 students, 2 secondary schools, and a government college at Georgetown, in 1932.

The area under cultivation is about 180,366 acres; the chief agricultural products for 1932 were sugar, 148,034 tons from 62,905 acres; rice, about 60,869 tons; coffee, 1,054,451 lbs. exported, 5800 acres planted. Coconuts, cacao, rubber, and limes are other agricultural products. Livestock (1932), horned cattle 186,175; sheep 32,799; swine 17,499; goats 15,355; asses 7486; horses 4362; mules 1616; buffaloes 126. The forests have an area aggregating 77,278 square miles; timber taken from crown lands amounted to 580,205 cubic feet in 1932, and 765,475 lbs. of balata (gum) valued at £31,082 were exported in the same year.

The production of the principal minerals for 1932 was as follows: Gold, 15,171 ozs. valued at £64,634; diamonds, 60,185 carats valued at £118,865; bauxite, 92,434 tons were exported to the United States and Canada: manganese and mica are also found. There are local factories for the manufacture of matches, boots and shoes, and edible oil manufactured from coconuts which compares favorably with imported cooking oils. Total imports for 1932 amounted to £1,690,891; exports, including reexports, £2,208,901.

Roads have a total length of some 500 miles; trails, including a government cattle trail of 182 miles from Takama to Annai, 514 miles; the new road from Bartica to Potaro Landing which includes a suspension bridge over the Potaro River was completed during 1933. There were 78 miles of railway line in operation; 450 miles of river navigation; and 39 miles of canals. The main wireless station at Georgetown is in communication with 5 wireless stations in the interior. Georgetown is on the route of the weekly air mail service between Miami, Florida, and Brazil.

In 1932, government revenue from all sources amounted to £1,179,615; expenditure, £1,137,789. The public debt on Jan. 1, 1933 was £4,648,063 and the sinking fund amounted to £731,678. The colony is administered by a governor assisted by a legislative council of 10 official members and 19 unofficial members. Governor in 1933, Sir E. B. Denham.

BRITISH HONDURAS, hõn-dõõ'rás. A colony belonging to Great Britain bounded west and south by Guatemala, north by Mexico, and east by the Caribbean Sea. Area, 8598 square miles; population (1931 census), 51,137; estimated population on Jan. 1, 1932 was 52,945. Belize, the capital and chief town, had 16,687 inhabitants (1931 census). The total average school enrollment for the year 1932 was 8385 and the average attendance was 6854.

The chief products are bananas, mahogany, logwood, plantains, coconuts, and chicle. In 1932 exports totaled \$1,447,484 (domestic exports, \$297,580; reexports, \$1,149,904) compared with \$2,911,066 for 1931. The drop in reexports was caused by lower chicle exports and the large curtailment of the liquor-smuggling traffic; the decrease in domestic exports was due primarily to the collapse of foreign markets for mahogany and cedar logs. Imports in 1932 totaled \$2,301,838 (\$4,435,358 in 1931). Shipping entered in 1931 aggregated 327,271 tons. There are 25 miles of railway, and 925 miles of telegraph lines with 32 offices. The air-mail and passenger service between Miami, Florida, and Cristobal, Canal Zone, uses Belize as a stopping point.

For 1932-33 revenue amounted to \$893,716; expenditure, \$940,285; public debt, \$2,598,407. The administration is under a governor assisted by an executive council of 7 members, and a legislative council of 6 official members and 7 unofficial members. Governor and Commander-in-Chief in 1933, Sir Harold Kittermaster.

BRITISH INDIA. See INDIA.

BRITISH LABOR PARTY. See SOCIALISM.

BRITISH MALAYA. The entire Malay peninsula from Siam on the north to the Strait of Singapore in the south is under British control, the component administrative divisions are (1) Straits Settlements, (2) Federated Malay States, (3) Unfederated Malay States. Total area, 52,603 square miles; total population (1931 census), 4,351,180. The chief cities are Singapore, the capital, with 445,778 inhabitants in 1931; and Georgetown (Penang), 149,327. Three other British protectorates in Malaysia—British North Borneo, Brunei, and Sarawak—are seldom included in the term British Malaya and are never covered by British Malayan statistics. The statistics of the foreign trade for British Malaya include the Straits Settlements, the Federated, and the Unfederated States. The chief agricultural products were rubber, copra, palm oil, sugar, tapioca, pineapples, and resin. In 1932 exports of rubber amounted to 478,252 tons (519,590 tons in 1931); pineapples, 2,000,000 cases shipped; rice production was increased 10 per cent to 15 per cent during the year. Tin production was stopped during July and August of 1932 and the production for the remaining 10 months of the year ending July 1, 1933, was to be limited to 30 per cent of the total 1929 production. Gold production, from practically the only gold mine in the country, was 27,782 oz. (22,686 oz. in 1931). In 1932, including bullion and specie, total imports were valued at 384,371,000

Straits dollars; total exports, 367,599,000 Straits dollars (Straits dollar averaged \$0.404 for 1932). The 1933 trade was: Exports, 402,500,000 Straits dollars; imports, 367,500,000 Straits dollars. See STRAITS SETTLEMENTS, FEDERATED MALAY STATES, and UNFEDERATED STATES.

BRITISH NORTH BORNEO. A British protectorate occupying the northern part of the island of Borneo, bounded on the southwest by Sarawak. Area, about 31,106 square miles, and a coast line of about 900 miles; total population (1931 census), 270,223, consisting chiefly of Mohammedans on the coast and native tribes in the interior. Europeans numbered 340; Eurasians, 236; Chinese, 47,799; Malay Archipelago natives, 11,494. Chief towns are the capital Sandakan (population 13,826), and Jesselton.

The chief products are timber, sago, rice, coconuts, gums, coffee, rubber, and tobacco. Total exports in 1931 were valued at £878,994; imports were valued at £509,273; revenue amounted to £297,950 and expenditure to £250,858. Trade is carried on chiefly, through Singapore and Hong Kong, with the British Empire. A railway runs from Jesselton to Melalap 127 miles in the interior. Shipping entered and cleared during 1931 was 352,876 and 348,063 tons respectively. The territory is administered by a governor in Borneo and a board of directors in London under the jurisdiction of the British North Borneo Company. Governor in 1933, A. F. Richards.

BRITISH SOMALILAND. See SOMALILAND PROTECTORATE.

BRITISH SOUTH AFRICA. See SOUTH AFRICA, UNION OF.

BRITISH WEST AFRICA. The following British colonies, protectorates, and mandated territories comprise British West Africa: Nigeria colony and protectorate, and the mandated territory known as British Cameroons; Gambia colony and protectorate; Gold Coast colony with Ashanti, the Northern Territories, and the British mandated area in Togoland; Sierra Leone colony and protectorate. Consult the separate articles.

BRITISH WEST INDIES. The British West Indies consist of (1) BAHAMAS; (2) BARBADOS; (3) JAMAICA with Turks Islands; (4) LEEWARD ISLANDS; TRINIDAD with Tobago; (6) WINDWARD ISLANDS. See separate article on each group.

The Royal commission appointed in 1932 to study the feasibility of a closer administrative union of the British West Indies submitted its report in September, 1933. The commissioners reported that it was impracticable to unite all the islands, but recommended the union of the Leeward and Windward Islands under a governor with headquarters at St. Lucia.

BROMINE. See PHYSICS.

BROOKINGS INSTITUTION. An organization devoted to public service through research and training in the social sciences, established in Washington, D. C., in 1927. Its purposes are: to aid constructively in the development of sound national policies, and to offer training of a super-graduate character to students of the social sciences. It maintains, as operating units, the Institute of Economics, the Institute for Government Research, and a division of training in which only those who have had at least two years of graduate work are accepted as research fellows. It provides also headquarters for visiting scholars who come to the national capital to make use of the material available there on eco-

monic, political, historical, social, administrative, and legal problems, as found in library collections and in the records of the various government departments.

By charter provision the investigations of the institution are conducted "without regard to the special interests of any group in the body politic, whether political, social, or economic." During 1932 the following studies were published: *The Society of Nations: Its Organization and Constitutional Development*; *War Debts and World Prosperity*; *Bankers' Profits from German Loans*; *Credit Policies of the Federal Reserve System*; *Advertising Allowances*; *A Phase of the Price-Making Process*; *Unemployment Insurance in Austria*; *State Centralization in North Carolina*; *The Federal Radio Commission*.

The institution is supported from endowment funds and annual grants. The board of trustees, a self-perpetuating body, has general responsibility for determining the institution's policies and its programme of work, but does not assume responsibility for each particular investigation. The officers of the board of trustees for 1933-34 were: chairman, Frederic A. Delano; vice chairman, Leo S. Rowe; treasurer, Henry P. Seidemann; and President, Harold G. Moulton. Headquarters are at 722 Jackson Place, Washington, D. C.

BROOKLYN COLLEGE. A coeducational institution of higher education in Brooklyn, N. Y., founded in 1930 as one of the three institutions of higher learning supported by municipal taxes and administered by the Board of Higher Education. The others are Hunter College and the College of the City of New York. The enrollment for the autumn of 1933 was 10,116. The 1933 summer session had an attendance of 2523. The faculty numbered 468. There were 24,943 volumes in the library. President, William A. Boylan.

BROOKLYN INSTITUTE OF ARTS AND SCIENCES. An institution in Brooklyn, N. Y., composed of four divisions—education, museum of arts and sciences, children's museum, and a botanic garden. It was founded in 1824 and incorporated in its present form in 1890. Membership is open to all who are interested in any branch of science or art. The education division is divided into the following departments, composed of members interested in a particular field: Agriculture, astronomy, botany, dramatic art, electricity, fine arts, geography, geology, music pedagogy, philology, philosophy, photography, physics, political science, psychology, and sociology. These departments conduct courses and sponsor addresses, lectures, and concerts. A forum conducted by the departments of political science and sociology provides for the discussion of current problems. The enrollment in the school of pedagogy in 1933 was 2240, with an attendance at lectures of 344,127.

The institute's museums contain collections in the fields of art, ethnology, and natural science; its botanic garden comprises more than 50 acres. Attendance at the museums during the year was 1,381,146 and at the botanic garden, 1,307,000. The library contains more than 27,000 volumes. In 1933 the permanent funds of the institute amounted to \$3,479,726: the funds to meet current expenses totaled \$864,784. The president of the board of trustees was Edward C. Blum; director of the division of education, Charles D. Atkins; of the museum of arts and sciences, William Henry Fox; of the children's museum, Anna

B. Gallup; and of the botanic garden, C. Stuart Gager. Headquarters are at Brooklyn Academy of Music, 30 Lafayette Avenue, Brooklyn, N. Y.

BROWN UNIVERSITY. An institution of higher education in Providence, R. I. Founded in 1764, it is the seventh oldest college in the United States and the third in New England. It has three major subdivisions: The College, for undergraduate men; Pembroke College for undergraduate women; and the Graduate School. The College includes a division of engineering. The enrollment in the autumn of 1933 was 1267 undergraduate men, 467 undergraduate women in Pembroke College, 322 graduate students, and 33 special students in education. The faculty consisted of 209 members, including 120 professors, 43 instructors, 8 lecturers, and 38 assistants. The productive fund of the university on June 30, 1933, was \$10,284,543. Gifts and bequests included \$252,518 from the estates of Henry L. and Charles T. Aldrich and \$100,000 for the John Hay Library from Webster Knight and \$100,000 from C. Prescott Knight. A number of special projects were being carried on with the aid of special funds provided for the purpose, including a research project on the International Gold Standard by the department of economics and the Linguistic Atlas of the United States and Canada. Larger opportunities have been offered for the study of art through cooperative arrangements with the Rhode Island School of Design. The libraries contained approximately 500,000 volumes. President, Clarence Augustus Barbour, D.D., S.T.D., LL.D.

BRUNEI, brōō'nī. A native state between British North Borneo and Sarawak in the northwest of the island of Borneo, under British protection. Area, about 2500 square miles; population (1931 census), 30,135, including 60 Europeans, 2683 Chinese, and 377 Indians. Brunei, the capital town, had 10,453 inhabitants. In 1931 there were 10 vernacular schools with 598 pupils.

Native industries in the town of Brunei are boat building, cloth weaving, silver ware manufacture, and brass founding. Rubber, jelutong, cutch (mangrove extract), and sago are the important products. Many kinds of serviceable timber are produced in the jungle which occupies most of the interior part of the country. An oil field is being developed at Sera on the coast where oil was found in commercial quantity. The average annual rainfall is about 100 inches. In 1932 imports totaled £283,529; exports, £175,669; revenue, £42,280; expenditure, £39,005; public debt (Jan. 1, 1933), £45,383.

On Jan. 2, 1906 the Sultan of Brunei made a treaty by which the general administration of the state was handed over to a British Resident. British Resident in 1933, T. F. Carey.

BRUNSWICK, brūnz'wīk. One of the states of the German Republic. See GERMANY under Area and Population.

BRUSH, EDWARD NATHANIEL. An American psychiatrist, died in Baltimore, Md., Jan. 10, 1933. He was born at Glenwood, N. Y., Apr. 23, 1852, and was graduated with the M.D. degree from the University of Buffalo in 1874. After practicing medicine in Buffalo he was appointed in 1878 assistant physician at the New York State Lunatic Asylum in Utica. Six years later he was called to the Pennsylvania Hospital for the Insane in Philadelphia in the same capacity. Upon the founding in 1891 of the Sheppard and

Enoch Pratt Hospital in Baltimore, one of the first model institutions for the care of the mentally sick in the United States, he became its physician-in-chief and medical superintendent. He was appointed to the professorship of psychiatry at the University of Maryland and at the College of Physicians and Surgeons of Baltimore in 1899, but retired as emeritus from all three of these positions in 1920.

Dr. Brush was well known as a writer on insanity, and for more than 50 years was connected with the *American Journal of Insanity* (later *Psychiatry*), first as associate editor (1878-84 and 1897-1904) and then as editor (1904-31). He also served as president of the American Psychiatric Association during 1915-16 and of the Mental Hygiene Society of Maryland from 1914 to 1926, and was an honorary member of medico-psychological societies of Great Britain, France, and Belgium.

BRYN MAWR COLLEGE. An institution for the higher education of women in Bryn Mawr, Pa., founded in 1885. The enrollment for the autumn of 1933 totaled 497. The teaching staff numbered 83. The productive funds of the college amounted to \$5,995,654 in the autumn of 1933 and the receipts for the year 1932-33 were 879,890. The number of volumes in the library was 143,000. President, Marion Edwards Park, Ph.D., LL.D.

BUCKNELL UNIVERSITY. A coeducational Baptist institution of higher learning in Lewisburg, Pa., founded in 1846 under the name of the University of Lewisburg but renamed in 1886 in honor of its benefactor, William Bucknell. In the autumn of 1933 the enrollment was 969, of whom 609 were men and 360 women. At the junior branch, opened in Wilkes-Barre, Pa., there were 164 freshmen, 123 men and 41 women. Of the 352 students enrolled in the summer session of 1933, 208 were men and 143 women. The faculty numbered 78. The productive funds amounted to \$1,700,000, and the income for the year was \$700,000. The library contained 60,000 bound volumes. The Literature Building, the first unit of the new building programme, was to be ready for occupancy in February, 1934. President, Homer Price Rainey, Ph.D., LL.D.

BUCKWHEAT. The production of buckwheat in the United States in 1933 as estimated by the Department of Agriculture amounted to 7,844,000 bushels as compared with 6,727,000 bushels in 1932 and 9,913,000 bushels, the average yield of the five years 1926-1930. The acreage in 1933 although only 462,000 acres was still nearly 2 per cent above that of the preceding year but 30 per cent under the average acreage of 664,000 acres for the 5-year period. The average yield per acre, 17 bushels, was 1.2 bushels above the average acre yield in 1932 and 0.48 of a bushel above the 5-year average. With the exception of 1932 the country's production in 1933 was the lowest since 1928 and the acreage the smallest since 1874.

As usual during recent years the production of buckwheat was reported by the same 23 States, all east of the Rocky Mountains, and New York and Pennsylvania were again the leading producing States, yielding 67 per cent of the total crop. The estimated yields, in bushels, of the six leading States, producing over 84 per cent of the nation's crop, were reported as follows: Pennsylvania, 2,679,000; New York, 2,641,000; West Virginia, 407,000; Ohio, 372,000; Maine, 320,000; Michigan, 284,000. During the fiscal year ended

June 30, 1933 the United States exported only 33,000 bushels of buckwheat as compared with 524,000 bushels in the preceding fiscal period. No imports were recorded. The exports of buckwheat vary widely from year to year having ranged from 22,000 bushels in 1929 to over a million bushels for several years in succession in the late sixties.

BUFFALO, THE UNIVERSITY OF. A coeducational institution of higher learning in Buffalo, N. Y., founded in 1846 under a charter received from the State Legislature. The enrollment for the autumn of 1933 was distributed as follows: College of arts and sciences, 756; school of law, 177; school of dentistry, 131; school of medicine, 282; school of pharmacy, 113; school of business administration, 205; nurses training school, 257; school of education, 464; University of Buffalo extension courses, 1916. The enrollment for the 1933 summer session was 762. The faculty numbered 476 in the autumn of 1933. The library contained 97,129 volumes and 87,450 pamphlets. Chancellor, Samuel P. Capen, Ph.D., LL.D., LL.D.

BUILDING. Though it seemed unbelievable that the building programme could shrink to a lower level than that reached in 1932, the value of the buildings for which permits were granted in 1933 for the 215 cities in the United States which are included in *Dun and Bradstreet's* annual summary, was about 20 per cent lower than in the previous year. The total in these cities was \$313,739,676 for 1933, \$399,288,930 for 1932, and \$1,158,963,273 for 1931. However, this decrease was the result of the extreme depression of the industry in the first four months of the year, in each of which the building permits granted were more than 50 per cent less than in the corresponding months of the previous year. Thereafter, except in May and November, the monthly totals were slightly higher than in the same months of 1932.

In a grouping of 215 American cities by sections, the West Central section showed the least decline for the year and the South Atlantic the greatest. New York City, in the Mid-Atlantic section, showed a slight improvement in building activities, amounting to 4.6 per cent over the previous year. It is interesting to observe in the accompanying tabulation of the eight sections that building activities in New York City accounted for more than 25 per cent of the grand total:

BUILDING PERMITS IN THE UNITED STATES
FOR 215 CITIES, 1932-1933
[From *Dun and Bradstreet's*]

	1933	1932	Change per cent
New England . . .	\$ 26,891,076	\$ 34,424,759	-21.9
Middle Atlantic . .	120,138,547	134,374,448	-10.6
South Atlantic . .	25,406,922	44,863,964	-43.4
East Central . . .	33,618,661	59,234,144	-43.2
South Central . . .	26,511,299	31,777,864	-16.6
West Central . . .	25,187,223	27,288,952	-7.7
Mountain	4,333,183	5,521,910	-21.5
Pacific	51,652,815	61,802,889	-16.4
Total U. S. . .	313,739,676	399,288,930	-21.4
New York City . .	81,812,850	78,183,889	+ 4.6
Outside New York City	231,926,826	321,105,041	-27.8

The foregoing figures, however, reflect activities in housing and in office building rather than in general engineering construction, and do not include expenditures for public and private works.

According to estimates in the annual review number of the *Engineering News-Record*, the total expenditures for all construction in the United States during the year amounted to \$2,440,000,000, as compared with a total of \$2,839,000,000 in 1932. The total for the year is broken down into the following estimates, with 1932 estimates in parentheses: Residential construction, \$249,000,000 (\$281,000,000); public works, \$1,533,000,000 (\$1,918,000,000); other private construction, \$658,000,000 (\$640,000,000).

The construction contracts actually reported by the *Engineering News-Record* during the year and upon which the estimates in the previous paragraph are based indicate that waterworks, earthwork, and waterways, and industrial buildings were the factors that prevented a far more serious drop in general construction activities. These items showed a gain over the figures of the previous year, as shown by the accompanying tabulation.

CONSTRUCTION CONTRACTS REPORTED IN 1933
[*Engineering News-Record*]

(In thousands of dollars)			
	1933	1932	
Waterworks	67,263	34,586	
Sewers	22,175	24,613	
Bridges, public	80,890	79,557	
Earthwork and waterways	136,575	101,251	
Streets and roads	288,258	379,937	
Buildings, public	121,161	240,627	
Unclassified, public	22,817	38,014	
Total, public	739,139	898,585	
Bridges, private	16,941	4,275	
Buildings, industrial	152,376	93,064	
Buildings, commercial	105,399	166,296	
Unclassified, private	53,514	57,089	
Total, private	329,230	320,724	
Total	1,068,369	1,219,309	

By geographical sections the foregoing construction expenditures were distributed as follows:

	1933	1932	Percentage gain or loss
New England	58,594,000	71,636,000	-19.5
Middle Atlantic ..	298,481,000	403,830,000	-26.0
South	123,988,000	127,815,000	-3.0
Middle West	150,693,000	205,423,000	-26.5
West of Mississippi	225,295,000	236,205,000	-4.5
Far West	211,318,000	174,400,000	+21.0

Though the figures just given show a percentage gain or loss in one year's activity they give force to another comparison drawn by the same authority of the swing of construction from the East to the South and West. Whereas four years earlier, in 1930, more than 40 per cent of the total construction was carried on in the Middle Atlantic States, that percentage has been steadily dwindling to a total of 28 per cent in 1933. Conversely in the seven States comprising the Far West Division, the percentage of total construction has risen from 10.8 per cent to 21.1 per cent; in the ten States comprising the division West of the Mississippi, from 15.4 per cent to 21.1 per cent; in the eleven States of the South, the rise has been less conspicuous, from 8.6 per cent to 11.6 per cent.

Loans and grants from the Reconstruction Finance Corporation and the Public Works Administration supplied the funds for the greater percentage of construction during the year. Bonds

purchased by these two agencies in 1933 in addition to those sold by States and municipalities in the open market and allotments made by the P.W.A. for which bonds had not been purchased, brought the total of financing of public construction to \$1,090,700,000. Private financing, aside from that through the agency of P.W.A. loans, amounted to less than \$55,000,000; but construction projects under private operations were allotted P.W.A. funds amounting to \$237,322,000, of which \$182,808,000 was lent to railroads, \$5,942,000 to other corporations, and \$48,572,000 for housing. About two billion dollars of the P.W.A. fund of \$3,300,000,000 was allotted to Federal agencies. The *Engineering News-Record* divides these allotments as: \$562,000,000 for straight construction work, \$100,000,000 for Federal housing projects, and \$800,000,000 to projects that border on construction work but cannot be considered strictly as such, such as the projects under the Civil Works Administration, shipbuilding, and the geological survey.

Of the three basic materials of construction, lumber production showed an increase of 28 per cent over the previous year, with a price increase at the close of the year about 50 per cent above that of the close of 1932. Cement output fell to about 79 per cent of the 1932 output, and shipments of fabricated structural steel dropped to 833,372 tons, or about 88 per cent of the production for 1932.

BUKA. See NEW GUINEA.

BULGARIA. A constitutional monarchy in the Balkans. Capital, Sofia. King in 1933, Boris III, who succeeded to the throne upon the abdication of his father, Oct. 3, 1918.

AREA AND POPULATION. With an area of 39,825 square miles, Bulgaria had an estimated population in 1932 of 6,128,000 (5,478,741 at the 1926 census). In 1931 living births numbered 170,950; deaths, 98,192; marriages, 55,555. In 1932 the birth rate per 1000 was 31.3 (29.3 in 1931); death rate, 16.2 (16.8 in 1931). Bulgarians constitute about 81 per cent of the total, Turks about 10 per cent. The chief cities, with the 1926 census populations, are: Sofia, 213,002; Plovdiv (Philippopolis), 84,655; Varna, 60,563; Russe (Rus-chuk), 45,788.

EDUCATION. Primary education is free and compulsory. In 1931-32 there were 677,673 pupils in elementary schools, 202,273 in secondary schools, 27,990 in special and professional schools, 9914 in universities. There is a large state university at Sofia.

PRODUCTION. Eighty per cent of the population is engaged in agriculture, the 8,994,000 acres of arable land and 776,000 acres of pasture being widely distributed among small proprietors. Yields of the chief crops (1000 bushels, except as indicated) in 1932, with 1931 returns in parentheses, were: Wheat, 50,553 (63,830); rye, 10,136 (10,653); barley, 14,102 (15,862); oats, 7777 (7060); corn, 41,511 (34,989); mixed grain, 95,000 metric tons (141,000); potatoes, 3583 (2570); tobacco, 31,212,000 pounds (54,784,000); grape must, 69,318,000 gallons (74,179,000); sugar beets, 184,000 metric tons (201,000); beet sugar, 27,000 tons (25,000); sunflower seed, 177,027,000 pounds (256,878,000); attar of roses, 67,000 ounces (68,000).

Output of the State-controlled tobacco industry in 1932 was 7,731,000 pounds of manufactured tobacco (8,554,000 in 1931). Coal production, 1932, was 1,732,000 metric tons (1,523,000 in

1931). Copper, zinc, lead, aluminum, and salt are produced in small quantities. The industrial census of 1926 showed 197,784 industrial establishments (including home industries), with 368,022 employees.

COMMERCE. Imports in 1932 were valued at 3,471,233,000 leva (\$24,958,000), against 4,660,063,000 leva (\$33,366,000) in 1931. Exports in 1932 totaled 3,382,845,000 leva (\$24,323,000), as against 5,934,174,000 leva (\$42,489,000) in 1931. Conversions to dollars are made at the average exchange rate for the lev of \$0.00719 in 1932 and \$0.00716 in 1931. Values of the chief import items in 1932 and 1931 were: Textiles, \$9,330,000 (\$10,545,000 in 1931); metals and manufactures, \$3,886,000 (\$6,512,000); machinery and instruments, \$3,058,000 (\$4,756,000); chemicals and allied products, \$2,614,000 (\$2,815,000). Export items included: Leaf tobacco, \$7,751,000 in 1932 (\$18,471,000 in 1931); eggs, \$4,486,000 (\$6,086,000); wheat, \$3,907,000 (\$4,358,000); corn, \$2,097,000 (\$2,113,000). Germany supplied 25.9 per cent of all imports in 1932; Italy, 15.6; United Kingdom, 10.3. Germany also took 26 per cent of all 1932 exports; Italy, 12.5; United Kingdom, 2.5. Imports (1933) were 2,202,000,000 leva; exports, 2,846,000,000 leva.

FINANCE. Preliminary returns for the fiscal year ended Mar. 31, 1933, showed a deficit of 1,300,000,000 leva, with expenditures of 7,200,000,000 and revenues of 5,900,000,000 leva. In 1931-32, there was a deficit of 931,000,000 leva on expenditures of 7,365,000,000 leva; in 1930-31, a deficit of 1,847,000,000 leva on expenditures of 8,106,000,000 leva. The 1933-34 budget estimates balanced at 5,205,000,000 leva. Public debt, Dec. 31, 1932, totaled 27,413,173,000 leva (funded internal, 2,504,267,000; funded external, 20,627,580,000; floating, 4,281,336,000).

COMMUNICATIONS. The state railways, with 1650 miles of line, carried 7,680,000 passengers and 4,780,000 metric tons of freight in the year ended Mar. 31, 1932. Gross receipts were 1,149,511,000 leva (\$8,276,000). Private railway lines extended 332 miles. Highways aggregated 10,340 miles (4736 miles of state and 5604 miles of communal roads). During 1932 there entered the Black Sea ports, 6127 vessels of 2,043,948 net registered tons; cleared, 6129 vessels of 2,046,442 tons. At the Danube ports (1932) 12,537 ships of 2,285,322 tons entered; 12,575, of 2,273,223 tons cleared.

GOVERNMENT. The King is the executive authority under the Constitution of 1879. He is assisted by a council of ministers nominated by him but responsible to the National Assembly (Sobranie). The National Assembly is a single chamber of 274 members elected for four years. The composition in 1933 of the Sobranie elected June 21, 1931, was: National Bloc, 155 (including 76 Agrarians, 43 Democrats, 29 National Liberals, and 7 Radicals); Democratic Entente, 62 (including Liapcheff group, 43, and Zankoff group, 19); Labor (formerly Communist), 31; other parties, 26. The Cabinet, as reorganized Dec. 31, 1932, was headed by Alexander Malinoff.

HISTORY

DOMESTIC AFFAIRS. With agricultural prices at their lowest recorded level, the economic condition of the Bulgarian people—80 per cent of whom were dependent upon the soil—became increasingly desperate during 1933. Actual starvation was reported in both rural and urban districts. The majority of the peasants were heavily

in debt and the collection of loans was practically impossible. Currency was so scarce, especially in the rural areas, that barter was the prevailing method of exchange.

Widespread suffering among the masses was reflected in the vigorous growth of the Independent Labor (Communist) party, which won 29 seats in the Sobranie in the election of June 21, 1931, and captured control of the Sofia municipal council in the autumn of 1932. Alarmed by these gains and by aggressive Communist propaganda in the schools and the army, the government sought to repress the Communist movement. A drastic press censorship law was enacted in January, 1933. Early in April two Communist Deputies and a number of soldiers were arrested on charges of organizing Communist "cells" and spreading propaganda in the army. On April 12, the Sobranie by a large majority voted to oust the 30 Communist Deputies, leaving their seats vacant, and to bar adherents of the Independent Labor party from elective offices and public employment. Numerous arrests of alleged Communists followed and on Dec. 26, 1933, seven were condemned to death for engaging in subversive activities in the army. Eighteen others received prison terms of 5 to 15 years on the same charge.

The ousting of the Communists from the Sobranie stimulated rather than checked radical propaganda among the peasants. To prevent the growth of an educated proletariat, the government closed a number of secondary schools. University fees were raised and other restrictions imposed on higher education. The students voiced their opposition in strikes and demonstrations, while violent clashes between radical and Fascist students increased. Anxious to hold its position against both Communist and Fascist attacks, the government on Jan. 13, 1933, secured the passage of a bill granting amnesty to members of the Agrarian Cabinet of Premier Stambulisky, who fled the country following Stambulisky's overthrow in 1923.

The government faced another serious problem in the revival of the feud between the Mihailoffist and Protogueroffist factions of the Macedonian Revolutionary Organization. The conflict, marked by assassinations and street clashes in Sofia, became so acute early in 1933 that the government was urged to intervene. It hesitated to attack so thorny a problem, however. Even its half-hearted measures evoked the censure of a great Macedonian Congress, held at Gorna Djumaja in February, 1933. Meanwhile continued Macedonian raids over the Yugoslav border threatened to embroil the two governments.

On June 25, 1933, the Sofia authorities were finally moved to act by a series of assassinations. They declared martial law for one day and combed the capital with 7000 troops, searching for concealed arms. Large quantities of rifles, revolvers, bombs, hand grenades, and ammunition were confiscated and about 1200 persons were arrested. This move was not effective in checking factional strife. New clashes between the Macedonians caused the government to repeat its search on July 9.

FOREIGN RELATIONS. Bulgarian-Yugoslav relations were particularly strained early in 1933, due to Macedonian raids and other irritating incidents. However Bulgaria's need for foreign markets for her agricultural produce and Yugoslavia's fear of war with Italy or a combination of anti-treaty nations moved both countries to seek a

reconciliation. The Little Entente (q.v.) attempted to detach Bulgaria from Italy and bring it into their group. Both Yugoslavia and Rumania, as members of the Little Entente, lent a responsive ear to the Bulgarian request for less severe treatment of their Bulgarian minorities and for favorable commercial agreements. The Kings of the three countries played a leading rôle in the rapprochement of these former enemy countries and in the subsequent negotiations, which were under way at the close of the year.

The first move toward conciliation of Bulgaria and Yugoslavia was the meeting of King Boris and King Alexander at the Belgrade railway station Sept. 18, 1933, the first time they had met since the wars of 1913-18. In October King Alexander and Queen Marie of Yugoslavia visited Boris and his consort at Varna on the Black Sea and in December Boris and Giovanna paid a state visit to the Yugoslav rulers in Belgrade. On October 30, Boris and King Carol of Rumania conferred for seven hours on Carol's yacht in the neutral waters of the Danube. These moves on the part of Boris were received with hostility or scepticism by the Macedonian revolutionaries, the Liapcheff Democrats, the Smiloff Liberals and the Zankoff groups in Bulgaria. The visit of Boris in September to London and to Paris, where he conferred with high British and French officials, was interpreted as an effort to secure a foreign loan in return for a new Bulgarian orientation toward France and her eastern allies. He was said to have asked British advice on Bulgaria's foreign policy.

Premier Ismet Pasha and Foreign Minister Tewfik Rushdi Bey of Turkey visited Sofia September 21 and 22. The Bulgarians declined the Turkish invitation to adhere to the Turko-Greek treaty of friendship and nonaggression or to conclude a new Turko-Bulgarian pact modeled on the Turko-Greek treaty. The Bulgarian government's refusal was based on the contention that to do so would involve the abandonment of Bulgaria's claim to access to the Ægean Sea. Finding no closer tie possible, the two governments agreed to renew for five years the existing Turko-Bulgarian treaty, which was due to expire in March, 1934.

THE VATICAN'S PROTEST. A daughter, born to King Boris and Queen Giovanna on Jan. 13, 1933, immediately became the subject of a controversy between Boris and the Vatican. On January 15 the baby was baptized in the Greek Orthodox faith by the Metropolitan of Sofia. The Apostolic Delegate to Sofia immediately protested and on January 18 the Vatican published documents exchanged between the Pope and Queen Giovanna before the Pope gave his consent to her marriage. In the documents she promised that any children born of her union with Boris would be brought up in the Roman Catholic faith. The Bulgarian constitution provides that the King's eldest son must be Orthodox. Pope Pius XI in a consistory held March 13 deplored the baptism of the child in a non-Catholic faith, but exonerated the Queen on the ground that she had given the proceeding neither express nor tacit consent.

See YUGOSLAVIA, RUMANIA, TURKEY, ITALY, under *History*; LITTLE ENTENTE; UNITED STATES OF EUROPE.

BURIAT-MONGOL REPUBLIC. See SIBERIA.

BURK, WILLIAM HERBERT. An American clergyman and curator, died at Valley Forge, Pa., June 30, 1933. Born in Philadelphia, Pa., Apr. 23, 1867, he was graduated from the Uni-

versity of Pennsylvania in 1890 and from the Philadelphia Divinity School in 1893. Upon his ordination as a priest of the Protestant Episcopal Church in 1894, he was appointed rector of the Ascension Church, Gloucester City, N. J., and during the next three years served as assistant rector of St. John's Church, Norristown, Pa. While rector of All Saints Church at Norristown he became interested in the project of a national shrine at Valley Forge as a memorial to Washington's faith during the trying winter of 1777. In 1903 he founded there the Washington Memorial Chapel and in 1911 was chosen its rector. The Gothic chapel which was erected under his direction has long been known as "The Shrine of American Patriotism." There was established in connection with it the Valley Forge Museum of American History, of which he was curator.

Dr. Burk was also founder and president of the Valley Forge Historical Society, and a member of the Valley Forge Park Commission (1923-29). His more ambitious project of erecting at Valley Forge a \$10,000,000 Washington National Memorial Church, to be the Westminster Abbey of America did not materialize on account of the opposition of the Bishop of the Diocese. In 1928 he received the Philadelphia civic award of \$10,000 for service advancing the best interests of that city. Among his writings about the region were *The Shrine of Washington at Valley Forge* (1905) and *Historical and Topographical Guide to Valley Forge* (1906-29).

BURLESON, THE RT. REV. HUGH LATIMER. An American clergyman, died at Camp Remington, Black Hills, S. D., Aug. 1, 1933. He was born at Northfield, Minn., Apr. 25, 1865, and was graduated from Racine College in 1887 and from the General Theological Seminary in 1893. On his ordination to the Protestant Episcopal priesthood in 1894 he served until 1898 as rector of St. Mark's Church at Waupaca, Wis., and until 1900 as assistant at St. Luke's Church, Rochester, N. Y. During the seven years following he was dean of Gethsemane Cathedral in Fargo, N. D. In 1909 he was appointed secretary of the Domestic and Foreign Missionary Society of the Protestant Episcopal Church, serving also during 1913-16 as editor of *The Spirit of Missions*. Following his election as Missionary Bishop of South Dakota in 1916, he devoted his energies particularly to advancing the material and spiritual interests of the Sioux Indians of his district.

Bishop Burleson served after 1925 as assessor or assistant to the President Bishop of the Protestant Episcopal Church. In 1931 he resigned his see so as to devote his entire time to his administrative duties with the National Council in New York City. He wrote *The Conquest of the Continent* (1911) and *Our Church and Our Country* (1918).

BURMA. A province in the easterly part of British India bounded on the east by China, French Indo-China, and Siam. The total area is 262,732 square miles divided as follows: Burma proper, 184,102 square miles; the Shan States, 62,305 square miles; and 16,325 miles of unadministered territory. Population (1931 census), 14,667,146; Rangoon, the capital city, had 400,415 and the city of Mandalay had 147,932. In religion the census of 1931 showed that over 84 per cent of the people were Buddhists. The native races belong to the Mongolian group and they

have little in common with India proper in language, race, or religion. In 1931-32 there were 525,013 students in 7303 recognized schools and colleges, and 202,393 students in unrecognized institutions. There is a university at Rangoon; an agricultural college, a research institute, and an intermediate college, at Mandalay; a forestry school at Pyinmana; and a technical institute, and a veterinary school, at Insein near Rangoon.

PRODUCTION. At the 1931 census agricultural cultivation was recorded as being the principal occupation of 4,127,772 persons, and the subsidiary occupation of 118,725 persons. The production of rice and rice products for 1932-33 was 12,142 million lbs., and the surplus available for export in 1933 was estimated at 7728 million lbs. The area under rice in 1932-33 was estimated to be 9,622,400 acres. Paddy prices (unmilled rice) on March, 1933 reached the low of 55/56 rupees per 100 baskets. Reserved forest land at the end of the year 1930-31 amounted to 29,834 square miles from which the output of teak for the year totaled 309,279 tons. The petroleum production was 243,914,568 Imperial gallons. Mineral production in 1931 was tin, 2436 tons; tungsten ore, 940 tons; and silver, 5,900,400 ounces. Factories in 1931 numbered 947 and the total number of persons employed was 90,593.

COMMERCE. In 1932, exports to foreign countries were valued at 226,974,000 rupees, and to the rest of India were valued at 266,954,000 rupees; imports from foreign countries were valued at 111,136,000 rupees, and from the rest of India at 109,502,000 rupees (rupee averaged \$0.2635 for 1932).

FINANCE. Revenues for 1931-32 totaled 103,200,000 rupees; expenditures, 92,500,000 rupees. The provincial government made no contribution to the central government in 1931-32. From the forests the net surplus amounted to 5,000,000 rupees.

COMMUNICATIONS. Owing to the rugged nature of the eastern and northern frontiers, communication with India and the outside world is entirely by water. Most of Burma's imports and exports pass through Rangoon, situated about 20 miles from the sea on the Rangoon River. The great river Irrawaddy is navigable as far as Bhamo, 900 miles from the sea, and forms the main highway of commerce; the Chindwin, its tributary, is navigable for 300 miles. In 1931-32 there were 2057 miles of state-owned railway open to traffic. Surfaced roads extended 1982 miles; unsurfaced roads, 7696 miles.

GOVERNMENT. In 1923, Burma was constituted a Governor's Province under the government of India Act of 1919. There is an appointive executive council and a legislative assembly of 103 members, of whom 80 are elected and 23 nominated and *ex-officio*. The Shan States are administered by the local chiefs under the supervision of the Commissioner of the Federated Shan States. The government moves from Rangoon to Maymyo during the hot weather season. Governor in 1933, Sir H. L. Stephenson.

HISTORY. The Round-Table Conference on Burma, held in London from Nov. 27, 1931, to Jan. 12, 1932, had envisaged the separation of Burma from India and the granting to Burma of a Constitution extending greater autonomous powers. Progress toward this goal was delayed during 1932 and 1933 by the development of a movement in Burma opposing separation from India unless Burma first secured a greater degree of self-

government than that proposed by the British. The Anti-Separationist party urged Burma's entrance into the proposed Indian Federation, holding that Burma could then secede from the Federation with greater autonomous powers than those to be conferred by the proposed Constitution. British spokesmen made it plain that if Burma entered the Indian Federation it could not withdraw later. Nevertheless the Anti-Separationists won a majority in the provincial legislature in the elections of November, 1933.

In August, 1933, Sir Samuel Hoare, British Secretary of State for India, made public a new scheme of constitutional reform for Burma, separated from India. The proposals were modeled on the governmental setup of the Indian Federation as proposed by the Parliamentary Joint Select Committee on Indian Constitutional Reform. Early in December the Burmese delegates to the Joint Select Committee arrived in London to discuss the British government's constitutional proposals. These discussions continued to the end of the month. Dr. B. A. Maw, one of the Anti-Separationist leaders, told the committee that even if no right of secession from the Indian Federation were granted, his group would continue to demand federation with India. See INDIA under *History*.

BURNHAM, HARRY LAWSON WEBSTER LAWSON, 1st VISCOUNT. A British journalist, died July 20, 1933, in London, where he was born Dec. 18, 1862. Educated at Eton and Balliol College, Oxford, he became associated in London with his father, the 1st Baron Burnham (Edward Levy Lawson, 1833-1916), in the direction of the *Daily Telegraph*, acquired by his grandfather, J. M. Levy, from Colonel Sleigh in 1855. By a reduction in price to one penny and by giving attention to special correspondence in peace and war and to theatrical, musical, literary, and social news it became the favorite newspaper of the English middle class. He represented the *Telegraph* as special correspondent in South Africa during the Boer War and later in India. On his father's retirement in 1903 he succeeded to the sole direction of the paper, holding the proprietorship until its sale in 1927. In recognition of his service as chairman of the Newspaper Conference, responsible for the regulation of news during the World War, he was created a Companion of Honor of the British Empire. From 1916 to 1928 he was president of the Empire Press Union, presiding over the Imperial Press Conferences held in Ottawa, Canada, in 1920 and in Melbourne, Australia, in 1925.

Until he took his seat in the House of Lords in 1916 Lord Burnham represented, as a Unionist, various constituencies in the House of Commons. These included West St. Pancras (1885-92), East Gloucestershire (1893-95), and the Mile End division of Tower Hamlets (1905-06 and 1910-16). He was also a member of the London County Council from 1889 to 1892 and again from 1897 to 1904 and was mayor of Stepney during 1908-09. In the House of Lords he was a member of the committee which drafted the Electoral Reform Act of 1918 and of the committee which secured recognition of the powers of the Second Chamber. He also served as chairman of the Standing Joint Committees of Education Authorities and Teachers which drew up the new scales of teachers' salaries in Great Britain, known as the Burnham scales; deputy chairman of the Empire Parliamentary Association; and

member from 1927 to 1930 of the Indian Statutory Commission, appointed to investigate the workings of the Montagu-Chelmsford plan of local self-government in India.

An advocate of internationalism, Lord Burnham presided over the International Labor Conferences held in Geneva in 1921, 1922, and 1926 and over the Public Health Congresses held in Bordeaux, France, in 1924 and in Ghent, Belgium, in 1927. After 1929 he was president of Birkbeck College, University of London. Among the honors bestowed on him were Knight of the Grand Cross of St. Michael and St. George, Commander of the French Legion of Honor, Commander of the Order of Leopold of Belgium, and Grand Officer of the Star of Rumania. Also he received the Grand Cross of the Crown of Italy, Grand Cross of the Order of the Redeemer of Greece, and Grand Cross of the Order of the Star of the North of Sweden. He was created a Viscount in 1919.

BUSINESS IMPROVEMENT. See RAILWAYS.

BUSINESS REVIEW. In few recent years has the history of business been more chequered than during 1933. The opening of the twelve-month was marked by an extremely low morale, and low volume, of trade and of production, while employment was likewise at low ebb. This situation was fairly general throughout the world but was doubtless aggravated in the United States by the fact that the change of Administration and the uncertainty what the new management of Federal affairs would do tended to make the doubt regarding current conditions deeper than would otherwise have been the case. Banking conditions (see article on BANKS AND BANKING) had grown alarming, and had their reflex influence upon trade generally, particularly in view of the doubt and difficulty which seemed to attend upon the getting of loans at many institutions. A second phase of the situation opened toward the beginning of April, when a revival set in, both in Great Britain and in the United States, due largely to natural rebound from extreme depression accompanied in this country by the belief that what had been viewed as a "do-nothing policy" was over and that a more active management of affairs was about to inaugurate reforms. Hence a marked revival of activity, particularly in textiles and some other allied lines, previously distinctly depressed. This period of activity continued well into mid-summer. It was succeeded by a third period, lasting practically throughout the remainder of the year, in which gradual recession and reaction were characteristic. During its early months, the new National Administration had accepted two outstanding policies: (1) that of inflating the credit of the country and (it was feared by some) the currency system; and (2) that of reorganizing industry under what was termed the National recovery system, a plan providing for joint control of hours, wages, and output by committees representing labor and capital as well as the Government. The higher costs resulting from shortening of hours and raising of wages, were to be met by corresponding increases of price, but, the public proving unwilling to pay such advances, the higher charges tended to cut off the larger demand of the summer months and so to reduce the increase in manufacturing, although it continued on a level rather better than that established during the latter part of the preceding year. In-

flation, on the other hand, at first operated to create an optimistic state of mind, with many persons predicting great paper profits as the result of higher prices for goods which, it was asserted, would follow upon the depreciation of the dollar as that was brought about under the plans of the Administration. The outcome, in this regard, proved disappointing, for increases in prices, though substantial, proved unstable and inconstant, and in no case corresponding to expectation, while the stimulating effect of inflation upon investments proved limited, and was shortly lost—at least in very large measure. All in all, the business results of the year were thus far from meeting expectations, either on the part of politicians or of business men.

In the accompanying table, is reviewed the general composite business situation from the production standpoint, as exhibited by the Federal Reserve Board's Index.

INDEX OF INDUSTRIAL PRODUCTION

[Index numbers adjusted for seasonal variations; 1923—1925 average = 100]

Mos.	1925	1926	1927	1928	1929	1930	1931	1932	1933
Jan.	105	106	107	106	117	102	82	71	64
Feb.	105	107	109	109	117	110	86	71	64
Mar.	104	107	111	109	119	109	87	68	60
Apr.	103	107	109	109	122	110	89	64	67
May	103	106	111	109	123	106	89	61	80
June	102	107	108	108	126	99	84	59	91
July	103	107	106	109	124	89	83	56	96
Aug.	103	111	107	112	123	88	79	59	90
Sept.	102	112	105	114	121	91	76	68	84
Oct.	105	111	103	114	117	87	73	68	77
Nov.	106	108	99	112	106	84	72	65	72
Dec.	108	105	99	113	99	82	71	60	75
Annual index	104	108	106	111	119	96	81	64	76

DISTRIBUTION. Distribution, partly as a result of unemployment, partly owing to the belief that commodity prices, which had long moved steadily downward, would go to even lower depths, had operated severely against both retail and wholesale trade during the year 1932. At the beginning of 1933, many distributors were almost in despair, and there was a prevailing opinion that an advance of prices would immensely help toward rectifying the whole situation. The policies initiated by the Roosevelt Administration were confessedly based upon an intent to advance prices, while the inflation efforts of one kind and another, suggested or initiated by the incoming politicians, doubtless tended to further such an advance, at least psychologically. More influential still, was the fact that many commodities had probably reached the low point in their downward cyclical movement, and were about to react upward, owing to partial exhaustion of supplies, higher costs of production, or other factors. The early part of 1933, with its larger pay-rolls and greater employment opportunities, due to the broadening of manufacturing, distributed consuming power, and made the mid-year a time of distinct improvement in all sorts of business, particularly retail. Betterment of retail trade continued long after the reaction in manufacturing had again set in, and carried well up to the close of the calendar year. Foreign demand suffered for special reasons, elsewhere reviewed, but domestic distribution was improved, as may be seen from the department store indexes reflecting buying at selected establishments during the twelvemonth as shown in the accompanying table.

DEPARTMENT STORES—SALES, STOCKS

[Index numbers; 1923-1925 average = 100]

Month	Index of sales *			
	Adjusted for seasonal variation		Without seasonal adjustment	
	1932	1933	1932	1933
January	78	60	64	49
February	78	60	64	49
March	72	57	69	50
April	79	67	74	68
May	72	67	72	67
June	69	68	66	64
July	65	70	46	49
August	65	77	49	59
September	68	70	71	73
October	69	70	75	77
November	63	65	73	75
December	60	69	106	121
Year .....	..	..	69	67

Month	Index of stocks (end of month)			
	Adjusted for seasonal variation		Without seasonal adjustment	
	1932	1933	1932	1933
January	75	58	66	52
February	73	57	69	54
March	70	54	73	55
April	69	53	72	55
May	68	55	69	56
June	67	57	65	56
July	64	60	59	56
August	61	64	59	62
September	60	70	63	73
October	61	70	67	77
November	61	69	69	78
December	60	65	56	62
Year .....	..	..	66	61

* Based throughout on figures of daily average sales—with allowance for changes from month to month in number of Saturdays and for six national holidays: New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, and Christmas. Adjustment for seasonal variation makes allowance in March and April for the effects upon sales of changes in the date of Easter

COMMODITY PRICES. It was in the direction of improvement of commodity prices that much of the new policy of the Federal Administration was directed from the opening of the year, and it was in this particular field that most of the complaint of former years had been concentrated. Accordingly, the movement of prices during the year 1933 was under closest scrutiny from the very first. However, a comparison of indexes for the year as a whole, shows comparatively little net result. At wholesale, i.e. for staples such as wheat, corn, and cotton, the year at times showed striking movements but much of these advances was not able to be maintained save sporadically and in a tentative fashion so that the end of the period found them on the whole better off (about 10 points) than at the beginning but still far from the level of 1926. At retail the early prices of the year had not suffered so great a fall as the wholesale, and accordingly were less subject to rebound. The loud, and nation-wide, call for higher prices and the encouragement, as well as the impetus, given to price-raising by the National recovery programme brought a general effort to advance prices especially at retail, during the latter part of the year, but proved largely futile, owing to the fact that purchasing power had evidently not grown *pari passu*—in like proportion—with nominal charges, so that eventually many of the higher rates for goods had to be rescinded if sellers did not wish to be left overstocked. This, toward the close of the year actually brought about the anomalous condition that in some lines retail prices were lower than the corresponding wholesale

prices fixed for the same industries under Government supervision.

MOVEMENT OF WHOLESALE PRICES

Month	1927	1928	1929	1930	1931	1932	1933
January ..	97.0	96.3	97.2	93.0	77.0	67.3	61.0
February ..	96.0	96.4	96.7	92.0	75.5	66.3	60.0
March ..	95.0	96.0	92.5	91.0	74.5	66.0	60.0
April ..	94.0	97.4	96.8	91.0	73.3	65.5	60.0
May ..	94.0	98.6	95.8	89.0	71.3	64.4	63.0
June ..	94.0	97.6	96.4	87.0	70.0	63.9	65.0
July ..	94.0	98.3	98.0	84.0	70.0	64.5	69.0
August ..	95.0	99.8	97.7	84.0	70.2	65.2	70.0
September ..	97.0	100.1	97.5	84.0	69.1	65.3	71.0
October ..	97.0	97.8	96.3	83.0	68.4	64.4	71.0
November ..	96.7	96.7	94.4	80.4	68.3	63.9	*71.0
December ..	96.8	96.7	94.2	78.4	66.3	62.6	*71.0

* Preliminary

MANUFACTURING. The year 1933, as already incidentally indicated, was more than usually "spotty" in manufacturing, as the indexes for the successive months show. During the early months of the year, general depression and inactivity had caused extreme discouragement and pessimism among large classes of the population, and particularly among producers who found it necessary to have large turnover ("mass-production") in order to cover expenses. This period was followed by several months of good demand, large output, and rising profits, so that not a few enterprises were able, for the first time in some years, to show improvement in balance-sheet condition.

Improvement occurred in automobile manufacturing, and during the middle of the year in steel and allied industries. Farm implement makers found demand better than for some time past. Textile producers enjoyed something like a "boom." Industries which were already provided with large stocks of raw material acquired during the years of exceptionally low prices for basic commodities, found the situation particularly conducive to growth of profits. There was a general tendency toward expansion, in the belief that something like the business conditions of 1928 was about to return. This confidence was rudely broken in upon by the large advances in wages and other costs, due to the recovery administration's programme, and the increases in price of imported materials growing out of the high cost of foreign currencies (in dollars) caused by depreciation of the dollar. There was a sharp reduction of productive activity, and steel, which had shown a large increase in occupied capacity, fell to 25 per cent during November. The following table, reproducing the unfilled orders of the United States Steel Corporation reflects the dif-

UNFILLED ORDERS

[U. S. Steel Corporation]

Month	Tons 1933	Tons 1932	Tons 1931
January	1,893,644	2,648,150	4,132,351
February	1,854,200	2,545,629	3,965,194
March	1,841,002	2,472,413	3,995,380
April	1,864,574	2,326,926	3,397,729
May	1,929,815	2,177,162	3,620,452
June	2,106,671	2,034,768	3,479,323
July	2,020,125	1,966,302	3,404,816
August	1,890,444	1,969,595	3,169,457
September	1,985,090	1,985,090	3,144,833
October	1,997,040	1,997,040	3,119,432
November	1,968,301	1,968,301	2,993,891
December	1,968,140	1,968,140	2,795,353

The low point reached by Steel's backlog earlier in the year was at the end of March when only 1,841,002 tons of unfilled orders remained on the books of the corporation. This figure represented at the time the lowest reserve of orders since the corporation was founded in 1901.

ferent stages of development during the year. At the opening of November, the Steel Corporation announced the termination of its old practice of making known these orders monthly, notwithstanding its long standing and the importance generally ascribed to the orders as a business index. In place of such figures the Steel Corporation proposed to substitute a regular report of "occupied capacity."

The accompanying tabulation shows the monthly shipments of the United States Steel Corporation since the beginning of 1930.

MONTHLY SHIPMENTS, 1930-1933
[U. S. Steel Corporation]

Month	Tons 1933	Tons 1932	Tons 1931	Tons 1930
January ..	285,138	426,271	800,031	1,104,168
February ..	275,929	413,001	762,522	1,141,912
March	256,793	388,579	907,251	1,240,171
April	335,321	395,091	878,558	1,188,456
May	455,302	338,202	764,178	1,203,916
June	603,937	324,746	653,104	984,739
July	701,322	272,448	593,900	946,745
August	668,155	291,688	573,372	947,402
September ..	575,161	316,019	486,928	867,282
October	572,897	310,007	476,032	784,648
November ..	430,358	275,594	435,697	676,016
December ..	600,639	227,576	351,211	579,098
Less yearly adjustment		5,160	6,040	40,259
Total ...	5,760,952	3,974,062	7,676,744	11,624,294

AGRICULTURE. The farmer who, for years past, had been the constant source of solicitude for every National Administration had at the close of 1932, reached a condition which was in many respects desperate. Not only was he suffering from continuously low and falling prices, but he was also finding his current money return below costs of production as well as often insufficient to meet his current necessary outlays for actual expenses and for local taxation to say nothing of interest on borrowings. This situation was most prevalent in the twelve north central States where the findings of the Department of Agriculture had shown that about 60 per cent of the farm mortgages of the nation were concentrated, but it fairly reflected real trouble in many other regions. The new Administration accordingly set itself to relieve the farmer, not only by artificially advancing his prices, but also by making arrangements for a forced reduction of acreage, whereby the farmer in certain staple industries was to be paid for acreage left untilled. Compensation was to be made out of taxes levied on consumers of these products, and further relief was provided by plans for mortgage assistance and refunding, with Government aid. Loans on cotton and wheat at fixed artificial values were provided. Agriculturally, the year was productive, and in spite of all the Government could do in cutting acreage—at a cost of \$113,000,000 in cotton alone—cotton turned out 13,177,000 bales or about 175,000 more than the year before, while wheat which was less favored by climatic conditions, yielded a total of 514,000,000 bushels. Animal husbandry, though aided by Government purchases, was also productive and prices continued low while for wheat and cotton advances were sporadic and insufficient, wheat closing the year at \$1.02½ (No. 2, Red) per bushel in New York and cotton at 10.3 cents per lb. The accompanying table affords a general view of the year's yields.

U. S. AGRICULTURAL PRODUCTION, 1933

Product	Production	Value
Corn .....bushels	2,330,237,000	\$917,605,000
Wheat .....do..	527,418,000	357,525,000
Oats .....do..	722,485,000	219,520,000
Barley .....do..	156,104,000	63,486,000
Apples .....do..	143,827,000	97,949,000
Potatoes (white) ..do..	317,143,000	222,667,000
Cottonseed .....tons.	5,859,000	79,532,000
Hay .....do..	74,485,000	578,558,000
Sugar beets .....do..	11,085,000	58,988,000
Tobacco .. ..pounds	1,396,174,000	180,647,000
Cotton .....bales.	13,177,000	617,716,000

GENERAL BUSINESS. Starting with a low level of industrial earnings and with a record of widespread suspension and reduction of dividends, the business community had a favorable basis of annual comparison. With this in mind, the results of the year 1933 must be regarded as comparatively successful. Many concerns were able during the active mid-year period to pull themselves "out of the red"; and, in some cases, to restore surpluses or resume dividends. In other cases, the desire to conserve cash led enterprises to refrain from larger distributions to stockholders, but they were able to issue much more favorable earnings reports. These conditions partly accounted for the upswing in the stock market and were the more encouraging in view of the fact that foreign trade continued its decline early throughout the year. Public utilities, including the railroads, telegraphs, and telephone companies, were able to improve their showing in a material degree. Manufacturing enterprises, in many cases, distinctly improved their balance-sheet position. These gains, however, were largely concentrated in the second and third quarters of the year, and recession occurred during the final quarter. Possibly, the most encouraging element in the case during the bulk of the year was the fact that not a few industries were able, by economies and elimination of waste, to adjust themselves to what seemed to be the more or less permanent conditions growing out of the changes in industry resulting from the depression. Unfortunately many of the latter type of gains had to be sacrificed under the new National recovery requirements.

BUSINESS FAILURES. Business failures, like other indications of commercial condition, were modified by extraneous influences which gave rise to new alignments. As during 1932, the Government was extremely desirous to reduce the severity and number of business failures, and it, early in the new Administration, sought additional measures for the attainment of that end. The most outstanding was the widespread application of the new National bankruptcy measure adopted in 1932 and now administered with great leniency. Banks compelled to close during the National bank holiday were usually placed in the hands of conservators instead of in those of receivers, while railroads were, in some cases, treated in a similar way and in other cases, actual failure, when unavoidable, was accompanied by very lenient conditions. The result was that in not a few cases, creditors who would otherwise have insisted upon receiverships or bankruptcy in given instances, were disposed to refrain from taking the steps necessary to bring about either of these steps and permitted compositions or adjustments with creditors to be made in order to protect their own interests at least to some small extent. Accordingly, actual

statistics of failures for 1933 were not particularly enlightening as contrasted with former years. They are, however, given in the accompanying table following "Dun and Bradstreet's, Inc." annual compilations which have superseded those of "Bradstreet's" through consolidation of the two sources. The figures would in ordinary circumstances for reasons just reviewed, have been much larger, as well as differently distributed, and conclusions based upon them must therefore be received with reservations.

TOTAL NUMBER OF COMMERCIAL FAILURES IN THE UNITED STATES, WITH LIABILITIES, FOR FOURTEEN YEARS, AS REPORTED TO DUN AND BRADSTREET'S, INC.

Year	Number	Liabilities	Average liabilities
1933	20,307	\$502,830,584	\$24,761
1932	31,822	928,312,517	29,172
1931	28,285	736,309,102	26,032
1930	26,355	668,283,842	25,357
1929	22,909	483,250,196	21,094
1928	23,842	489,559,624	20,533
1927	23,146	520,104,268	22,471
1926	21,773	409,232,278	18,795
1925	21,214	443,744,272	20,918
1924	20,015	543,225,449	26,351
1923	18,718	539,386,806	28,818
1922	23,676	623,896,251	26,351
1921	19,652	627,401,883	31,926
1920	8,881	295,121,805	33,230

The total indebtedness involved in insolvencies for 1933 was \$502,830,584 which was 84.3 per cent below the total of \$928,312,517 reported for 1932. Of the 13 years, 1921-33, in which insolvencies have been high and liabilities heavy, there were 8 in which the amount of indebtedness reported for each year was in excess of that shown for 1933.

BUSTAMANTE, DANIEL SÁNCHEZ DE. A Bolivian statesman, died in Buenos Aires, Argentina, Aug. 5, 1933. Born at La Paz, Bolivia, in 1871, he received his education at the university there and was admitted to the bar in 1890. The following year he entered public life as chief clerk in the Department of the Treasury. He later became a member of the Chamber of Deputies (1894-1900), assistant secretary of government (1901), and professor of law at the Universities of Sucre and La Paz. Commissioned by the government in 1904 to study the educational systems of European countries, he was appointed in 1908 Minister of Public Instruction in the cabinet of President Montes and was largely responsible for the passage in Congress of the plan by which the educational system of Bolivia was reorganized. He founded also the first normal school at Sucre and the national school of commerce at La Paz.

In 1909 Dr. Bustamante was appointed Minister of Foreign Affairs in the cabinet of President Villazón and played a prominent part in the boundary settlement with Peru. After again holding the portfolio of Public Instruction in President Guerra's cabinet (1918-20), he served as Minister to Chile, devoting his energies in particular to obtaining an outlet to the sea for Bolivia. During 1927-28 he attended as a member of the joint commission the conferences held in Buenos Aires in an attempted settlement of the Chaco dispute with Paraguay. On the election of Dr. Daniel Salamanca as president in 1931 he was appointed for a second time to the post of Minister of Foreign Affairs but was named later in that year Minister to Argentina. He served in the latter capacity until a few months before his death. Among his works were: *Principios de*

Derecho (1901); *Opiniones y discursos* (1904); *Los conflictos internacionales y el Panamericanismo* (1917); and *Bolivia, su estructura y sus derechos en el Pacífico* (1919).

BUTTER. See DAIRYING.

BYRD, REAR ADMIRAL RICHARD E. See POLAR RESEARCH.

CABINET, UNITED STATES. See UNITED STATES under Administration.

CALIFORNIA. POPULATION. The population of the State on Apr. 1, 1930, was 5,677,251 (Fifteenth Census); in 1920 it was 3,426,861; in 1933 (Federal estimate), 6,002,000. Sacramento, the capital, had (1930) 93,750 inhabitants; Los Angeles, 1,238,048; San Francisco, 635,394.

AGRICULTURE. The following table shows the acreage, production, and value of the principal crops for 1933 and 1932:

Crop	Year	Acreage	Prod. Bu.	Value
Oranges . . .	1933	32,547,000 ^a	32,547,000 ^a	\$34,174,000
	1932	33,827,000 ^a	33,827,000 ^a	\$3,827,000
Grapes	1933	1,559,000 ^b	1,559,000 ^b	25,000,000
	1932	1,926,000 ^b	1,926,000 ^b	20,765,000
Hay (tame) . .	1933	1,720,000	3,997,000 ^b	\$1,102,000
	1932	1,846,000	4,520,000 ^b	\$3,448,000
Barley	1933	934,000	24,471,000	10,278,000
	1932	1,246,000	39,249,000	9,812,000
Dry beans . . .	1933	275,000	3,520,000 ^c	12,320,000
	1932	225,000	2,484,000 ^c	7,079,000
Sugar beets . .	1933	108,000	1,568,000 ^b	5,288,000
	1932	104,000	1,288,000 ^b	8,528,000
Wheat	1933	655,000	12,118,000	8,361,000
	1932	595,000	11,126,000	6,008,000
Lemons	1933	6,800,000 ^a	6,800,000 ^a	14,280,000
	1932	6,715,000 ^a	6,715,000 ^a	14,102,000
Peaches	1933	22,752,000	22,752,000	9,889,000
	1932	22,794,000	22,794,000	4,007,000
Cotton	1933	208,000	216,000 ^d	11,124,000
	1932	123,000	129,000 ^d	4,386,000
Rice	1933	106,000	6,042,000	4,471,000
	1932	110,000	7,040,000	2,534,000
Potatoes	1933	33,000	7,920,000	5,623,000
	1932	33,000	6,369,000	3,567,000
Corn	1933	100,000	2,800,000	1,736,000
	1932	95,000	2,660,000	1,250,000

^a Boxes. ^b Tons. ^c 100-lb. bags. ^d Bales.

MINERAL PRODUCTION. The State continued in 1932 to produce about one-fifth of the country's output of petroleum. In addition to the minor quantities diverted to other uses, there were sent to the stills, for refining, 164,737,000 barrels of petroleum (1932), as against 173,008,000 for 1931. The position of the petroleum industry was improved by an increase of prices for most of the light grades by about one-third on June 26, 1932. The whole production of petroleum in California, for 1932, was stated as 178,128,000 barrels, which was 10,702,000 less than that for 1931. The chief producing fields, named in the order of quantity produced, were the Long Beach, the Santa Fe Springs, the Kettleman Hills, and the Midway-sunset. The Kettleman Hills field was held down by rigid proration. Comparatively little new drilling was done in 1932.

Some 35 fields in the State yielded, in 1932, 276,877,100 M cu. ft. of natural gas, of which more than half was sold to utility companies, etc. The quantity of natural gas allowed to escape into the air, and thus be wasted, was greatly reduced, to 17,510,900 M cu. ft. for 1932, as against 247,477,000 M for 1929; the improvement resulted from extension of facilities for distribution. The production of gasoline from natural gas attained 545,000,000 gallons for 1932, as against 680,300,000 for 1931. The decline was attributed, in large part, to proration in fields producing both petroleum and natural gas.

The value of the gold, silver, copper, lead, and zinc mined in 1933 was estimated to be \$12,473,351. In this estimate, gold was still figured at the old statutory value of \$20.67 an ounce; accordingly the estimated 592,400 ounces of the year's gold product accounted for \$12,245,995 of the above value. As the government, over a part of the year, paid prices above the old statutory figure, the actual receipts for gold mined in 1933 were estimated to exceed the total value at the old statutory price by \$1,971,600.

The value of the 1932 production of gold (\$11,774,677) furnished all but 2 per cent of the value of all metals mined in California in 1932. Small-scale mining among unemployed individuals supposed to number 30,000 brought in about \$493,000 in gold during 1932 in lots averaging \$41. It did not greatly augment the State's total production of gold, but added something to the income of many people lacking regular support.

FINANCE. State expenditures in the year ended June 30, 1932, as reported by the U. S. Department of Commerce, were: for maintaining and operating governmental departments \$84,755,299 (of which \$29,548,945 was for local education); for conducting public-service enterprises, \$1,840,802; for interest on debt, \$5,927,252; for permanent improvements, \$41,748,893; total, \$134,272,246 (of which \$35,659,186 was for highways, \$7,931,450 being for maintenance and \$27,727,716 for construction). Revenues were \$118,896,700. Of these, property and special taxes furnished 8.5 per cent; departmental earnings and compensation to the State for officers' services, 5.6; sale of licenses, 67.1 (in which was included a gasoline sale tax that produced \$26,734,178). Funded debt outstanding on June 30, 1932, totaled \$143,890,844, of which \$57,625,000 was for highways. Net of sinking-fund assets, the debt was \$142,444,984. The State levied in the year no general ad-valorem taxes on property.

EDUCATION. The number of persons of school age in the State, as of October, 1930, the latest time of available data thereon, was reported as 1,383,650. It exceeded the number of enrolled pupils for the academic year 1932-33, which was 1,345,889. Of those enrolled, 74,447 were in kindergartens; 769,940 in elementary schools (grades 1-8, inclusive, in elementary schools and grades 7-8 in junior high schools), and 501,502 in high schools (grades 9-10 in junior high and grades 9-14 in high schools). During the school year 1932-33, the amount of money expended for education in elementary and high school districts was \$116,819,686. This was a considerable reduction from the year 1931-32. During the school year, 1931-32, the average salary paid to full-time teachers in kindergartens was \$1347; in elementary schools, \$1825; in junior high schools, \$2400; in high schools, \$2499. These are the latest figures available.

LEGISLATION. The Legislature, in regular session, passed a measure calling for the election of 22 delegates (20 by Congress districts and 2 at large) to hold a convention and act for the State with regard to ratifying the proposed repeal of the Federal Eighteenth Amendment. By its own action the Legislature gave the State's ratification to the proposed Federal child-labor amendment.

Among measures of relief for the inhabitants of the State the most conspicuous enactment was a moratorium on the payment of the installment due April 20 on property taxes, which was

postponed until June 20; exception was made of San Francisco, which owing to a new charter requiring the city to run on a cash basis was allowed to collect half of the delayed installment on April 20 and the rest before June 20. Another measure authorized irrigation districts to waive temporarily all taxes for revenue to serve their bonds. At the same time, State taxation was increased in divers ways. A constitutional amendment was submitted to popular vote; it permitted the transfer of non-operating properties of public utilities to local assessment rolls and empowered the Legislature to tax realty directly in the proportion of one-fourth of State appropriations. A sale tax of $2\frac{1}{2}$ per cent was enacted. An income-tax measure was passed but vetoed. The franchise tax on corporations was lowered, but the allowance made thereon for property taxes paid was abolished. Business trusts of the Massachusetts type, doing business in the State in the manner of corporations, were made subject to the franchise tax. See *Political and Other Events* below.

A State constitutional amendment was proposed, to permit development of State water resources at an expenditure of \$160,000,000 for the initial projects, for which the money was to be raised by bonds. Authority was granted to create municipal utility districts. In the realm of industrial legislation were passed a tax of 8 cents a pound on oleomargarine, a prohibition of the use of foreign materials in contracts for public works, establishment of a 5-day week for State employment, so far as practicable in the Governor's judgment, invalidation of "yellow dog" labor contracts (binding the worker not to enter a union), and provision for housing the poor by means of limited-dividend corporations and "community land chests." The penalty for kidnapers who killed or mutilated victims was made death or life imprisonment without benefit of parole. Advertising structures near highways outside of cities were subjected to State regulation.

A special session was held in July to balance the State budget, partly by use of tax powers ratified by the popular vote of June 27.

POLITICAL AND OTHER EVENTS. Exchanges and banks were closed on March 2 by proclamation of a period of legal holidays by Governor Rolph. An election was held on June 27, at which delegates favoring the repeal of the Federal Eighteenth Amendment were chosen to constitute a State convention, by a popular vote of about 3 to 1. A body advocating prohibition had previously sought without success to prevent the popular vote by court proceedings. At the same election the people voted the establishment of the parimutuel system of betting at racetracks, thus adopting it over Governor Rolph's previous veto of a Legislative measure. The constitutional amendments as to taxation, submitted by the Legislature, were adopted.

Los Angeles and neighboring communities, especially Long Beach, sustained serious damage and the loss of 60 or more lives in a series of earthquake shocks on the evening of March 10. Work was begun on May 24 on the Los Angeles aqueduct, designed to bring water to the city from the Boulder Dam on the Colorado River, some 300 miles away, at a cost of \$300,000,000. The city's prohibition ordinance was repealed by popular vote on May 3. A loan of \$22,800,000 from the Reconstruction Finance Corporation

to the water and power department of Los Angeles was authorized, for work in connection with the Boulder Dam project.

Thomas J. Mooney, in prison on conviction of complicity in the bomb explosion on the occasion of the preparedness-day parade in San Francisco in 1916, and the subject of a long agitation for his release, was admitted to trial at San Francisco, not on the original charge, but on a second indictment that had never been tried. He was acquitted by a jury on May 24, in a directed verdict, the prosecution having declined to present evidence. He was, however, returned to San Quentin prison. The area of Death Valley, including 1,601,800 acres, was made a National monument by Presidential proclamation in February.

A mob at San Jose battered its way into the jail on November 26, seized two kidnapers of whom one had confessed to slaying the victim, and hanged both men in the neighboring park. Governor Rolph aroused criticism from many sections of the nation by a statement praising the mob's act. See the article LYNCHINGS.

OFFICERS. The chief officers of the State, serving in 1933, were: Governor, James Rolph, Jr.; Lieutenant-Governor, Frank F. Merriam; Secretary of State, Frank C. Jordan; Treasurer, Charles G. Johnson; Comptroller, Ray L. Riley; Attorney General, U. S. Webb; Director of the Department of Agriculture, Dudley Moulton; Superintendent of Public Instruction, Vierling Kersey.

Judiciary. Supreme Court: Chief Justice, William H. Waste; Associate Justices, William H. Langdon, John W. Preston, Jesse W. Curtis, Emmett Seawell, John W. Shenk, Ira F. Thompson.

CALIFORNIA, UNIVERSITY OF. A coeducational institution of higher learning with headquarters at Berkeley, Calif., founded in 1868. Branches are found in various parts of the State. At Mt. Hamilton is the Lick Observatory; at San Francisco, the California School of Fine Arts, Hastings College of the Law medical school, the George Williams Hooper Foundation for Medical Research, college of dentistry, California College of Pharmacy; at Los Angeles, the University of California at Los Angeles, branch of the college of agriculture in southern California, Los Angeles medical department; at Davis, branch of the college of agriculture; at Riverside, branch of the college of agriculture in southern California, including the citrus experiment station and graduate school of tropical agriculture; at La Jolla, the Scripps Institution of Oceanography.

The total number of resident students in the academic and professional departments, fall and spring sessions, 1932-33, was 21,305, of whom 11,768 were men and 9537 were women. At Berkeley 13,088 students were enrolled; at Los Angeles, 7168. The enrollment in the university extension division in 1932-33 was 24,013 in classes and correspondence courses. The 1933 summer session enrollments (Berkeley and Los Angeles) totaled 4151. At the beginning of the autumn term there were approximately 2000 members on the regular teaching staff and 800 on the extension staffs. The total income for 1932-33 was \$14,203,000, including gifts totaling \$63,000 for permanent improvements, \$580,000 for endowments, and \$350,000 for current use. Total assets were listed at \$72,745,000, including \$48,289,000 in real estate, improvements,

and equipment and \$18,111,000 in endowment and trust funds. The libraries contained approximately 1,300,000 volumes. President, Robert Gordon Sproul, LL.D.

CALMETTE, kâl'mêt', LEON CHARLES ALBERT. A French bacteriologist and sanitarian, died in Paris, Oct. 29, 1933. Born in Nice, July 12, 1863, he attended the lycées of Clermont-Ferrand in Brest and Saint-Louis in Paris and was graduated in medicine from the University of Paris in 1886. After spending several years as surgeon in the French Navy he was appointed in 1889 the first director of the Pasteur Institute at Saigon, French Indo-China, where he became famous for his discovery of a cobra antivenin. In 1893 he was recalled to France as director of the Pasteur Institute at Lille, serving also as professor of bacteriology and hygiene at Lille University. In 1916 when Émile Roux was promoted to the directorship of the Pasteur Institute in Paris he was made assistant director.

After the World War Dr. Calmette was active in tuberculosis prevention through the immunizing of infants born to tuberculous parents by vaccination with attenuated tubercle bacilli, developing thereby a higher degree of resistance to the disease in later life. His publications included *Recherches sur l'épuration biologique des eaux d'égout* (8 vols., 1905-14); *Les venins, les animaux venimeux et la sérothérapie antivenimeuse* (1907); *Recherches expérimentales sur la tuberculose* (1907-14); *L'infection bacillaire et la tuberculose chez l'homme et les animaux* (1920); and *La vaccination préventive contre la tuberculose* (1927).

CAMBODIA, kâm-bô'dî-â. A state under the protection of France, and one of the five states constituting French Indo-China (q.v.). Executive authority is exercised by the French Resident-Superior, who acts through King Sisowathmonivong (crowned July 22, 1928). Resident-Superior in 1933, F. Lavit.

CAMERAS. See PHOTOGRAPHY.

CAMEROON, kâm-êr-ôon', or CAMEROONS. The former German protectorate of Kamerun in West Africa on the Gulf of Guinea, between Nigeria and French Equatorial Africa. Occupied by British and French troops in February, 1919, it was divided between the two nations by an agreement signed in London, July 10, 1919. In 1922 the territories were confirmed as British and French mandates by the Council of the League of Nations.

FRENCH CAMEROON. The area mandated to France amounted to 166,489 square miles, not including the 107,270 square miles ceded to Germany in 1911 and now incorporated in French Equatorial Africa. The population of French Cameroon on July 1, 1931 was estimated at 2,192,163 including 2163 Europeans. The chief towns are Yaunde, the capital; and Duala, the largest town and chief seaport. In 1930 there were 89 government schools with an attendance of 6244 and 51 private schools with 7059 students. Tobacco, almonds, palm oil, timber, rubber, cacao, and ivory are the chief products. The exports in 1931 were valued at 82,133,000 francs and imports, 104,368,000 francs (franc at par equals \$0.0392). General budget balanced at 83,263,900 francs in 1931; special railway budget, 28,500,000 francs; special medical budget, 15,917,149 francs. Vessels entered the ports of Duala and Kibra in 1931 totaled 436 and 106 respectively. There are 292 miles of railway, and

2777 miles of roadway. Commissioner in 1933, M. Marchand.

BRITISH CAMEROONS. The territory mandated to Great Britain has an area of 36,236 square miles and extends along the Nigerian border from the sea to Lake Chad. Population (1931 census), 773,840. The chief products are palm kernels, palm oil, bananas, rubber, and cacao. Imports in 1931 were valued at £107,767; exports, £155,432. Government expenditure for 1930-31 was £149,952; revenue was £81,945. During 1931 a total of 118 vessels aggregating 203,744 tons entered and cleared the port of Victoria, and 102 vessels totaling 70,329 tons entered the port of Tiko. The chief town is Buea with about 3000 inhabitants. The Governor of Nigeria administers the territory. See NIGERIA.

CAMPBELL, ADMIRAL SIR HENRY HERVEY. A British naval officer, died in London, Feb. 12, 1933. Born Feb. 27, 1865, he served as a midshipman on the *Inconstant* during the Egyptian War of 1882. Following his transfer to the gunnery division six years later, he became commander of the *Crescent* in 1898 and captain of the vessel in 1902. He was in command during 1905-06 of the *Terrible*, escort to the *Renown* on which the Prince and Princess of Wales, now the King and Queen of England, sailed to India. After serving for three years as assistant director of naval intelligence he was commissioned in 1909 captain of the *Hindustan* and in 1911 acted as first governor to the present Prince of Wales during the Prince's service as midshipman on board that vessel. The following year he was made rear admiral.

On the mobilization of the British fleet at the outbreak of the World War Sir Henry was appointed commander of a cruiser squadron to protect the Belgian coast and to maintain a general command of the southern waters of the North Sea. This squadron formed part of the supporting forces during the engagement with the German fleet at Helgoland, Aug. 28, 1914. He was rear admiral of the home fleets at The Nore until 1917 when he was assigned to the Admiralty for special service in connection with the protection of trade, being largely responsible for the arming of merchant vessels against the submarine menace and for perfecting the method of protecting seaborne commerce, especially in keeping open routes for food ships. He was advanced to admiral on the retired list in 1921. Among the honors conferred on him were Companion of the Bath (1917) and Knight Commander of the Royal Victorian Order (1930). He was also a groom-in-waiting to the King.

CAMP FIRE GIRLS OF AMERICA. An organization primarily for the adolescent girl, whose object is to "seek beauty, give service, pursue knowledge, be trustworthy, hold on to health, glorify work, and be happy." It was organized nationally in 1911 and chartered in 1912, with Dr. Luther H. Gulick as president. The purpose of its activities is not the attainment of particular skill in any of the seven crafts: Home, health, hand, camp, nature lore, business, and citizenship, but the development, and happiness through development, of the individual girl, who discovers new interests and new talents and at the same time enjoys the companionship of other girls.

Each year the organization launches a special project. "Making the Most of Me" was the theme of the 1933 project, which involved health, ap-

pearance, and behavior. Girls became interested in the relation of good health to attractiveness, learned the principles of costume design, and came to realize the part manners play in making an agreeable personality.

The membership of the organization in 1932 was 231,200, including 173,165 Camp Fire Girls and Guardians and 33,000 Blue Birds, the youngest members. There were held, during the school year of 1931-32 and the summer of 1932, 180 training courses which were attended by 4094 leaders and college students who desired to become leaders. During the summer of 1932, 13,425 Camp Fire Girls attended 100 Class A camps (camps having an attendance of 25 or more), while more than 6000 others went camping in small groups with their leaders. The organization publishes *The Guardian*, a programme resource for leaders.

At the meeting of the board of directors held in New York City Oct. 7, 1933, the following officers were elected: Mrs. Lida Foote Tarr, president; Miss Florence Hughes, first vice-president; Dr. Joseph E. Raycroft, second vice-president; Dr. Jay B. Nash, third vice-president; Dr. Myron T. Scudder, treasurer; and Lester F. Scott, secretary and national executive. National headquarters are at 41 Union Square, New York City.

CANADA. Dominion of the British Commonwealth, comprising nine Provinces and two Territories. Capital, Ottawa.

AREA AND POPULATION. The land area, the census population of June 1, 1931, and the estimated population of 1932 are shown in the accompanying table. The total water area is about 180,035 square miles.

AREA AND POPULATION OF CANADA

Province	Land area, sq. miles	Population	
		1931	1932
Prince Edward Island	2,184	88,038	88,000
Nova Scotia . . .	20,743	512,846	513,000
New Brunswick . .	27,710	408,219	409,000
Quebec	523,534	2,874,255	2,904,000
Ontario	363,282	3,431,683	3,459,000
Manitoba	219,723	700,139	705,000
Saskatchewan . . .	237,975	921,785	971,000
Alberta	248,800	731,605	740,000
British Columbia .	349,970	694,263	704,000
Yukon Territory . .	205,346	4,230	4,000
Northwest Territories	1,258,217	9,723	9,000
Total	3,510,008	10,376,786	10,506,000

The total population at the 1921 census was 8,787,949. Among the nine Provinces, the density of population is greatest in Prince Edward Island and least in British Columbia. Of the 1931 total, 5,374,541 were males and 5,002,245 females. Racial origins of the chief national groups in the population in 1931 were: English, 2,741,419; Irish, 1,230,808; Scottish, 1,346,350; total British, 5,381,071; French, 2,927,990; German, 473,544. Persons of British stock comprised 51.86 per cent of the total 1931 population; French, 28.22 per cent; other European races, 17.59 per cent. There were 5979 Eskimos, 122,911 Indians, and 19,456 Negroes. Roman Catholics in 1931 numbered 4,285,388 (including 186,654 Greek Catholics); United (Protestant) Church of Canada, 2,017,375; Anglicans, 1,635,615; Presbyterians, 870,728; Baptists, 443,341; Lutherans, 394,194. Foreign born residents of Canada in 1931 numbered 1,122,695; unnaturalized aliens, 507,724. In the same year 41.73 per cent of the population resided in places of over 5000

inhabitants, as compared with 52.3 per cent in the same category in the United States.

Populations of cities having over 50,000 inhabitants in 1931, with the 1921 figures in parentheses, were: Montreal, 818,577 (618,500); Toronto, 631,207 (521,893); Vancouver, 246,593 (163,220); Winnipeg, 218,785 (179,087); Hamilton, 155,547 (114,151); Quebec, 130,594 (95,193); Ottawa, 126,872 (107,843); Calgary, 83,761 (63,305); Edmonton, 79,197 (58,821); London, 71,148 (60,959); Windsor, 63,107 (38,591); Verdun, 60,745 (25,001); Halifax, 59,275 (58,372); Regina, 53,209 (34,432).

Exclusive of the Territories, there were in 1931, 240,108 living births, 104,449 deaths and 66,578 marriages. The birth rate per 1000 of population ranged from 14.9 for British Columbia to 29.1 for Quebec. The number of immigrants entering Canada during 1932 was 20,591, of whom 13,709 came from the United States, 3327 from Great Britain and Ireland, and 2640 from other countries.

EDUCATION. According to the 1931 census, 7.18 per cent of the population of five years of age and over could neither read nor write, as compared with 9.25 per cent in 1921. The population of school age (5-19 years) in 1931 was 3,246,391, of whom 2,542,747 were enrolled in educational institutions. Of these, 2,137,810 were enrolled in about 30,500 provincially-controlled ordinary day schools, 95,083 were in private ordinary day schools, and 77,618 were in colleges and universities. There were six Provincial universities in Canada and 17 private institutions of university grade. The expenditure on schools, colleges, and universities in 1931 was \$178,701,507. Also see article on each Province.

AGRICULTURE. Although the value of manufactured products is greater, agriculture is of primary importance to Canada. The chief agricultural industries are grain growing, dairying, fruit culture, stock raising, and fur farming. The gross agricultural wealth in 1932 was officially estimated at \$5,069,930,000 (\$5,696,972,000 in 1931). Farm lands were valued at \$1,948,070,000; buildings at \$1,342,924,000; implements and machinery at \$650,664,000; livestock at \$375,722,000; poultry at \$34,138,000; animals on fur farms at \$6,514,000; and agricultural production at \$711,898,000. There were 728,444 occupied farms in 1931; about 369,000,000 acres were estimated to be suitable for farming.

Due to falling prices and reduced crops, the value of Canadian agricultural production showed a steady decline from the peak of \$1,806,020,000 in 1928 to \$880,241,000 in 1931 and \$711,898,000 in 1932. Field crops from 59,633,500 acres in 1932 were valued at \$416,586,900, as against crops valued at \$432,199,400 from 58,074,905 acres in 1931. The remainder of the 1932 agricultural revenue was derived from: Dairy products, \$131,623,000; farm animals, \$69,033,000; poultry and eggs, \$48,824,000; fruits and vegetables, \$30,245,000; tobacco, \$6,088,000; maple products, \$2,747,000; fur farming, \$2,732,000; honey, \$1,651,000; wool, \$1,093,000; clover and grass seed, \$962,000; and flax fibre, \$170,000. Livestock in 1932 included about 3,088,630 horses, 3,624,600 milch cows, 4,886,500 other cattle, 3,644,500 sheep, and 4,639,100 swine. Yields of the leading field crops in 1930, 1931, and 1932, with preliminary returns for 1933, are shown in the accompanying table.

CANADIAN CROP YIELDS, 1930-33
[Units in thousands of bushels, except as indicated]

	1930	1931	1932	1933*
Wheat	420,672	304,144	428,514	271,821
Oats	423,148	328,278	391,561	311,812
Barley	135,160	67,362	80,773	63,787
Rye	22,018	5,322	8,938	4,725
Buckwheat ..	10,903	6,649	8,424	8,664
Mixed grains ..	44,276	39,431	39,036	33,204
Potatoes	48,241 ^b	52,305 ^b	39,416 ^b	.....
Hay and clover	16,397 ^c	13,960 ^c	13,559 ^c	.....

* Estimates. ^b 1,000 cwt. ^c 1,000 tons.

The value of field crops in 1933 was estimated at \$427,791,000, compared with \$444,894,900 in 1932 and \$432,199,400 in 1931.

Wool production in 1932 was 20,518,000 lbs. (20,365,000 lbs. in 1931); farm eggs, 277,604,215 valued at \$36,586,415 (286,882,447 worth \$49,206,845 in 1931); creamery butter, 225,955,246 lbs. in 1931 valued at \$50,198,878; factory cheese, 113,956,639 lbs. in 1931 valued at \$12,824,095. Fruit production in 1932 included 2,789,447 barrels of apples; grapes, 49,000,000 lbs.; strawberries, 23,909,752 qts.

MANUFACTURING. One of the leading world producers of automobiles, hydro-electric power, paper, aluminum, and rubber goods, Canada in 1931 had 24,501 industrial establishments, employing 557,426 workers. Salaries and wages totaled \$624,545,561; the net value of products, \$1,474,581,851; the gross value of products, \$2,698,461,862. This compared with 1930 statistics showing 24,020 plants, 644,439 employees, salaries and wages of \$736,092,766, a net production value of \$1,761,986,726, and a gross production value of \$3,428,970,628. The gross value of manufactured products in 1931 was divided by industrial groups as follows: Vegetable products, \$535,079,463; wood and paper, \$484,237,930; iron and its products, \$374,725,068; animal products, \$320,803,456; textiles products, \$317,158,670; non-ferrous metals, \$211,862,412; non-metallic minerals, \$181,431,906; central electric stations, \$122,310,730; chemicals and allied products, \$105,501,905; miscellaneous industries, \$45,350,322. Ontario and Quebec, with gross manufacturing productions of \$1,312,400,828 and \$849,154,353, respectively, far exceed the other provinces in manufacturing activity.

During the world depression the Canadian output of pig iron, steel, and iron and steel products showed a drastic decline. The pig iron production fell from 1,209,779 short tons in 1929 to 470,443 tons in 1931 and 161,426 in 1932; steel ingots and castings, from 1,543,387 tons in 1929 to 383,923 in 1932. There were (1933) 21 automobile factories in operation, with an annual capacity of about 400,000 vehicles; actual output in 1932, 60,816 units. Food, clothing, and certain other industries maintained a higher relative level of production during the depression. The hydraulic turbine power installed in Canada up to Dec. 31, 1932, aggregated 7,045,260 horse power (6,666,337 horse power on Dec. 31, 1931). The index of employment in all industries, based on 1926 as 100, declined from 78.5 in January, 1933, to 76.0 in April and then rose to 91.8 in December. The weighted index of the physical volume of industrial production (1926 = 100) increased from a monthly average of 60.9 in February, 1933, to 82.6 in July and 86.2 in December.

MINERAL PRODUCTION. In 1931, Canada stood first among the nations in the production of asbestos and nickel, second in gold, zinc, and

cobalt, third in silver and copper, fourth in lead, and eleventh in coal. In that year Canada produced 83 per cent of the world's nickel output, 57 per cent of the asbestos, 33.4 per cent of the cobalt, 15.5 per cent of the zinc, 12.6 per cent of the gold, 10.6 per cent of the silver, 9.6 per cent of the copper, and 8.9 per cent of the lead. As a result of the decline of mineral prices, the value of Canadian mineral production declined from \$310,850,246 in 1929 to \$228,029,018 in 1931 and \$182,320,150 in 1932. The three leading mineral producing provinces in 1932 were Ontario, \$79,239,578; British Columbia, \$26,855,997; and Quebec, \$24,369,246. The values of the leading minerals produced in 1932 (provisional figures) and 1931 are as follows: Gold, \$63,061,103 (\$55,687,688 in 1931); silver, \$5,803,769 (\$6,141,943); copper, \$15,294,022 (\$24,114,065); lead, \$5,409,758 (\$7,260,183); nickel, \$7,179,862 (\$15,267,453); zinc, \$4,144,454 (\$6,059,249); coal, 11,823,411 short tons valued at \$37,045,272 in 1932 (12,243,211 tons valued at \$41,207,682 in 1931); natural gas, \$8,682,505 (\$9,026,764); crude petroleum, \$3,000,886 (\$4,211,674); asbestos, \$3,039,721 (\$4,812,886).

Canada's mineral production in 1933 was estimated at \$198,253,000, against \$182,682,000 in 1932, an increase of 8.5 per cent. Marked gains were recorded in base metals, especially nickel, copper, lead and zinc, while silver and gold (gold valued at \$20.67 per ounce) showed a slight decline. The value of all metals was \$124,382,000, a gain of 20 per cent; that of non-metallic minerals, was \$8,898,000, a 28 per cent increase. The quantity and value of the chief mineral products was: Gold, 2,945,070 fine ounces, \$60,880,000; silver, 15,360,764 fine ounces, \$5,774,000; nickel, 84,586,000 pounds, \$20,736,000; lead, 269,000,000 pounds, \$6,456,000.

FORESTS. The value of Canadian forestry production in 1930 was \$303,145,169, including the value of the products of woods operations and the value added by manufacturing in sawmills and pulp-mills, but not in paper-mills. This was 20 per cent of the total primary production for the Dominion, and gave forestry second place in the value of primary output. The total cut of lumber and other forest products in Canada in 1931 was estimated at 2,306,143,706 cubic feet of standing timber, valued at \$141,123,930. The value of sawmill products was \$62,927,750, of which lumber comprised \$46,136,340. The value of wood and paper manufactures in 1931 was \$484,237,930, or nearly 18 per cent of the total manufactured production. Products of forest origin accounted for 30.4 per cent of the total value of exports in the year ended Mar. 31, 1932. A total of 5,046,291 cords of pulpwood, valued at \$51,973,243, was produced in 1931. The output of wood pulp was 3,167,960 tons, valued at \$84,780,809 (3,619,345 tons valued at \$112,355,872 in 1930). There were 71 pulp and paper factories in 1931, which produced 2,611,225 tons of paper and pulp productions, valued at \$143,957,264 (2,926,787 tons valued at \$173,626,383 in 1930). The newspaper paper output was 2,227,052 tons, valued at \$111,419,637, in 1931 and 1,907,666 tons (preliminary) in 1932.

FISHERIES. The value of Canadian fisheries declined from an annual average of about \$50,000,000 during 1927-29 to \$30,517,306 in 1931 and \$25,962,088 (preliminary) in 1932. British Columbia and Nova Scotia are the two leading fishery provinces, together accounting for over

63 per cent of the total output in 1932; their respective totals were \$9,914,071 and \$6,557,943. Normally about 60 per cent of the total catch is exported. The chief food fish, in order of the value of the 1931 catch, are salmon, lobsters, cod, herring, halibut, whitefish, and haddock.

FURS. The production of raw furs in the year ended June 30, 1932, was valued at \$10,156,225, compared with \$11,681,221 in the preceding year. Silver fox furs accounted for \$3,089,179; muskrat, \$1,391,010; and white fox, \$1,373,809.

FOREIGN INVESTMENTS. British and foreign investments in Canada as of Jan. 1, 1931, were estimated by the Dominion statistician at \$6,477,879,000, of which \$4,107,803,000 was from the United States, \$2,204,857,000 from Great Britain, and \$165,217,000 from other countries. Canadian investments in other countries were estimated at \$1,831,310,000, of which \$1,047,285,000 was placed in the United States, \$84,826,000 in Great Britain and \$699,198,000 in other countries.

FOREIGN TRADE. The sharp decline in Canadian foreign trade during the period of the world depression is shown in the accompanying table compiled from the *Canada Year Book* for 1933.

CANADIAN FOREIGN TRADE, 1929-30 TO 1932-33

Year ended March 31	Total exports	Imports for home consumption
1929-30	\$1,144,938,070	\$1,248,273,582
1930-31	817,028,048	906,612,695
1931-32	587,565,517	578,503,904
1932-33 *	480,713,797	406,271,329

* Preliminary figures.

The distribution of exports and imports, by industrial groups, in the fiscal year 1932-33 is shown in the accompanying table.

CANADIAN EXPORTS AND IMPORTS, BY INDUSTRIAL GROUPS, IN 1932-33

	Exports	Imports
Agricultural and vegetable products	\$203,370,418	\$88,220,858
Animals and animal products	54,333,047	15,438,577
Fibres, textiles and textile products	4,731,094	61,213,824
Wood, wood products and paper	120,886,796	20,489,242
Iron and its products	17,277,099	59,336,765
Non-ferrous metals and their products	42,642,318	17,684,958
Non-metallic minerals and products	9,215,837	87,658,005
Chemicals and allied products	11,099,814	25,455,432
Miscellaneous commodities	10,243,532	30,772,668

The United Kingdom replaced the United States as the principal market for exports of Canadian produce in 1932-33, purchasing goods valued at \$184,361,019 (\$174,043,725 in 1931-32) as compared with American purchases totaling \$143,160,400 (\$235,186,674 in 1931-32). The British Empire took Canadian exports valued at \$222,118,927 in 1932-33, as compared with \$217,956,387 in 1931-32. The Netherlands, France, and Japan, followed in the order named as markets for Canadian goods. The chief sources of imports in 1932-33 were the United States, \$232,548,055 (\$351,686,775 in 1931-32); the British Empire, \$120,271,909 (\$147,811,993 in 1931-32); Great Britain, \$86,353,681 (\$106,371,779 in 1931-32); Germany, \$9,088,905 (\$11,657,869); France, \$7,712,558 (\$13,570,141).

During the calendar year 1933 imports totaled

\$401,300,000 (\$452,600,000 in 1932) and exports \$537,500,000 (\$501,800,000 in 1932). Figures in Canadian dollars.

INTERNATIONAL PAYMENTS. The balance of Canadian international payments in 1932 showed credits exceeding debits of about \$72,000,000. Of this \$23,000,000 represented net capital exports and the remainder was attributed to errors and omissions. During the year Canada exported \$248,000,000 to meet interest payments due abroad and received but \$56,000,000 on Canadian investment abroad. Outstanding factors in offsetting the adverse balance thus created were tourist expenditures of \$212,448,000 (Canadian currency) in Canada, gold exports of \$67,000,000, and a surplus of exports over imports totaling \$50,187,000. The visible and invisible imports and exports balanced at \$928,927,000.

FINANCE. The steady decline in Dominion revenues, accompanied by a steady increase in annual expenditures, during the course of the world economic depression is shown in the accompanying table compiled with the aid of the Dominion Bureau of Statistics.

DOMINION RECEIPTS AND EXPENDITURES,
1929-33

<i>Fiscal year, ended Mar. 31</i>	<i>Total receipts</i>	<i>Total expenditures</i>	<i>Surplus (+) or deficit (-)</i>
1929 . . .	\$460,151,481	\$388,805,953	\$ + 71,345,528
1930 . . .	445,916,992	398,176,246	+ 47,740,746
1931 . . .	856,160,876	440,008,855	- 83,847,979
1932 . . .	836,721,305	450,955,541	- 114,234,236
1933 . . .	820,065,501	540,700,155	- 220,634,654

Ordinary expenditures during this five-year period showed no great variation; they rose from \$350,952,924 in 1928-29 to \$389,558,289 in 1930-31 and then declined to \$367,487,472 in 1932-33. Special expenditures increased abruptly from \$1,397,754 in 1928-29 to the successive totals of \$9,803,722 (1929-30), \$16,740,848 (1930-31), \$55,460,134 (1931-32), and \$96,704,225 (1932-33). The latter total includes \$30,700,905 spent under the Unemployment and Farm Relief Act of 1931. Capital expenditures during this period reached a peak of \$28,222,318 in 1930-31 and fell to \$8,548,155 in 1932-33. Debt charges were \$144,829,031 in 1932-33 (\$125,643,615 in 1931-32). Tax receipts decreased annually, despite several increases in rates, from the peak of \$395,921,028 in 1928-29 to \$275,085,033 in 1931-32 and \$254,318,801 in 1932-33.

The estimates for 1933-34, as submitted to Parliament, called for expenditures of \$358,656,488, as compared with 1932-33 estimates of \$364,884,224. To balance these expenditures, the Minister of Finance levied new taxes designed to produce an additional \$70,000,000 of revenue (see under *History*). The chief items of expenditure listed in the budget were: Charges on public debt, \$142,278,443; pensions, \$47,092,321; Post Office, \$30,619,375; subsidies to Provinces, \$13,686,177; public works, \$11,991,482; national defense, \$11,307,559; pensions and national health, \$11,257,500; national revenue, \$10,436,786; and civil government, \$10,101,538.

The net public debt of the Dominion on Mar. 31, 1933, totaled \$2,599,089,000, with annual interest charges of \$121,637,300, as compared with a net debt on Mar. 31, 1932, of \$2,375,846,172, with interest charges of \$121,151,106. The total public debt of the Dominion, the nine Provinces, the municipalities and corporations amounted on

Mar. 31, 1933, to \$8,855,596,800 on which the annual interest charges was \$421,965,800 or an average rate of 4.77 per cent. The gross liabilities of the Provinces totaled \$1,363,382,464, while Provincial indirect liabilities added a further \$215,977,011. The grand total of direct liabilities of Canadian municipalities was \$1,584,000,000. As of Mar. 31, 1933, bonds guaranteed by the Dominion of Canada for both principal and interest aggregated \$780,148,354 while those guaranteed for interest only totaled \$216,000,000.

SHIPPING. For the fiscal year ended Mar. 31, 1932, 157,980 vessels of 72,200,372 registered tons entered Canadian ports and 156,045 vessels of 71,172,889 tons departed. Sea-going vessels accounted for 19,462 arrivals, aggregating 17,095,883 tons, and for 19,593 departures, totaling 17,182,454 tons. Coastwise vessels accounted for 82,560 arrivals, aggregating 36,240,041 tons, and for 80,033 departures totaling 34,730,037 tons. The international trade on the Great Lakes accounted for the remainder. The Canadian merchant marine on Dec. 31, 1932, consisted of 8895 vessels aggregating 1,475,128 net registered tons. The total freight movement through Canadian canals in 1933 was 18,788,527 tons (Welland Ship Canal, 9,194,396; St. Lawrence Canals, 6,951,064; Sault Ste. Marie, 2,277,729).

RAILWAYS, ETC. Canada's steam railway mileage of 41,967 as of Jan. 1, 1932, was exceeded only by that of the United States (253,286 miles). The Canadian railways owned an additional 341 miles of line in the United States. Including second track, yards, sidings, and industrial track, the total Canadian mileage was 56,908. During the calendar year 1931, the steam railways carried 26,396,812 passengers and 85,993,206 tons of freight, the gross earnings being \$358,549,382 and the operating expenses \$321,025,588. In 1932 the railways carried 21,099,582 passengers and 67,722,105 tons of freight, with gross earnings of \$290,932,246 and operating expenses of \$255,286,887. The net income deficit of the Canadian National Railways for 1932 was \$61,006,919, exclusive of interest on government loans. The gross operating revenue was \$161,103,595 (\$200,505,162 in 1931), operating expenditures were \$155,208,241 (\$199,313,075 in 1931), interest on funded debt was \$56,965,278. The gross operating income of the Canadian Pacific Railway in 1932 was \$123,936,713, against \$147,846,118 in 1931, and net earnings in the same period declined to \$20,098,984 from \$25,424,766 in 1931.

Traffic through Canadian canals in 1932 totaled 17,956,000 tons, a 10 per cent increase over the preceding year, attributable to better shipping conditions on the improved Welland Canal. The canals, extending 509 miles, opened up 1846 miles of waterways to navigation. Civil air lines during 1932 carried 76,800 passengers, 3,129,974 lbs. of freight or express, and 413,687 lbs. of mail. The total mileage flown was 4,569,131. Air mail transportation between London, Ont., and Buffalo, N. Y., was inaugurated Feb. 11, 1933. At the end of 1932 there were 398,320 miles of highways, of which 91,312 miles were surfaced and 307,008 miles were of gravel, improved earth, or unimproved.

GOVERNMENT. Executive power is exercised in the King's name by the Governor-General of Canada, acting through a responsible ministry or cabinet. Legislative power is in a Parliament of two Houses: a Senate and a House of Commons,

the former consisting of 96 members appointed for life and the latter of 245 members, in accordance with the distribution act of 1924, elected for five years (unless sooner dissolved) by popular vote, including woman suffrage. Women are eligible for election to Parliament. The nine Provinces have local autonomy, there being a separate parliament and administration for each. A lieutenant-governor appointed by the Governor-General-in-Council heads each provincial executive.

Governor-General in 1933, the Earl of Bessborough, who assumed office Apr. 4, 1931. The composition of Parliament following the election of July 28, 1930, was: Conservatives, 138; Liberals, 87; United Farmers of Alberta, 10; Progressives, 2; Liberal-Progressives, 3; Labor, 3; Independents, 2. The Conservative Ministry in office in 1933, in order of precedence, was as follows: Prime Minister, President of the Privy Council, Secretary of State for External Affairs, Richard B. Bennett; Minister of Finance, E. N. Rhodes; Ministers without Portfolio, Sir George H. Perley and Arthur Meighen; Labor, W. A. Gordon; Justice and Attorney-General, Hugh Guthrie; Fisheries and Marine, Alfred Duranleau; Trade and Commerce, H. H. Stevens; Railways and Canals, Dr. R. J. Manion; National Revenue, E. B. Ryckman; Minister without Portfolio, J. A. Macdonald; Postmaster-General, Arthur Sauvé; Pensions and National Health, Murray MacLaren; Public Works, H. A. Stewart; Secretary of State, C. H. Cahan; National Defense, Lieut.-Col. D. M. Sutherland; Agriculture, Major Robert Weir.

HISTORY

THE ECONOMIC REVIVAL. The opening of the year 1933 found Canada still struggling unsuccessfully to check the four-year decline in economic activity. Wheat prices were about 15 cents a bushel lower than in January, 1932. The Canadian dollar continued to depreciate with reference to the American dollar, despite the continued trade surplus and heavy exports of gold. Foreign trade had declined 25 per cent from the level maintained a year earlier. Business and industry continued to decline and by the end of February about 1,360,000 out of some 10,000,000 Canadians were receiving direct relief. In March, however, there was an upswing in general economic activity which gained momentum with the beginning of the business revival in the United States in April. The price of No. 1 Northern wheat rose from the low point of \$0.423 per bushel in December, 1932 to \$0.833 in July, 1933. Foreign trade, industrial production, business activity, and employment indexes all showed a decisive improvement. As in the United States, there were fluctuations in the prices of commodities and stocks. But the general trend was upward throughout the remainder of the year. Mining and manufacturing production, lumbering, foreign trade, employment, and governmental revenues all showed a steady increase, with none of the sharp fluctuations recorded in the United States.

TARIFF POLICIES. The efforts of the Bennett government throughout the year 1933 were concentrated mainly upon efforts to readjust the Canadian economic system to the exigencies of the depression. Prospects of the termination of the tariff war between Canada and the United States were opened early in the year. President-

elect Roosevelt sounded out Canadian officials with reference to a reciprocal trade treaty, meeting with a favorable response from Prime Minister Bennett. The latter stated in the Dominion Parliament February 20 that his government conditionally approved such a treaty. Negotiations were opened by Prime Minister Bennett and President Roosevelt in Washington late in April, when Mr. Bennett was guest of the President at the White House. In return for the admission of Canadian copper, oil, lumber, live stock, potatoes, dairy products, fish and coal to the American market, the Canadian government offered to reduce its tariffs on American manufactured and semi-manufactured goods. The negotiations were indefinitely postponed, however, when President Roosevelt discovered unforeseen conflicts between his policy of tariff reduction and his programme for internal economic recovery.

Meanwhile the 57 amendments to the tariff schedule proposed in the Budget Speech of the Minister of Finance March 21 were favorable to the United States in general. They became provisionally effective March 22 and were ratified, with some changes, by Parliament during the week ending April 29.

Some dissatisfaction with the working out of the Ottawa tariff agreements of 1932 was expressed during the year. Particular objection was raised to the failure of the British government to take action against low-priced Soviet lumber imports, which drove Canadian lumber out of the British market. It was charged that the Russian lumber was imported into Britain in violation of the anti-dumping clauses of the Ottawa Agreements. About 80 per cent of Soviet imports into Britain were embargoed by the British government on April 19, in retaliation for the trial of British engineers in Moscow. Canadian protests were renewed, however, when the British anti-Soviet embargo was lifted July 1.

Early in the year the British made other tariff concessions to Canada. They abandoned the embargo on Canadian live cattle. The amount of empire content necessary to obtain imperial preference was raised from 25 to 50 per cent. Great Britain also granted the imperial preference of 6 cents a bushel on Canadian wheat shipped through the United States. The British were not disposed to go further in Canada's behalf. Trade returns for the fiscal year ended Mar. 31, 1933, showed that Canada had increased its exports to Great Britain by more than \$10,000,000, as compared with the previous year, while imports into Canada from Great Britain had decreased by \$20,000,000.

An important trade agreement with France, signed at Ottawa May 12 and subsequently ratified by both countries, went into effect June 10, 1933, to run one year. It replaced and amplified the commercial convention abrogated in June, 1932, and contained reciprocal tariff preferences on 1148 items. France accorded to Canada its minimum tariff rates on 185 items and percentage discounts from its general tariff rates on 24 items. Canada granted its intermediate tariff rates to France on 840 items, British preferential rates on 7 items and reductions varying from 10 to 25 per cent below the intermediate rates on 91 items. Under existing most-favored-nation treaties, Canada was obliged to extend the same preferences to imports from Argentina, Belgium, Colombia, Czechoslovakia, Italy, Japan, the

Netherlands, Norway, Spain, Sweden, Switzerland, Venezuela, and various other countries. A second treaty between France and Canada, signed at the same time, provided most-favored-nation treatment for their respective nationals in matters of taxation, purchase and sale of property, conduct of business, status in courts, etc.

The trade agreement between Canada and South Africa, signed at Ottawa, Aug. 20, 1932, went into effect June 30, 1933. On the same date, Canada extended the benefit of its British preferential tariff to the Unfederated Malay States. A six-months' extension of the Canada-New Zealand trade agreement, to May 24, 1934, was announced in November.

THE WHEAT AGREEMENT. As one of the leading wheat-exporting countries, Canada joined with the United States, Australia, Argentina, the Soviet Union, and the Danubian states in agreeing at London August 25 to limit wheat exports for two years. In an effort to eliminate the surplus world wheat stocks of 960,000,000 bushels, they agreed to export a joint maximum of 560,000,000 bushels in 1933-34 and, with the exception of the Soviet Union and the Danubian states, to reduce either their acreage or their exports by 15 per cent in 1934-35.

THE 1933-34 BUDGET. Besides the tariff changes introduced by the Minister of Finance in his budget announced March 21, increases in taxation designed to bring in an additional \$70,000,000 of revenue were provided for. The 6 per cent sales tax was extended to numerous commodities previously exempt. New excise taxes were imposed upon cosmetics and toilet preparations, automobile tires and tubes, cigarette papers and tubes, refined sugar, unfermented wort, and malt sirup, powder, and extracts. The individual and corporation income taxes were increased, interest or dividends paid by Canadians to non-residents were taxed 5 per cent at the source, and rents and royalties payable by Canadians to non-residents were taxed 12½ per cent at the source.

Another interesting feature of the budget was the introduction of a stabilization fund to enable Canadian exporters of farm products to the British market to obtain payment at the rate of \$4.60 (Canadian) per pound sterling. The plan applied to exports of animals, meats, poultry, fresh and canned fish, tobacco, cheese, milk products, canned fruits and vegetables, maple products, eggs, and honey. The annual cost of the subsidy was estimated at from \$6,000,000 to \$10,000,000.

THE CURRENCY PROBLEM. Owing to restrictions upon gold exports, Canada had been actually off the gold standard since 1929. The country was taken officially off gold on Apr. 24, 1933, when the Finance Minister announced that the government had suspended the redemption of Dominion notes in gold. In the meantime, the depreciation of the Canadian dollar with relation to the American dollar had increased the burden of Canadian interest and amortization payments due in New York. It also erected a new barrier against Canadian imports from the United States. During 1932 the exchange value of the Canadian dollar ranged from 83.68 to 88.62 cents. It declined from 88.62 cents on Jan. 3, 1933, to around 82.81 cents for the first week of April. Then the action of the United States government in abandoning the gold standard and the subsequent

depreciation of the U. S. dollar caused the gradual recovery of the Canadian dollar.

Despite the premium on the U. S. dollar, all Dominion and provincial obligations maturing in New York were promptly met. The Dominion government was forced to aid the four western provinces in meeting their obligations. It declined to aid the western cities directly, with the result that the city of Calgary defaulted on a stipulated gold payment of \$2,300,000 due Jan. 3, 1933, rather than pay \$300,000 extra to purchase U. S. dollar exchange. So long as U. S. dollars remained at a premium over Canadian dollars, Canada found it profitable to sell gold in London and use the sterling proceeds to purchase depreciated American dollars for paying Canadian obligations in New York. For the same reason Canadian loans were floated in London instead of New York. For the first time in 20 years, Canada borrowed on the London market July 30, obtaining £15,000,000, maturing in 1953-58, at 4 per cent.

A \$225,000,000 internal loan, part bearing 3½ and part 4 per cent interest, was offered by the Dominion Government October 10 and fully subscribed within four days. A large part of the proceeds were used for the conversion of Victory 5½ per cent bonds maturing in November.

BANKING REFORM. In anticipation of the decennial revision of the Bank Act, the government early in August, 1933, appointed a commission to investigate and report on its operation. Lord Macmillan, chairman, and Sir Charles Addis, former director of the Bank of England, were the English members. The Canadian members were Sir Thomas White, former Dominion Finance Minister; Beaudry Leman, general manager of the *Banque Canadienne Nationale*; and Premier Brownlee of Alberta. The committee's report, published November 12, recommended immediate establishment of a central bank and of an organization for the extension of intermediate and short-term credits to farmers. Premier Bennett announced December 3 that legislation creating a central bank would be passed at the next session of Parliament.

OTHER LEGISLATION. During the spring session, Parliament adopted legislation embodying recommendations of the Royal Transportation Commission for aiding the railways to meet the drastic decline in earnings. The legislation called for the appointment of three trustees to replace the board of directors of the Canadian National system, supervision of its expenditure by the Minister of Finance, and the regular audit of its accounts by Parliament. It also provided for economies through the coöperation of the Canadian National and Canadian Pacific systems and for an arbitral tribunal to settle disputes between the two companies. Amendments to the Shipping Act passed by Parliament completely excluded foreign ships from the Canadian coastal trade and from the carrying trade between Canadian ports on the Great Lakes.

DOMESTIC POLITICS. A socialistic movement, known as the Coöperative Commonwealth Federation, gained considerable momentum during the year. Formed in Alberta in 1932, the Federation merged in 1933 with the United Farmers of Ontario, an organization which controlled Ontario after the World War. Fearing that the new party might secure the balance of power in the next Canadian parliament, the Conservatives sought to make capital of the Federation's radical pro-

gramme by inviting the more conservative Liberals into their ranks. To check inroads upon his party membership by the other parties, the Liberal leader, Mackenzie King, made numerous speeches in the Canadian West during July. The Federation candidates, however, made a poor showing in the Nova Scotia election of August 22. The Liberals overwhelmingly defeated the Conservative government of the province.

Subsequent elections confirmed the drift of voters from the Conservative to the Liberal ranks and showed the growing strength of the Commonwealth Federation. Liberals defeated the Conservatives in three federal by-elections in New Brunswick, Quebec, and Saskatchewan on October 23. In the British Columbia provincial elections early in December the Conservatives suffered another severe defeat. The Liberals captured 34 out of the 48 seats in the Legislature, while the Commonwealth Federation elected seven members. The elections reflected the strong demand in the western provinces for a greater share in Dominion relief expenditures and programmes. At a meeting in Victoria in December, the Premiers of the western provinces adopted demands for conversions of their obligations to lower interest rates, new low-interest-bearing Dominion loans, a great Dominion public-works programme, and the relief of unmarried transient labor by the Dominion Government. Premier Bennett accepted the recommendation for a public-works scheme, and called a meeting of the provincial and Dominion officials at Ottawa for Jan. 11, 1934, to discuss unemployment relief and insurance.

Other issues debated in Parliament during the year were the operation of the national broadcasting system, the redistribution of electoral constituencies in accordance with 1931 census returns, and the advisability of the granting of honorary titles to Canadians by the King.

EMPIRE RELATIONS. The economic coöperation within the British Commonwealth of Nations envisaged in the Ottawa Agreements of 1932 was furthered during 1933. Representatives of Britain and the Dominions at the World Economic Conference in London on July 27 issued a joint declaration of financial and economic policy (see *GREAT BRITAIN under History*). The first British Commonwealth Relations conference was held in Toronto, Sept. 10-21, 1933. Existing systems of communication, consultation and action between members of the Commonwealth were discussed with a view to their improvement.

The incorporation of Newfoundland in the Canadian Dominion was considered with British and Newfoundland representatives during the year. The Canadian government, however, was reluctant to take the bankrupt island under its wing in view of its own heavy obligations. See *NEWFOUNDLAND*; *GREAT BRITAIN under History*; *ECONOMIC CONFERENCE, WORLD*.

Consult Duncan McArthur, "Canada's Divided Loyalty," *Current History*, November, 1933; Wilfrid Eggleston, "Canada's Party of the Left," *Current History*, January, 1934.

CANADA, THE UNITED CHURCH OF. The designation applied to the single body formed by the union in 1925 of the Congregational, Methodist, and Presbyterian churches in Canada; the Methodist churches of Newfoundland and Bermuda are also included. Foreign mission work is carried on in Japan, Korea, China, India, Trinidad, and Angola (West Central Africa). In 1932

there were in Canada, Newfoundland, and Bermuda 7327 preaching places (including home missions) in 2935 pastoral charges, 678,445 communicant members, and 1,636,465 persons under pastoral care. At the fifth general council held in Hamilton, Ont., in September, 1932, the Rev. T. Albert Moore, D.D., was chosen moderator for the ensuing biennium. Headquarters are at 421 Wesley Building, Toronto, Ont. See *FEDERAL COUNCIL OF THE CHURCHES OF CHRIST IN AMERICA*.

CANALS. Very little of interest can be added for 1933 to the inland waterway situation as outlined in previous *YEAR BOOKS*. In the United States the Inland Waterways Corporation continues to show small operating profits while its critics point out that all costs of operation are not reflected in the accounting and that the corporation exists only because of Federal subsidies.

Indeed, as we have noted previously, this is part of the American transportation problem which is no longer simply a railroad problem but also involves inland waterways, airways, motor traffic, and pipelines. The solution of this great problem is complicated by the fact that our railroad system has been privately built under a competitive system and is heavily taxed, whereas our waterways and highways are built and maintained at public expense, traffic on them paying but a fraction of actual costs.

Obviously the ideal plan is a coördinated system utilizing all these methods of transportation in such a way as to give the required service at the least cost. Clearly such an objective cannot be quickly or easily attained. In particular, vast adjustments in the railroad field, the abandonment of many miles of heavily bonded track, and the consolidation of other lines, is essential. The railroads themselves, faced with the usual difficulties of depression and the largely unregulated competition of these other and subsidized forms of transportation, are unable to undertake extensive abandonments and reorganization. We venture to predict that, in the end, the Federal government will have to assist in retiring many railroad bonds in order to make abandonments and adjustments possible, and will also have to adopt a fair and just policy of taxation and regulation. The situation at present is practically at a stalemate and the future of American inland waterway transportation is, accordingly, uncertain and unknown.

ST. LAWRENCE WATERWAY. The favorable report on February 10th by the Senate Foreign Relations Committee on the United States-Canadian Treaty which involves the St. Lawrence Waterway, together with the unreasoning and unreasonable demand on the part of many public organizations for increased expenditures for public works, makes it possible that this great experiment may actually be put under construction within a year or two. The project involves not only a navigable channel but also huge water power possibilities. Opinion differs widely on its advantages, some enthusiasts claiming that Great Lakes navigation would be immeasurably benefited by the construction and power rates reduced, while others point out that Canada, rather than the United States, would profit by the development of such facilities and that the power developments, for which there is no Canadian demand, would flood the New York market.

GREAT LAKES-TO-GULF WATERWAY. The completion of this waterway from Chicago to New

Orleans was marked by the first shipments in May. The Chicago authorities have since been anxious to have the Federal government take over the Sag Channel of the existing Drainage Canal to provide a by-pass for the traffic around the city to Lake Michigan. It is pointed out that such a by-pass would make it possible to turn many of Chicago's lift bridges into fixed structures. This matter is under consideration by the War Department Engineers.

PROJECTED WORKS. Among these should be noted the proposed \$138,000,000 lock canal across Florida and part of Georgia to connect the Atlantic with the Gulf of Mexico. A 35-foot channel with a summit level of a little over 100 feet, reached by four locks, is proposed. The length would be 166 miles. The R.F.C. or P.W.A. is looked to for funds but to date very little interest in the plan has been shown by the Federal authorities.

Another project of considerable interest has received local approval in the Northwest. This consists in a canal to join the Columbia River with Puget Sound. Apparently canalization works, or means of by-passing river rapids in this area and making the upper river reaches available for traffic, offer worth-while possibilities. Reports indicate that existing facilities have been fully taken advantage of and new developments are to be expected.

EBERSWALDE CANAL LIFT. A barge lift of unusual size has been built on the Berlin-Stettin Canal near Eberswalde where this cross-Germany canal comes down to the Oder River. This structure, with a lift of 118 feet, replaces four locks. Its construction was undertaken in connection with the reconstruction programme initiated to provide canal facilities for 1000-ton barges directly across Germany from the Rhine on the west to Stettin and Danzig on the Baltic. (For brief description of system see *Engineering News-Record*, June 23, 1932, p. 893.)

BIBLIOGRAPHY. During the year an interesting new study of the Suez Canal has appeared *The Suez Canal, its Past, Present, and Future*, by Sir Arnold T. Wilson (Oxford Press), which emphasizes the British viewpoint and interests in this great work. Students of the St. Lawrence project should compare the favorable point of view expressed in the recent *Great Lakes-St. Lawrence Deep Waterway to the Sea* by Tom Ireland (New York) with the analysis of *The St. Lawrence Navigation and Power Project* by Moulton, Morgan, and Lee (Brookings Inst., 1929) and that of *An Economic Survey of Inland Waterway Transportation in the United States* (Bureau of Railway Economics, 1930).

CANARY ISLANDS. An archipelago off the northwest coast of Africa, belonging to Spain. Total area 2807 square miles; population (1931), 564,873. In 1927 the islands were divided into two provinces and administered as a part of Spain. Las Palmas, with an estimated population of 79,444 (Jan. 1, 1932), and Santa Cruz de Tenerife, population 63,052, are the chief towns. Fruits and vegetables are grown for export. There is regular steamship, cable, and wireless communication with Spain. See SPAIN.

CANCER. See CHEMISTRY.

CANNON, FRANK JENNÉ. An American journalist and legislator, died in Denver, Colo., July 25, 1933. He was born in Salt Lake City, Utah, Jan. 25, 1859, a son of George Quayle Cannon, first counselor of the Church of Jesus Christ of Latter-day Saints. On his graduation from the

University of Utah in 1878 he became engaged in journalism, being associated with his father on the *Deseret News* and later serving as city editor of the *Ogden Junction*, news editor of the *San Francisco Chronicle*, and proprietor of the *Ogden Daily Standard*. In 1894 he was elected on the Republican ticket delegate to Congress from the Territory of Utah and two years later, upon the State's admission to the Union, was elected to the United States Senate, serving until 1899. During this period he became a free silver advocate, which resulted in his joining the Democratic party in 1900, serving as State chairman during 1902-04.

On removing to Denver, Colo., Mr. Cannon became editor of the *Rocky Mountain News*. He also controlled mining enterprises at Aspen, Colo., and with the revival of interest in bimetalism was president of the National Bimetallic Association and chairman of the International Silver Commission. His books *Under the Prophet in Utah* (with Harvey O'Higgins, 1911) and *Brigham Young and the Mormon Empire* (with George L. Knapp, 1913), written after his abjuration of Mormonism, were exposés of Utah's condition under the Mormon domination.

CANONIZATIONS. See ROMAN CATHOLIC CHURCH.

CANTILEVERS. See BRIDGES.

CAPE COLONY. See CAPE OF GOOD HOPE PROVINCE.

CAPE OF GOOD HOPE PROVINCE. The province occupying the most southerly part of Africa, formerly known as Cape Colony; one of the original provinces of the Union of South Africa. Area, 276,536 square miles excluding the Walvis Bay area of 430 miles. The estimated mean population on June 30, 1932 was 3,163,700 of whom 758,000 were Europeans. Europeans numbered 749,231 (1931 census) including the population of Walvis Bay. The chief towns, with their white populations for 1931, were: Cape Town, the capital, 150,914; Port Elizabeth, 43,924; East London, 27,801; Kimberley, 18,618. Births, in 1930, were 19,468 European and 40,609 non-European; deaths, 7416 European and 26,412 non-European, marriages, 6529 European and 9752 non-European.

Education for white children from 7 to 16 years of age is compulsory unless the child is employed in a regular occupation and has passed the sixth standard. In 1930 there were 4906 schools for white children with 353,942 pupils, and 4038 schools with 382,707 colored and native pupils. The total ordinary revenue for 1931-32 was £4,495,752 including £2,646,001 received as a subsidy from the Union government; total ordinary expenditure amounted to £4,750,978. Provincial government is by an administrator, appointed by the Governor-General of the Union, assisted by the Executive Committee of 4 members and the Provincial Council of 58 elected members. In the Union Parliament at Cape Town the Province elects 8 members to the Senate and 58 members to the House of Assembly. Administrator in 1933, J. H. Conradie. See SOUTH AFRICA, UNION OF.

CAPE VERDE (vûrd) ISLANDS. A Portuguese dependency consisting of 14 islands divided into two groups (Windward and Leeward), 320 miles west of Cape Verde on the west coast of Africa. The islands of the Windward group are São Vicente, Santo Antão, São Nicolau, Santa Luzia, Sal, Boa Vista, Banco, and Raso; of the

Leeward group they are Sant'Iago, Maio, Fogo, Brava, Rei, and Rombo. Total area, 1511 square miles; total population (1929 estimate), 153,738 including 54,559 negroes, 94,977 mulattoes, and 4202 whites. There are 157 primary schools. The chief products are coffee, sisal, mustard, castor oil, oranges, brandy, and hides. Imports for 1931 were valued at 63,386,378 escudos (escudo equals \$0.0442 at par); exports, 2,313,499 escudos. The budget for 1932-33 estimated revenue at 19,417,650 escudos and expenditure at 19,399,873 escudos. Mindello, on the island of São Vicente, is the chief port and a transatlantic coaling station; 972 ships entered the harbor in 1931. A Governor administers the dependency from Praia, the capital, on the island of Sant'Iago. Governor in 1933, Col. Antonio A. G. Vaz.

CARBON DIOXIDE. See CHEMISTRY, INDUSTRIAL OR APPLIED.

CARCINOMA. See MEDICINE AND SURGERY.

CARDINALS. See ROMAN CATHOLIC CHURCH.

CARHAET, PAUL WORTHINGTON. An American lexicographer, died suddenly in Springfield, Mass., Oct. 27, 1933. Born at Jackson, Mich., Nov. 10, 1872, he was graduated from Yale University in 1894. Four years later he became associated with the G. and C. Merriam Co. as assistant editor of *Webster's New International Dictionary*, and apart from one year (1904-05) spent in research and study in England and Germany devoted all his time to this enterprise, rising to the rank of managing editor. He was a recognized authority on phonetics and pronunciation and contributed to the establishment of a standard speech in the United States.

CARINTHIA, ká-rin'thl-á. A province of the Republic of Austria bounded on the south by Italy and Yugoslavia, on the north by the Austrian provinces of Salzburg and Styria. Area, 3680 square miles; population (1923 census), 370,817; Klagenfurt, the capital, had 27,423 inhabitants. See AUSTRIA.

CARLETON COLLEGE. A coeducational institution of higher learning in Northfield, Minn., founded in 1866. The enrollment in the autumn of 1933 was 790. There were 63 faculty members. The endowment amounted to \$2,859,377, and the total income for the year was \$553,927. There were 104,000 volumes and 31,000 pamphlets in the library. President, Donald John Cowling, Ph.D., D.D., LL.D.

CARNEGIE CORPORATION OF NEW YORK. Established by Andrew Carnegie in 1911, this corporation was formed for the advancement and diffusion of knowledge and understanding among the people of the United States, Canada, and the British colonies. Its total endowment is approximately \$135,000,000, of which \$10,000,000 is applicable elsewhere than in the United States.

In 1933, as in the previous year, approximately two-thirds of the annual income of the corporation was devoted to a reduction of unpaid obligations, which on September 30 amounted to \$18,006,900. The annual report of the president, Frederick P. Keppel, showed that during the fiscal year 1932-33 the sum of \$4,855,747 was appropriated. Of this amount \$1,186,300 was applied toward library service; \$227,500 toward the encouragement of adult education activities; \$722,550 toward the support of national organizations in the field of fine arts and of departments of art in colleges and universities and of projects for developing appreciation of the arts; \$992,187,

toward the support of educational and scientific studies and research publications; and \$1,727,209 toward general interests, including the Carnegie Endowment for International Peace.

The corporation continued to support various important projects, such as research in the study of cosmic rays, leukemia, velocity of light and vitamins, and study of susceptibility to infectious diseases. Various studies conducted by the American Historical Association and the American Law Institute were continued during the year. From the income of its \$10,000,000 fund, the corporation continued its five-year programme in British Africa, involving a total of \$500,000. This included scientific research, aid to Jeanes Schools, exchange of educational visits, and library service, carried on largely through responsible local bodies. Various educational enterprises in Canada, Australia, and New Zealand were also aided.

The trustees of the corporation in 1933 were: Newton D. Baker, James Bertram, Nicholas Murray Butler, Samuel Harden Church, Robert A. Franks, David F. Houston, Henry James, Frederick P. Keppel, Russell Leffingwell, John C. Merriam, John A. Poynton, and Elihu Root. Officers of administration were: Elihu Root, chairman of the board; Robert A. Franks, vice chairman and treasurer; Frederick P. Keppel, president; James Bertram, secretary; and Robert M. Lester, assistant to the president. Headquarters are at 522 Fifth Avenue, New York City.

CARNEGIE FOUNDATION FOR THE ADVANCEMENT OF TEACHING, THE. A foundation established in 1905 by Andrew Carnegie, who placed an endowment of \$10,000,000 in trust for the purpose of encouraging higher education in the United States, Canada, and Newfoundland. Following its incorporation by Congress in 1906, its resources were increased by a further gift of \$5,000,000 from Mr. Carnegie in 1908 and by appropriations of \$1,250,000 in 1913 and \$12,000,000 in 1918 from the Carnegie Corporation of New York. On June 30, 1933, its endowments and accumulated reserves amounted to \$31,409,589, while it had distributed \$25,370,122 in retiring allowances and pensions to 1384 college teachers and 693 teachers' widows, chiefly through 95 associate institutions selected for their educational standing.

The foundation publishes extensive annual reports, which deal with many phases of the educational process. Its division of educational inquiry, established in 1913, has issued 27 comprehensive bulletins, dealing with medical, legal, engineering, dental, and vocational education, the training of teachers, American and British college athletics, and kindred subjects. In 1933 the foundation was engaged upon studies concerning State higher education in the United States, professional education, and the relations between secondary and higher education in Pennsylvania. Dr. Henry Suzzallo (q.v.) was president until his death on Sept. 25, 1933. Dr. Henry Smith Pritchett was president emeritus and Howard J. Savage, secretary in 1933. Headquarters are at 522 Fifth Avenue, New York City.

CARNEGIE INSTITUTE OF PITTSBURGH. See ART EXHIBITIONS.

CARNEGIE INSTITUTE OF TECHNOLOGY. A nonsectarian institution for technical education at Schenley Park, Pittsburgh, Pa. founded in 1900. The enrollment for the autumn of 1933 was 4119, including 2242 registered in the regular day courses and 1877 in the

evening courses. For the summer session 660 students were enrolled. The faculty numbered 301, of whom 251 were on full time and 50 on part time. The endowment of the institution was \$16,383,000 and the annual income \$840,000 (not including student fees). The institute is adjacent to the Carnegie Library of Pittsburgh, which has 450,600 volumes. President, Thomas Stockham Baker, Ph.D., LL.D., Sc.D.

CARNEGIE INSTITUTION OF WASHINGTON. An organization founded in 1902 by Andrew Carnegie "to encourage in the broadest and most liberal manner investigation, research, and discovery and the application of knowledge to the improvement of mankind." Its major activities in 1933 were carried on through the following departments and divisions: Department of embryology (located in the Hunterian building of the Johns Hopkins University medical school); department of genetics (laboratory at Cold Spring Harbor, Long Island, N. Y.); geophysical laboratory; division of historical research, including the sections of aboriginal American history, United States history, and history of science; department of meridian astrometry (headquarters at the Dudley Observatory, Albany, N. Y.); Mount Wilson Observatory, in Pasadena, Calif.; nutrition laboratory, in Boston; division of plant biology (central laboratory at Stanford University); department of terrestrial magnetism; Tortugas (Fla.) Laboratory of Marine Biology.

Problems relating to human growth and development, especially the growth of individual cells and body tissue, behavior of chromosomes, nutrition and metabolism, and influences of hormones formed by glands of internal secretion, continued to occupy the attention of biological groups. In studies of the physics of matter there were conducted investigations of the physics and chemistry of the sun and stars, conditions of interstellar space, conditions of the earth's interior, and physical phenomena at various localities on the earth's surface and in the atmosphere.

Correlated investigations concerned penetrating radiation or influence of the cosmic rays and fundamental questions of atomic physics, a new building having been erected by the department of terrestrial magnetism where there were conducted such researches as bombardment of the atom. Investigations on the history of the Maya people and their culture in Middle America included all phases of knowledge bearing upon these questions.

Total receipts of the institution, representing interest on investments and bank balances, and sales of publications, amounted to \$1,651,275 for the year. During 1933 the executive committee authorized publication of 24 new volumes. The institution made known the results of its work through technical and scientific journals, its *Year Book*, and a series of scientific monographs and news releases.

The president in 1933 was John C. Merriam. The officers of the board of trustees were: Elihu Root, chairman; Henry S. Pritchett, vice chairman; Frederic A. Delano, secretary. The executive committee included: Henry S. Pritchett, chairman; Frederic A. Delano, W. Cameron Forbes, Cass Gilbert, John C. Merriam, Frederic C. Wolcott, Stewart Paton, and Elihu Root. Headquarters are at Sixteenth and P Streets, N. W., Washington, D. C.

CAROLINE ISLANDS. An archipelago of about 549 coral islands in Micronesia, Pacific Ocean, extending from the Philippine Islands eastward to the Marshall Islands, having a total area of about 550 square miles, transferred from Germany to Japan under mandate of the League of Nations by the Versailles Peace Treaty. Total population about 38,647. The islands have been divided into two groups for administrative purposes (1) Eastern Carolines, with Truk (15,973 inhabitants) and Ponapé (8910) as administrative centres; (2) Western Carolines, with Palau (8101) and Yap (6735) as centres for administrative purposes. Yap is an important wireless and cable station. The chief exports are sugar, copra, and phosphate.

CARRIER-BELLEUSE, kă'r'ya-bél'üz, **PIERRE ALBERT GÉRARD.** A French painter, died Jan. 1, 1933, in Paris where he was born Jan. 29, 1851. A son of Albert Ernest Carrier-Belleuse, the sculptor, he studied at the École des Beaux Arts under Cabanel and in the atelier of Galland, the decorator, and after 1875 was a regular exhibitor at the Salon. His versatility was displayed in his landscapes and genre studies, his portraits, and his pastels and paintings of dancing figures and nudes, many of which were purchased by the French government and placed in museums in France and abroad. Among the more noteworthy of these were: "Au Soleil fantaisie" (at Le Puy); "Une Danseuse" (La Rochelle); "Le Bonnet d'âne" (Mulhausen); "Le Miroir" (Versailles); "La Danseuse attachant son soulier" (Dunkirk); and "Tendre aveu" (Museum of the City of Paris). He contributed also to *Figaro* and other illustrated journals.

Carrier-Belleuse gained special renown for his three great panoramas—"Lourdes" (1880), "Jeanne d'Arc" (1889), and "Le Panthéon de la Guerre" (1919). The latter, executed in collaboration with Auguste François Gorguet, was painted during the four years of the World War for the purpose of keeping up the morale of the French people. It contained 6000 portraits of Allied generals, heroes, statesmen, and members of royal families, grouped by countries against a panorama of the Western Front, and enabled some 20 artists who were unable to bear arms to perform a patriotic service. In 1927 the enormous canvas, measuring 396 by 45 feet, was brought to the United States for exhibition in New York and other cities, and in 1931 was purchased by citizens of Washington for display during the Washington Bicentennial.

Among the honors conferred on Carrier-Belleuse were officer of the Legion of Honor, chevalier of the Order of Leopold of Belgium, and commander of the Order of Danilo of Montenegro. He was also a past president of the International Society of Painting and Sculpture.

CARS. See AUTOMOBILES; RAILWAYS.

CASE SCHOOL OF APPLIED SCIENCE.

An engineering college in Cleveland, Ohio, founded in 1880. In the autumn of 1933 the enrollment was 625. The 1933 summer session registration was 117. The faculty numbered 79. The endowment amounted to \$4,500,000, while the net income for the year was \$118,617. The library contained 25,000 volumes. President, William Elgin Wickenden, D. Eng., D.Sc. LL.D.

CASUALTY INSURANCE. See INSURANCE.

CATALONIA (CATALUNA). An autonomous region occupying the northeastern corner of the Spanish Republic, comprising the Provinces

of Barcelona, Gerona, Lérida, and Tarragona. The area is 12,427 square miles. The population on Dec. 31, 1931, was estimated at 2,798,751. Barcelona, the capital and chief city, had 991,262 inhabitants on the same date. The city is the centre of a thriving industrial, commercial, and agricultural region. Catalonia's autonomous status was defined in the Catalan Statute approved by the Spanish Cortes Sept. 15, 1932. It provided for a Parliament of 85 members, a President elected by the Parliament, and an Executive Council. Castilian (Spanish) and Catalan are official languages. The first Parliament was elected Nov. 20, 1932, and convened Dec. 6, 1932. President in 1933, Col. Francisco Macia, elected Dec. 14, 1932. For developments in 1933, see SPAIN under *History*.

CATHOLIC UNIVERSITY OF AMERICA, THE. A national institution of higher education in Washington, D. C., founded in 1887 by the Roman Catholic hierarchy with the approval of the Holy See. The enrollment for the autumn term of 1933 was 1388, distributed in the following schools: Graduate school of sacred sciences, 23; seminary, 100; canon law, 25; law (coeducational), 64; engineering, 142; arts and sciences, 397; and graduate school of arts and sciences (coeducational), 637. The enrollment for the summer session (coeducational) of 1933 was

CATTLE. See DAIRYING; LIVESTOCK; VETERINARY MEDICINE.

CELEBES. See NETHERLAND INDIA.

CELTIC LITERATURE. See PHILOLOGY, MODERN.

CEMENT. The preliminary estimates of production for the Portland cement industry in the United States, compiled by the U. S. Bureau of Mines, showed decreases of 17.4 per cent in production and 20.7 per cent in shipments during the year below the final totals for 1932. The production in 1933 was estimated at 63,373,000 barrels as against a final total of 76,741,000 barrels in 1932, and the shipments from mills at 64,086,000 barrels against 80,843,000 barrels in 1932. During the calendar year the production as related to mill capacity was 23.6 per cent as against 28.3 per cent in 1932. In addition to Portland cement, the production of clinker (unground Portland cement) was 62,965,000 barrels as compared with 75,004,000 barrels in 1932.

Exports of hydraulic cement from the United States in 1932 were 374,581 barrels, valued at \$802,205, with imports for that year amounting to 462,496 barrels valued at \$351,033. For the first eleven months of 1933 exports were 614,486 barrels valued at \$1,336,572, with imports for the same period of 416,479 barrels valued at \$342,110.

ESTIMATES OF PRODUCTION AND SHIPMENT OF FINISHED PORTLAND CEMENT BY DISTRICTS
[Quantities in thousands of barrels]
(U. S. Bureau of Mines, Revised, Jan. 13, 1934)

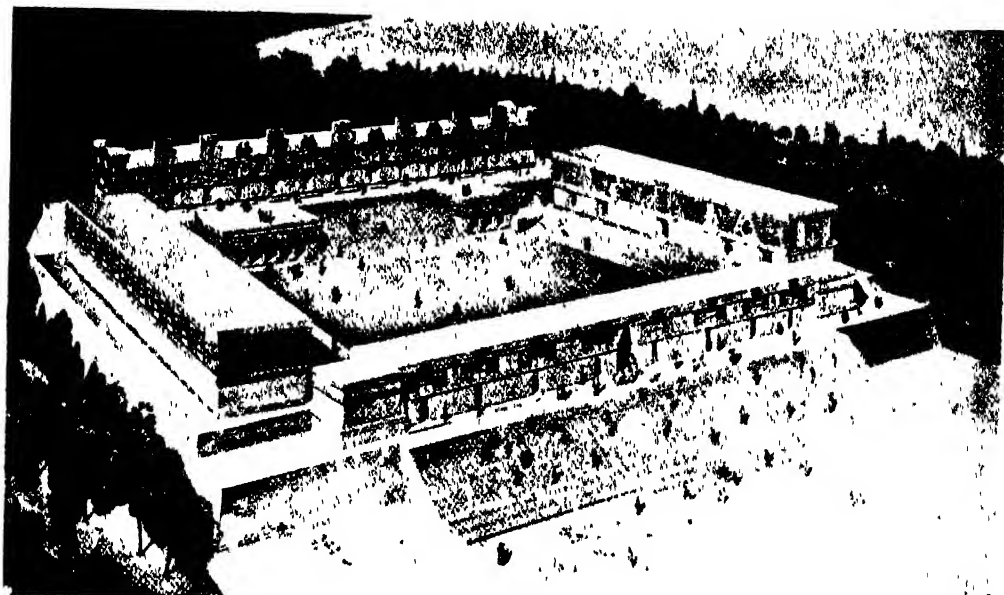
Districts	Production		Shipments	
	1933	1932	1933	1932
Eastern Pennsylvania, New Jersey and Maryland	11,738	16,192	11,878	17,312
New York and Maine	4,581	6,613	4,343	6,522
Ohio, West Pennsylvania, and West Virginia	5,417	6,695	5,792	7,211
Michigan	3,716	4,296	3,566	4,887
Wisconsin, Illinois, Indiana, and Kentucky	7,871	10,611	8,168	11,287
Virginia, Tennessee, Alabama, Georgia, Florida, and Louisiana	5,663	5,597	5,801	5,821
Eastern Missouri, Iowa, Minnesota, and South Dakota	7,315	9,001	7,071	9,849
Western Missouri, Nebraska, Kansas, Oklahoma, and Arkansas ..	4,817	5,651	4,886	5,522
Texas	2,973	3,748	3,091	3,798
Colorado, Montana, Utah, Wyoming, and Idaho	1,234	1,271	1,414	1,238
California	7,142	5,482	7,115	5,730
Oregon and Washington	906	1,584	961	1,666
Total	63,373	76,741	64,086	80,843

1131. Affiliated with the university is the Catholic Sisters' College (205 students); Trinity College for Women (285 students); National Catholic School of Social Service (48 students); and 34 religious houses of study in the immediate vicinity with an enrollment of about 1050 students. In addition, there are affiliated throughout the United States 5 seminaries, 33 colleges, 203 high schools and academies, 4 junior colleges, 4 normal schools, and 56 novitiates.

The university is governed by a board of trustees (archbishops, bishops, priests, and laymen) through the rector, who is advised by an academic senate composed of representatives (lay and clerical) of the various faculties. The faculty of the university proper numbered 148, of whom 34 were full professors. The endowment amounts approximately to \$3,300,000, plus an annual collection of about \$345,000. The library contained 319,000 volumes. Administrative officer: The Most Rev. Michael J. Curley, S.T.I., chancellor; the Most Rev. James H. Ryan, Ph.D., S.T.D., LL.D., Litt.D., rector; the Rt. Rev. Edward A. Pace, Ph.D., S.T.D., LL.D., vice rector; the Rt. Rev. David T. O'Dwyer, procurator; and Prof. Richard J. Purcell, Ph.D., general secretary.

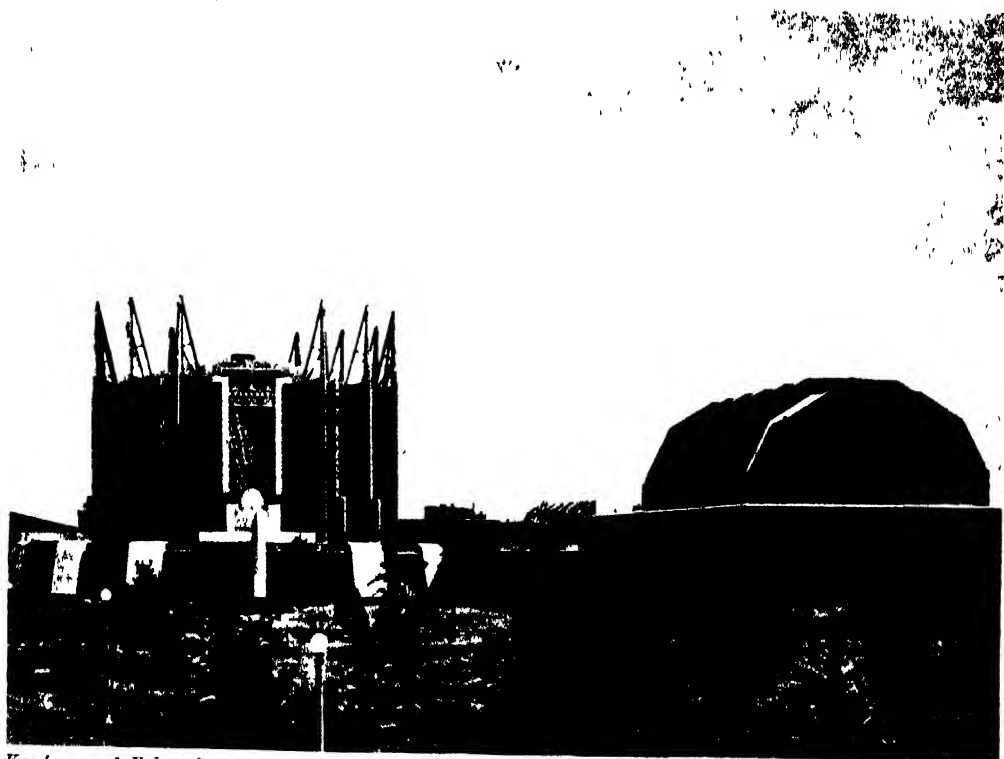
CENTENARIES. The centenary of the death of William Wilberforce and of the passing of the Act for the abolition of slavery within the British possessions, was marked by special services, including one in St. Paul's Cathedral on Sunday afternoon, July 16. At Hull there was a procession past the birthplace of Wilberforce and the Hull Grammar School where he was educated, and the Archbishop of York preached at Holy Trinity Church. There was also a service at Westminster Abbey, while the Bishop of Rochester preached at the Parish Church, Keston, Kent, which village includes Holmwood Park, where stands an oak tree beneath which Wilberforce made his first resolution to proceed with the agitation for the abolition of slavery.

Another centenary observed in July was that of King William's College, Isle of Man, the Archbishop of York preaching in the college chapel. The Tercentenary of George Herbert, the parson-poet, was celebrated at Fugglestone Church, near Salisbury, by a special service at Montgomery Church in which the Archbishop of Wales took part, and at Westminster Abbey. The White Cross League celebrated its jubilee in December. The jubilee of the Restoration of the



THE MAYA TEMPLE

A Replica of the Nunnery at Uxmal, a Maya City of Yucatan



Kaufmann & Fabry Company

THE TRAVEL AND TRANSPORT BUILDING AND DOME

The dome is 125 feet high and 200 feet across, without a single arch, pillar, beam, or other support to break its expanse. The hall at the right is 1000 feet long and windowless.

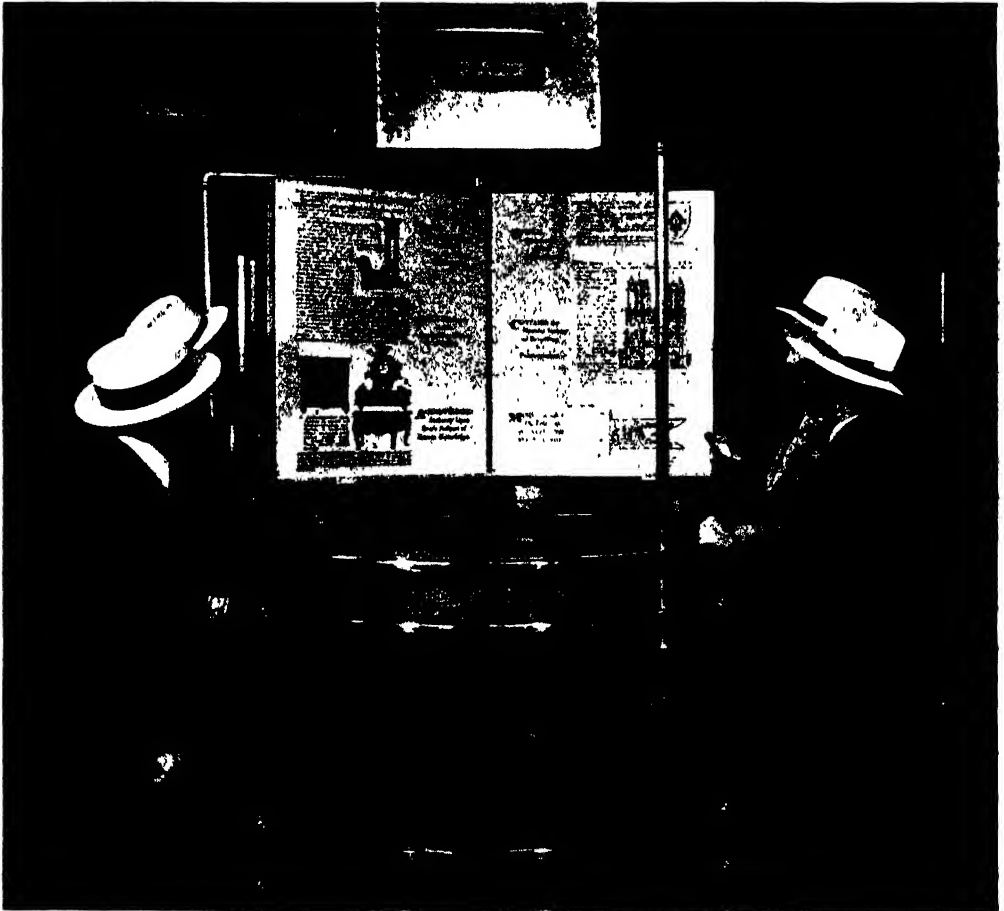
CENTURY OF PROGRESS EXPOSITION



Kaufmann & Fabry Company

FORT DEARBORN

A Reproduction of Fort Dearborn, the Original Site of Chicago



Kaufmann & Fabry Company

THE NEW STANDARD DICTIONARY "WITH THE ELECTRIC EYE"

A feature in the exhibit of the Funk & Wagnalls Company. A moving ribbon at the top carries a list of words. When one appears that interests the visitor he breaks the beam of light projected from the hole in the base by interposing his hand or some other object. Actuated by a selenium cell the enlarged replica of the Dictionary then opens to the page upon which the definition of the word is found.

English Church at The Hague was observed on October 19. See also CENTURY OF PROGRESS EXPOSITION.

CENTRAL AMERICA. The term generally applied to the southern portion of the North American Continent lying to the north of the Panama Canal and south of the Isthmus of Tehuantepec in Southern Mexico, and consisting of the five states, Costa Rica, Guatemala, Honduras, Nicaragua, and Salvador, and the British crown colony of British Honduras. See the articles on these respective countries.

CENTRAL AUSTRALIA. See NORTHERN TERRITORY OF AUSTRALIA.

CENTRAL VALLEY CONSTRUCTION PROJECT. See DAMS.

CENTURY OF PROGRESS EXPOSITION.

As announced in the NEW INTERNATIONAL YEAR BOOK for 1932, the city of Chicago, Ill., celebrated its hundredth anniversary by the opening of an exhibition which was designed to portray the advancements in arts, science, and industry in the hundred years that had passed since the date of the founding of the city. The exposition was located on the shore front of Lake Michigan, much of it on islands and causeways dredged up from the Lake, and stretched from Twelfth Place, near the heart of the city, southward about 3½ miles to Thirty-ninth Street. Specially built busses to accommodate a hundred passengers carried visitors to various points. In the main, the buildings for housing exhibits were huge structures, impressive more by size and architectural originality and daring than by beauty. The sheer starkness of wall, unrelieved by window openings, was in part overcome by a lavish use of vivid color, by great figures in bas relief, and by a liberal use of columns, panels, buttresses, and lines. Such architectural treatment, almost glaring by day, lent itself beautifully to a brilliant illumination by night that transformed buildings and grounds into a fairyland of color and light. This was accomplished by the use of millions of incandescent lights, by artfully placed flood lights in varying colors, and by the employment of literally miles of neon tubes. The lake front was transformed into a multi-colored panorama of light, with electrical cascades, flaming pylons, and scintillating colors.

Among the most impressive of the buildings were: the Administration Building, a modernistic "E" shaped structure; the Hall of Science, a great "U" shaped building on Leif Ericson Drive; the unique Travel and Transport Building, whose dome was supported by cables rather than pillars. Located on Northerly Island was the Electrical Group, composed of three units—the Radio, Communications, and Electrical Buildings. Among other prominent structures were included the Agricultural Group, the Music Group, in which the greatest music festival in the history of America was offered to visitors, the Court of the States, an international village, numerous buildings for industrial exhibits, and a miniature city demonstrating housing conditions. Especially interesting was the replica of old Fort Dearborn whose log battlements stood in vivid contrast to the skyscrapers of Michigan Boulevard. The story of the Indian from his primitive state to his most highly developed civilization was also shown. A large zone was devoted to amusements of every description, and the sports programme planned was most varied.

A Century of Progress was fortunate in having

a heritage of permanent buildings near the Fair grounds—the Field Museum, the Shedd Aquarium, the Adler Planetarium, and the Art Institute. Soldier Field, the great stadium for athletic exhibits and contests was also near by.

More than \$38,647,836 was invested in the construction of buildings, the preparation and installation of exhibits, attractions, and organization expense prior to its opening by A Century of Progress and by governments, exhibiting corporations and concessionaires who participated in the 1933 World's Fair. The Exposition expended \$4,783,839 in operating and maintaining the Fair for the 170 days of its duration. The cost of operation by governments, exhibiting corporations, and concessionaires undoubtedly exceeded that figure. Combined, these expenditures would total at least \$10,000,000. More than \$37,270,000 was spent by visitors for gate admissions and concessions. (Of this, \$27,985,518 represented concessions and \$10,175,007 admissions.) The Exposition sold 22,565,859 admissions, of which 245,403 tickets were unredeemed.

The success of the 1933 Exposition in a time of grave uncertainty was a demonstration that the nation's powers and resources were unimpaired. The importance of a Century of Progress Exposition in encouraging the nation's economic upturn was evident in the stimulation which it imparted to transportation. More than 4,000,000 passengers were brought to Chicago by the railroads during the 170 days' duration of the Fair. Figures compiled by the passenger associations covering the operations of 11 railroads reaching Chicago show that 24,240 extra railroad and Pullman cars were required to handle this traffic in addition to the normal complement of the various trains. Six railroads alone reported that nearly 5000 extra men were employed in various branches of the service. In addition to the visitors who were brought by rail, it is estimated that 4,000,000 people came to Chicago by automobile during the Exposition, and that 1,000,000 were brought by motor bus.

A complete check-up of actual exhibit attendance was not possible, but estimates and records compiled by some of the exhibitors revealed interesting results. One of the leading automobile manufacturers reported that 10,000,000 people, or nearly 50 per cent of the total paid admissions to the Fair, had visited their building and viewed their exhibit. A similar number were reported to have visited the special building and exhibit of a leading tire and rubber manufacturer. Records of a great mail order company indicated that 7,000,000 visitors had entered its special building and saw its exhibits. Five million people, it was estimated, visited the exhibit of an electric and manufacturing company in the Electrical Building. Two exhibit trains in the outdoor transportation area recorded a combined attendance of visitors in excess of 5,000,000. Between 12,000,000 and 15,000,000 people are believed to have visited the exhibits in the States Building. The largest percentage of all people entering the grounds, it is believed, visited the Hall of Science.

Approximately 22,000 people were employed on the grounds of a Century of Progress during the peak of the operating period in 1933. It is estimated that jobs for approximately 100,000 workers were created either directly or indirectly in Chicago and adjoining areas during the Exposition as a result of its operations. Of the persons employed on the Fair grounds, 8777 were

employed by the Exposition and 15,000 by exhibitors and concessionaires. During the pre-Fair period thousands of persons were employed by contractors in the construction of the Exposition and in the preparation and installation of exhibits and concessions.

The Exposition exerted such a profound influence during its 1933 operation that a demand for its continuance in 1934 was made by civic bodies, business organizations, and leading citizens in Chicago and elsewhere. It was believed that the Exposition had the effect of encouraging education on a widespread scale, that it benefited business materially, and was an important contributor to the nation's economic upturn. Hence, its sponsors announced that A Century of Progress Exposition will reopen its gates on June 1, 1934. See ART EXHIBITIONS; ELECTRICAL ILLUMINATION; ARCHITECTURE.

CERMAK, châr'mäk, ANTON JOSEPH. An American politician, died in Miami, Fla., Mar. 6, 1933. He was born at Kladno, Bohemia (now part of Czechoslovakia), May 9, 1873, and a year later was brought by his parents to the United States where they settled in the coal-mining town of Braidwood, Ill. At the age of 11 he began work in a mill, and when 12 became a mule driver in the coal mines. Discharged two years later for taking part in a strike, he was successively a railroad brakeman and teamster. In 1892 he engaged in the coal and wood business in Chicago, leaving it in 1908 to enter the real estate field as a member of the firm of Cermak and Serhant. After 1907 he was president of the Lawndale Building and Loan Association.

Early interested in politics, Mayor Cermak was elected a member of the House of Representatives of the 43d, 44th, 45th, and 46th Illinois General Assemblies. From 1912 to 1918 he served on the Chicago City Council and from 1922 to 1931 was president of the Cook County Board of Commissioners. In 1931 he was overwhelmingly elected on the Democratic ticket for a four-year term as mayor of Chicago. One of his first and most important acts was to reduce municipal expenditures in an attempt to bring order out of the city's financial chaos, the legacy of the Thompson administration. He also strove for greater efficiency in government so as to re-establish the city's credit, and preparatory to the opening of the Century of Progress Exposition was successful in curbing the activities of its gangsters, bootleggers, gamblers, and grafters, winning thereby for Chicago a new and more genuine respect both nationally and internationally.

Mayor Cermak was taking a vacation in Miami when President-elect Franklin D. Roosevelt arrived there on Feb. 15, 1933. In the attempt to assassinate Mr. Roosevelt made by Giuseppe Zangara, a half-crazed hater of officialdom, Cermak received one of the bullets, and after a vigorous struggle for life succumbed 19 days later. The world will long remember his gallant words to Mr. Roosevelt: "I am mighty glad it was me instead of you."

CERRETTI, BONAVENTURE, CARDINAL. A prince of the Roman Catholic Church, died in Rome, May 8, 1933. He was born at Orvieto, Italy, June 17, 1872, and, after attending the Pontifical Seminary at the Vatican, was ordained a priest in 1895. In 1904 he started his career in the Papal diplomatic service, first, until 1906, as secretary of the Apostolic delegation to Mexico

and then, until 1914, as auditor of the Apostolic delegation in Washington, D. C. In this service he traveled extensively throughout the United States and familiarized himself with the character and conditions of the American people. In 1914 he was created Archbishop of Corinth, and Apostolic Delegate to Australasia. In 1917, as Papal Secretary for Extraordinary Affairs, he carried out programmes for ameliorating the condition of prisoners of war, and during the Paris Peace Conference acted as Papal envoy in the interests of Catholic missions.

Upon the reestablishment of diplomatic relations between the Vatican and France in 1921 Cerretti was sent to Paris as Papal Nuncio, and in the next five years was so notably successful in overcoming anti-clerical opposition that the French government honored him with the Grand Cross of the Legion of Honor. In 1925 he was created a Cardinal and three years later went to the Eucharistic Congress at Sydney, New South Wales, Australia, as Papal Legate. In 1931 he was made keeper of the Papal Seal, and in 1933 was proclaimed a Cardinal-Bishop.

CEYLON, sê-lôn'. A British island crown colony in the Indian Ocean, southeast of the southern tip of India. Total area 25,332 square miles; population (exclusive of military and shipping) 5,306,863 at the partial census of Feb. 26, 1931. In 1931 there were 199,170 registered births; 117,453 registered deaths; 24,544 registered marriages (exclusive of Moslem marriages which are seldom registered). The population of the chief cities (excluding the military, shipping, and estates) at the census of 1931 was: Colombo, the capital, 284,155; Jaffna, 45,708; Galle, 38,424; Kandy, 36,541. Education is free in the vernacular schools; attendance at 1528 primary schools was 586,047 for 1931.

PRODUCTION. Agriculture is the chief industry, about 3,200,000 acres are devoted to the cultivation of rubber, tea, rice, cacao, tobacco, coconuts, spices, areca nuts, and sugar cane. Large quantities of rice are imported. In 1931 livestock included 1,580,000 horned cattle, 194,000 goats, 65,000 sheep, 41,000 swine, and 1100 horses. Plumbago mines reported working at the end of 1932 numbered 22, and some monazite and small-gem deposits are exploited. Manufacturing is confined to the production of agricultural commodities such as coconut oil, cacao, rubber, etc.

COMMERCE. Due mainly to the fall in world prices the value of foreign trade for 1932 continue to show a decline; excluding specie, imports totaled 196,202,961 rupees and exports totaled 173,208,745 rupees (rupee averaged \$0.2635 for 1932). Great Britain took 49 per cent of the exports and supplied 19 per cent of the imports.

FINANCE. Exclusive of railway earnings and expenses, government revenue for 1931-32 totaled R,84,843,207; government expenditure totaled R,97,056,079. Railway revenue was R,22,024,335 and railway expenditure was R,20,587,646. On Sept. 30, 1932 the net total public debt was R,130,043,195.

COMMUNICATIONS. At the end of 1932 there were 951 miles of railway open to traffic; several new lines were surveyed. There are about 16,500 miles of highways and 8200 miles of bridle paths. There were 3778 ships aggregating 12,160,339 tons entered the ports in 1932.

GOVERNMENT. The administration of the island is in the hands of a governor, aided by a state

council, having both executive and legislative functions, consisting of 61 members of whom 50 are elected, 8 are nominated unofficial members, and 3 officers of state (chief secretary, legal secretary, and financial secretary). Only 46 of the 50 electoral seats were filled at the general election of June 1931, as 4 constituencies in the Jaffna Revenue District failed to nominate candidates. Governor Sir Graeme Thomson, who died on Sept. 28, 1933, was succeeded by Sir R. E. Stubbs.

MALDIVÉ ARCHIPELAGO. A chain of coral islands (atolls) about 400 miles southwest of Ceylon. Land area about 115 square miles; population (census of 1931), over 79,000 Moslems. The chief products are millet, coconuts, coconut fibre, cowrie shells, tortoise shell, and esculent roots. Government is in the hands of an elected native Sultan, who resides on the island of Malé. The islands pay an annual tribute to the Ceylon government.

CHACO DISPUTE. See BOLIVIA and PARAGUAY under *History*; PAN AMERICAN CONFERENCE.

CHAD. See FRENCH EQUATORIAL AFRICA.

CHAIN STORES. See TAXATION.

CHAMBER MUSIC. See MUSIC.

CHAMBER OF COMMERCE OF THE UNITED STATES. A national federation of trade associations and local or regional commercial organizations, established in 1912 primarily as a vehicle for the expression of national business opinion on important economic questions. The membership in 1933 consisted of 1251 business organizations, 4100 individual members, and 2824 associate members.

The chamber maintains at its national headquarters in Washington 12 service departments, covering the main divisions of business activity. The agriculture department aids local chambers of commerce in the solution of agricultural problems and the enhancement of trade-area prosperity. The civic development department aids business men to approve not only local municipal and civic development but matters of general national importance. The commercial organization department assists member chambers in strengthening their organizations and extending their usefulness to the communities which they serve. The department of manufacture assists member organizations with their problems of industrial extension. The domestic distribution department promotes better methods of distribution. The finance department studies methods of Federal, State, and local taxation and problems of corporation and international finance.

There are also the foreign commerce department which deals with tariff policies and import and export problems; the insurance department which works to secure a more enlightened public attitude toward the insurance institution; and the natural resources production department which deals with the problems of water power, oil, coal, forest, and other natural resources. The trade association department serves as a clearing house as to the activities which a trade association can carry out most effectively, while the transportation and communication department studies problems of rail, highway, waterway, and air transportation and of postal service and electrical communications. The research department covers the general field of economic research, issues from time to time reports on economic subjects, and publishes a monthly magazine, *The Nation's Business*.

The chamber's twenty-first annual meeting was held in Washington, D. C., May 2-5, 1933. The officers elected for the year 1933-34 were: president, Henry I. Harriman, Boston, Mass.; honorary life vice-president, John Joy Edson, Washington, D. C.; vice-presidents, Matthew S. Sloan, Brooklyn, N. Y., Junius P. Fishburn, Roanoke, Va., Felix M. McWhirter, Indianapolis, Ind., F. Peavey Hefelfinger, Minneapolis, Minn., Wm. V. Hodges, Denver, Colo., Paul Shoup, San Francisco, Calif.; members of the senior council, Richard F. Grant, New York City, John W. O'Leary, Chicago, Ill., Lewis E. Pierson, New York City, William Butterworth, Moline, Ill., Silas H. Strawn, Chicago, Ill.; treasurer, Robert V. Fleming, Washington, D. C.; chairman of the executive committee, Henry I. Harriman, Boston, Mass.; and secretary, D. A. Skinner, Washington, D. C. National headquarters are in Washington, with divisional headquarters in New York City, Atlanta, Chicago, Minneapolis, Dallas, and San Francisco.

CHAMBERS, ROBERT W (ILLIAM). An American novelist, died in New York City, Dec. 16, 1933. He was born in Brooklyn, N. Y., May 26, 1865, and began his career as an artist after studying at the Académie Julian, Paris, during 1886-93. He became an illustrator for various New York weeklies, including *Life*, *Truth*, and *Vogue*, but soon practically abandoned the brush for the pen. From the historical-romantic style which he adopted in his early novels he became known as the American Anthony Hope (q.v.). Among the more successful of his 72 novels were: *In the Quarter* (1893); *The King in Yellow* (1893); *The Red Republic* (1894); *A King and a Few Rulers* (1894); *The Maker of Moons* (1895); *Lorraine* (1896); *The Cambric Mask* (1899); *The Conspirators* (1900); *Cardigan* (1901); *The Maid-at-Arms* (1902); *The Fighting Chance* (1906); and *The Firing Line* (1908).

After 1910 Mr. Chambers turned more and more to the so-called society type of novel, publishing *Aulsa Page* (1910); *The Green Mouse* (1910); *Streets of Ascalon* (1912); *Adventures of a Modest Man* (1913); *The Common Law* (1913); *Gay Rebellion* (1913); *The Business of Life* (1913); *The Hidden Children* (1914); *The Better Man* (1915); *The Dark Star* (1915); *The Restless Sea* (1917); *In Secret* (1918); *The Crimson Tide* (1919); *Slayer of Souls* (1920); *Little Red Foot* (1921); *The Hi-jackers* (1923); *The Girl in Golden Rags* (1924); *The Man They Hanged* (1925); *The Drums of Aulone* (1926); *The Sun Hawk* (1927); *The Rogues' Moon* (1927); and *The Happy Parrot*. He wrote also a play, *The Witch of Ellangowan*, in which Ada Rehan appeared at Daly's Theatre, New York City, in 1897. In 1913 a musical comedy adaptation of his novel *Iole* (1905) was produced. He was a member of the National Institute of Arts and Letters.

CHAMPIONSHIPS. See ATHLETICS, BOXING, BASEBALL, ETC.

CHANDERNAGOR. See FRENCH INDIA.

CHANNEL ISLANDS. See GREAT BRITAIN.

CHAPMAN, JOHN JAY. An American author, died at Poughkeepsie, N. Y., Nov. 4, 1933. Born in New York City in 1862, he was graduated from Harvard in 1884 and practiced law for ten years after his admission to the bar in 1888. On the successful reception of *Emerson and Other Essays and Causes and Consequences* in 1898 he turned definitely to literature, achieving fame

for the marked originality and felicity of expression of his work. Outstanding among his volumes of essays were: *Learning and Other Essays* (1911); *Greek Genius and Other Essays* (1915); *A Glance toward Shakespeare* (1922); *Letters and Religion* (1923); and *Dante* (1927). He wrote in verse *Homeric Scenes* (1914) and the plays, *The Maid's Forgiveness* (1908); *A Sausage from Bologna* (1909); and *Benedict Arnold: A Play for a Greek Theatre* (1909). In 1913 he published a biography of William Lloyd Garrison and in 1915 his memoirs under the title of *Memories and Milestones*.

CHAUTAUQUA INSTITUTION. An educational movement established at Chautauqua, N. Y., in 1874 by Lewis Miller and Bishop John H. Vincent, both prominent in the Methodist Episcopal Church. Its original idea was that of an assembly for Sunday school teachers, but it was gradually developed into an institution affording during the summer months a series of correlated lectures and entertainments. The three general fields of activity are the general assembly, consisting of an educational and popular series of lectures and addresses, symphony orchestra and other concerts, operas, plays, and so forth; the summer school, offering in its 18 departments credit courses under the direction of New York University; and a home-reading circle, in which four or more outstanding books are designated for reading during the year, in addition to a news narrative appearing in a monthly review. The attendance at the annual session is approximately 40,000, while the enrollment in the summer school is about 1500. The officers in 1933 were: George E. Vincent, honorary president; Arthur E. Bestor, president; William L. Ranson, chairman of trustees; Shailer Mathews, chairman of the executive board; Charles E. Pierce, secretary; and Jessie M. Leslie, treasurer.

CHELMSFORD, chémz'fêrd, FREDERIC JOHN NAPIER THESIGER, 1st VISCOUNT. A British administrator, died in London, Apr. 2, 1933. Born Aug. 12, 1868, he was educated at Oxford, where he studied law at Magdalen College and was Fellow of All Souls College from 1892 to 1899. In addition to his law practice he served as a member of the London School Board (1900-04) and of the London County Council (1904-05). In 1905, when he succeeded his father to the title as 3d Baron Chelmsford, he was appointed Governor of Queensland, Australia. In 1909 he was transferred to the governorship of New South Wales, where he remained until 1913. After serving in India with the Dorsetshire regiment during the early part of the World War he was appointed Viceroy of that country in 1916.

Chelmsford's five-year incumbency of the viceroyalty was distinguished by the report on certain constitutional changes for the extension of India's self-government, which he drew up in co-operation with Edwin S. Montagu, Secretary of State for India. This report, after advocating complete responsibility in local affairs and partial responsibility in provincial affairs, visioned a United States of India, self-governing in all matters of purely provincial interest and presided over by a central authority, representative of and responsible to the people of the whole country. It was approved by the Indian government and certain of its provisions were carried out in 1920-21 through the appointment of new governors for the provinces and the replacement of the viceroy's legislative council by two new

representative bodies in Parliament, the Council of State and the Imperial Legislative Assembly, composed largely of members directly elected by the constituencies. It was rejected, however, by the Indian National Congress under Gandhi, and this congress after the Amritsar disturbances of 1919 recommended the recall of the Viceroy.

On his retirement in 1921 Chelmsford was created a viscount. He had previously been made Knight Commander of St. Michael and St. George (1906), Knight Grand Commander of the Indian Empire (1916), Knight Grand Commander of the Star of India (1916), and Knight of the Grand Cross of the Order of the British Empire (1918). During the last decade of his life he held the portfolio of First Lord of the Admiralty in Ramsay MacDonald's Labor Ministry of 1924, was Agent General for New South Wales in London during 1926-28, and in 1930 was elected warden of Winchester College and in 1932 of All Souls College, Oxford.

CHEMICAL INDUSTRY, SOCIETY OF. See CHEMISTRY, INDUSTRIAL OR APPLIED.

CHEMISTRY. During 1933 distinct progress was made in the field of chemistry. Among the most notable achievements was the preparation of "heavy" water, together with a study of its properties and its effect upon organisms. Marked advances were made also in the study of the structure of matter and of transmutation. The neutron and the positron are of particular interest. These advances and many others are outlined in the account which follows.

THE ATOM AND ITS TRANSFORMATION. According to present knowledge, an atom appears to be composed of the following building "blocks":

(1) *Protons.* The proton is electrically positive and is a hydrogen atom which has lost an electron (H^+). Its weight is approximately 1 (oxygen = 16).

(2) *Electrons.* The electron is electrically negative. Since a hydrogen atom weighs as much as about 1850 electrons, the weight of the electron is negligible.

(3) *Neutrons.* The neutron is electrically neutral and has a mass which is estimated to be slightly greater than unity. It appears to consist of a proton and an electron bound or packed together. We are not certain what the neutron is, but its mass is about that of the proton. Artificial production of considerable quantities of neutrons has been accomplished at the California Institute of Technology. The metal beryllium was disintegrated by means of alpha-particles, or nuclei of helium atoms (He^{++}).

(4) *Positrons.* Blackett and Occhialini, of the Cavendish Laboratory at Cambridge University, announced in February, 1933 that cosmic rays consist in part of *positive electrons*. The findings of these investigators in some respects were not entirely new, for Carl D. Anderson, of the California Institute of Technology, in the autumn of 1932, reached the tentative conclusion that cosmic rays include positive particles. The name *positron* has been given to the positive electron. It has the charge of a proton but the mass of an electron. Positrons are produced in certain types of collision processes. They appear to originate in some type of atomic or nuclear process brought about by the incident cosmic radiation. Positrons are also produced when the radiation from a beryllium target is bombarded by alpha-particles. It may be that the positron is of great importance in building up atomic nuclei.

The mass of the atom depends almost entirely upon the nucleus. While the atom is exceedingly small, it is immensely larger than the nucleus. Not only does the nucleus hold the mass of the atom, but it is the centre which holds the rest of the atom together. Outside the nucleus there is relatively an enormous volume filled with almost nothing.

In order to bring about transmutation a successful attack must be made upon the nucleus of an atom.

The recent discovery by Cockcroft and Walton, at the Cavendish Laboratory, that high velocity protons have a remarkable effect in producing atomic transmutations has led to a great extension of work in this field.

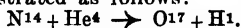
In order to accomplish atomic transmutation it is necessary to change in some way the structure of the nucleus. This may be done by adding to or subtracting from the nucleus one of its constituent particles, "whether a proton, neutron, alpha-particle or electron, or to substitute one of these particles for one of the existing units of the nuclear structure." It is therefore necessary for one of these particles to penetrate the atomic nucleus or heart of the atom. In order to get through the formidable defenses of the nucleus, the particles must move with very high velocities—of the order of 10,000 kms/sec.

As far back as 1919 Rutherford and Chadwick, of Cambridge University, bombarded certain light elements with alpha-particles from radioactive bodies, and it was observed that an alpha-particle occasionally entered the nucleus, leading to the expulsion from it of a swift hydrogen nucleus, or proton. It appeared that only about one alpha-particle in a million was effective in disintegrating the nucleus.

In later experiments protons were found to be effective in disintegrating the nucleus. It is important to produce *high-speed* protons, for the probability of a proton entering a nucleus diminishes with decreasing velocity and with increasing mass of the nucleus subjected to bombardment. Gamow advanced a theory which showed that, "whilst alpha-particles would require to be accelerated by potentials of the order of five million volts to penetrate a light nucleus, protons accelerated by one-tenth of this voltage ought to be almost as efficient, owing to their smaller mass and charge."

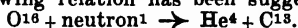
Let us now consider some of the types of transformation which are produced by the bombardment of atomic nuclei.

In the case of alpha-particles it is believed that an alpha-particle is occasionally captured by an atomic nucleus. This produces a violent disturbance, followed by the expulsion of one of the constituent protons at high speed. Thus, in the case of nitrogen the alpha-particle, which is a helium nucleus (He^{++}) of mass 4 carrying two charges, is captured by the nitrogen nucleus of mass 14 and charge 7, and a proton of mass 1 and charge 1 is expelled. The changes which occur may be illustrated as follows:



As a result of the change a new nucleus is formed of mass 17 and charge 8, which is an isotope of oxygen.

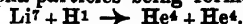
Since the neutron has no charge, it is able to pass freely through the outer structure of atoms and can penetrate deeply into matter. It is therefore a very efficient projectile in the transformation of other atoms. For example, oxygen, which is apparently not affected by bombardment either by alpha-particles or protons, is disintegrated by the neutron, an alpha-particle being emitted. The following relation has been suggested:



An isotope of carbon (C^{13}) is formed.

The proton has been found to be quite efficient in the disintegration of light metals. In general, it has been observed that when a proton enters a nucleus an alpha-particle is expelled. Thus, when lithium (Li^7) is bombarded by protons, it

appears that the lithium nucleus captures a proton, two alpha-particles being formed:



When boron is subjected to a stream of protons, it is probable that the following relation holds:



It thus appears that the boron isotope of mass 11 occasionally captures a proton and then disintegrates into three alpha-particles.

Deutons, the nuclei of the heavy hydrogen atom, H_2 , are very effective in bombarding substances. They are fired at high voltage. When deutons are used instead of helium nuclei (He^{++}), there are released from beryllium 500 times as many neutrons as ever before obtained. The deuton apparently penetrates the nucleus of the beryllium atom and transforms it into boron. When lithium was bombarded by deutons, it yielded neutrons even in greater abundance than did beryllium, helium being the by-product.

Since neutrons are knocked out at very high voltages they would appear to be the ideal tool in atomic disintegration.

Professors F. Paneth and P. L. Günther, of the University of Königsberg, reported in *Nature* that they had obtained the first *chemical evidence* of artificial transmutation. They passed helium (He^{++}), given off by thorium B and thorium C, through paraffin and got a surplus of helium—in some cases as much as 100 per cent increase. They were able to detect the helium by very refined chemical methods.

ENERGY INTO MASS. According to the theory of relativity, as propounded by Einstein, mass is potential energy, and energy is potential mass. The Einstein formula is as follows: $Mc^2 = E$. Stated in words, we have mass (in grams) times the square of the velocity of light (in centimeters per second) equals energy (in ergs).

Last year, in Paris, the Curie-Joliot's bombarded lithium by alpha-particles, neutrons and boron atoms being produced. According to K. T. Bainbridge, of the Bartol Research Foundation laboratories at Swarthmore, Pa., the production of boron atoms and neutrons when alpha-particles strike lithium atoms, confirms Einstein's formula; for an alpha-particle has an atomic weight which may be called 4, while one of the isotopes of lithium has an atomic weight of practically 7. Now, if the two particles merge during bombardment, their combined weight would be almost 11. In case the alpha-particle and the lithium atom merge, they at once break up into a boron atom and a neutron, the combined masses of which are infinitesimally more than the combined masses of the lithium atom and alpha-particle. What is the source of the additional mass? Bainbridge suggests that it is from the kinetic energy produced when the alpha-particle strikes the lithium atom. In other words, energy is transformed into mass.

When cosmic rays are turned on atoms, *positrons* are produced; also, the gamma rays of radium. Cosmic rays and gamma rays are energy, both being forms of light. It has been suggested that somewhere outside of the nucleus energy is creating particles of matter (positrons).

HEAVY HYDROGEN AND HEAVY WATER. The discovery of an isotope of hydrogen (heavy hydrogen; H_2) was made by Urey, Brickwedde and Murphy about two years ago. The different atoms of hydrogen have different masses because their atomic nuclei are different. At first the nucleus

of H^2 was regarded as being made up of two protons and one electron (p_e). The discovery of the neutron and the positive electron (positron) has given alternative possible structures for the nucleus of H^2 , which has been named the *deuteron* or *deuteron*. Thus, it may consist of two neutrons, regarded as primary uncharged particles of mass 1, and one positron. According to this hypothesis, the proton loses its supposed fundamental character as a constituent of atomic nuclei; it becomes an association of a neutron and a positron. A molecule of water is composed of two atoms of hydrogen and one of oxygen, H_2O . The hydrogen may be either hydrogen isotope of mass 1 or hydrogen isotope of mass 2. The two common isotopes of oxygen are isotope of mass 16 and isotope of mass 18. Ordinary pure water (light water) is made up of H^1 and O^{16} , $H^1H^{16}O^{16}$, while heavy water contains the heavier hydrogen isotope, H^2H^2O .

In 1932 Washburn and Urey examined the water from industrial electrolytic cells which had been operating two or three years. It was found that the optical spectrum of the hydrogen from this water showed an increase of the quantity of H^2 . Heavy water is prepared by the prolonged electrolysis of a 3 per cent solution of sodium hydroxide, nickel electrodes being employed. It is an advantage to start with a solution from an alkaline electrolytic bath which has been long in use, for such a solution has been found to contain larger amounts of heavy water. G. N. Lewis and R. T. Macdonald, of the University of California, started with 20 liters of water from an old electrolytic cell, which was half-normal in alkali, and electrolyzed it between nickel electrodes until the volume was reduced by 90 per cent. One-tenth of this was neutralized by carbon dioxide and the rest distilled. The two portions were then mixed, and the process was repeated until the volume had been reduced to half a cubic centimeter. The final result was water of specific gravity 1.073, estimated to contain 65.7 per cent of the hydrogen as H^2 . Subsequently, practically pure heavy water, H^2-O-H^2 was prepared by Lewis and Macdonald, and experiments on its physical properties were carried out with only 0.12 cc. of the liquid. During the summer of 1933 Hugh S. Taylor and Henry Eyring and their collaborators, of Princeton University, electrolyzed 600 gallons of water from old industrial cells, with the production of about 80 cc. of water containing upwards of 90 per cent of heavy hydrogen. It was found that about 1 cc. of water, 95 per cent heavy, was obtained for every 7 gallons of starting material. There is about one part of heavy water in 5000 parts of rain water. The Princeton laboratory is now (October) producing about 1 cc. of heavy water every two days. Urey says: "The cost of producing heavy water in these high concentrations comes to about 15 or 20 dollars per gram. This is in marked contrast to the quotations which we have seen in the public press of \$150 a gram." (See *Science*, Dec. 22, 1933, p. 568.)

According to E. B. Washburn, of the Bureau of Standards, the richest natural source of heavy water is native borax, a hydrated salt which exists in the beds of dead seas. The presence of a larger percentage of heavy water in stagnant seas is believed to be due to the more rapid evaporation of light water.

G. N. Lewis says: "The separation of any isotope in sufficient quantity to permit investiga-

tion not only of its spectrographic but also of its other chemical and physical properties suggests a wide range of interesting experiments but the isotope of hydrogen is, beyond all others, interesting to chemists. I believe it will be so different from ordinary hydrogen that it will be regarded almost as a new element."

As previously stated, Lewis and Macdonald prepared by electrolysis 0.12 cc. of H^2H^2O . Calculations showed that not more than 0.01 per cent of H^1 was present. Its freezing-point and boiling-point were as follows:

F.P., 3.8°C.

B.P., 101.42°C.

Like common water, there is a temperature of maximum density which for H^2H^2O is about 11.6°C.

P. W. Selwood and A. A. Frost, of Princeton, found the density (d_4) of water containing 92 per cent H^2H^2O to be 1.0970, and that of pure water to be 1.1052 ± 3 . Lewis has found the density of pure heavy water to be 1.1056.

The effect of heavy water upon seeds and animal organisms is being studied. Even before chemists had succeeded in concentrating the isotope of hydrogen, it was predicted that H^2H^2O would not support life. Lewis has demonstrated that the seeds of tobacco will not germinate in pure H^2H^2O , whereas seeds in ordinary distilled water sprouted within two days.

Taylor, W. W. Swingle (Biological Laboratory, Princeton), Eyring, and Frost summarize their results as follows:

(1) Water containing the isotope of hydrogen in high concentration (92 per cent) was found to be toxic for the animals tested.

(a) Tadpoles of the green frog *Rana clamitans* died within an hour after being placed in the water. Control animals in 30 per cent heavy water, and in ordinary distilled water, remained unaffected at the end of twenty-four hours. See also article on Zoölogy under *Amphibia*.

(b) The common aquarium fish *Lebistes reticulatus* is killed by the water within an interval of two hours. Neither 30 per cent heavy water nor distilled water exerted an effect over a twenty-four hour interval.

(c) Flatworms, *Planaria maculata*, are destroyed within three hours in the 92 per cent heavy water, but were uninjured by the 30 per cent heavy water over a period of three days.

(d) The protozoan, *Paramoecium caudatum*, is killed by the 92 per cent heavy water within 48 hours. Water containing 15-20 per cent of the heavy isotope of hydrogen did not affect the organisms during a three day interval. *Paramoecium* showed more resistance to the toxic action of the water than the highly organized animals studied.

What effect the drinking of heavy water will have upon animals and human beings has not yet been ascertained because of the limited quantities available. It is believed that it may induce a fever, and hence might be useful in treating diseases that require the raising of body temperatures.

Preliminary experiments made at Princeton University by Hugh S. Taylor, Earle R. Caley, and Henry Eyring have indicated that the solubility of salts in water containing a high concentration of H^2H^2O is markedly less than in ordinary distilled water at the same temperature. In the case of sodium chloride where 1.000 g. of ordinary water dissolves 0.395 g. at 25°,

it was found that 1.000 g. of water containing 92 per cent $\text{H}_2\text{H}^{2}\text{O}$ dissolves only 0.305 g. of this salt, a difference of -15.0 per cent.

Urey has suggested the name "protium" for the isotope of hydrogen having an atomic weight 1, and "deuterium" for that of atomic weight 2. Lord Rutherford of Nelson has urged the adoption of "diplogen" as the name for the double weight hydrogen, and "diploon" as the name of the nucleus or kernel of heavy hydrogen. The name "bar-hydrogen" also has been suggested for the heavy isotope of hydrogen.

OTHER DEVELOPMENTS: SCIENTIFIC SOCIETIES. After a careful study of the nutrition of rats, Prof. H. C. Sherman, of Columbia University, predicts that it will be possible to extend the life of human beings from 70 to 77 years. He says: "The quantitative studies of the energy relations, the protein chemistry of nutrition, the mineral elements, the vitamins, the interrelationships between the different nutritional factors, and the principle that in the chemical nutrition the ultimate concern is essentially nutritional reactions of the living body as a whole."

According to Sherman, milk is a fairly constant source of vitamins except vitamin D which prevents rickets. The human body is unable of itself to produce vitamins in the way that it produces hormones and enzymes. The rations supplied to cows contain vitamins A and B in fair amount, which find their way into milk. Vitamin C is also present in milk. The content of vitamin D can be increased by adding vitamin D concentrate to it, by irradiating the milk with ultra-violet light, or by giving irradiated food to the cows.

According to Dr. A. F. O. Germann, of Cleveland, carotene, the yellow coloring matter of carrots, butter, whole milk, etc., is much more valuable than nutritionists now believe, so its use in the diet should be increased. He believes that prehistoric man was able to resist many diseases that afflict civilized people because he ate plenty of this substance.

At a meeting of the Ohio-Michigan section of the American Chemical Society held at Akron, O., on October 13, Prof. Harry N. Holmes, of Oberlin College, described a pale yellow oil 9200 times more potent than ordinary cod liver oil. The oil is nearly pure vitamin A. Dr. Karrer, of the University of Zürich, has produced a similar oil 10,000 times as powerful as cod liver oil. Holmes prepares vitamin A from halibut liver oil.

Dr. T. Reichstein and his collaborators, of the Polytechnic Institute at Zürich, Switzerland, have announced the preparation of pure crystals of l-ascorbic acid, the anti-scorbutic substance which is believed to be identical with vitamin C.

At the Cancer Hospital in London research workers have isolated 1:2-benzpyrene, which is one substance to which tar owes its peculiar carcinogenic properties.

Dr. Roger J. Williams and C. M. Lyman, of Oregon State College, have concentrated a powerful growth-promoting substance which has been found in many plants and animals. They carried the concentration to a potency a thousand times stronger than any hitherto reached. Due to its widespread occurrence, the name "pantothenic" acid (Greek, meaning "from everywhere") has been suggested for the compound. All life may involve the presence of this potent substance.

At a seminar held on August 15 at Woods Hole, Mass., Dr. E. E. Chidester, of the University of West Virginia and the Marine Biological Laboratory at Woods Hole, gave further evidence of the vital part played by iodine in medicine. It is evident that all of the glands of the endocrine chain contain iodine at some stage. Numerous physiological studies suggest that iodine is involved in the activity of every cell of the animal body. It appears from Dr. Chidester's work that certain glands and substances containing iodine not only produce the sex hormone effect when injected into other animals, but are beneficial in the prevention and treatment of new growths by virtue of the iodine they contain. As stated by *Industrial and Engineering Chemistry*, "Doctor Chidester's own research has served to stress the importance of the thyroid disturbances characteristic of vitamin deficiency and to emphasize the iodine content of substances in vogue as sources of the sex hormone."

Prof. Arthur B. Lamb, of Harvard University, served as President of the American Chemical Society during the year. Charles L. Reese, of the duPont Company, Wilmington, Delaware, has been elected President of the Society for 1934.

The American Chemical Society met in Washington, D. C., from March 26-31. The total registration was 2293. An address was delivered by Dr. Irving Langmuir, Nobel Laureate in Chemistry, on the subject of "Surface Chemistry." At a general meeting the following notable papers were read: "Relation of Chemistry to the State." Harry L. Derby. "Relation of Chemistry to the Individual." C. F. Kettering. "Relation to Chemistry to Other Industry." C. M. A. Stine. "Chemistry—Its Interrelations with Other Sciences." Hugh S. Taylor. (See *Ind. and Chem. Eng.*, vol. 25, no. 5, pp. 481-497.)

The Eighty-sixth General Meeting of the American Chemical Society was held in Chicago from September 11-15. The total attendance was 3191, which was a record. Among the outstanding events were the award of the Willard Gibbs Medal to Prof. Richard Willstätter, of Germany, and the award in Pure Chemistry to Dr. F. H. Spedding, of the University of California. President Lamb, in the Hall of Science, at the Exposition, delivered his presidential address on the subject "A Century of Progress in Chemistry." Dr. W. F. G. Swann, Director of the Bartol Research Foundation of the Franklin Institute, reviewed the progress made in the past year in determining the nature of "Cosmic Rays." He reached the conclusion that the radiations consist of high-speed electrically charged particles and possibly bundles of very short wave-length light waves, known as photons.

Much attention was devoted to chemistry at the Century of Progress Exposition. The Century of Progress was able to secure a series of ten beautiful murals which show the growth and development of chemistry and its application to commerce, industry, and medicine. These murals were placed on the front of the Hall of Science. When the visitor entered the great hall of this building, attention was at once focused on an imposing model of the periodic table of the chemical elements. This exhibit was called the central feature of the entire exposition. It was about 30 feet high and 25 feet in diameter. The lower part consisted of a beautifully designed model of a periodic table of the elements, in which was displayed, in proper sequence, a specimen of each of

the elements. The most important source and the most important use of each element were also presented. The material for this exhibit was assembled from all over the world.

Dr. E. A. Pohle, professor of radiology, and Dr. Gordon Ritchie, assistant professor of pathology, of the University of Wisconsin, reported to the American Congress of Radiology which was held in Chicago in September, that thorium dioxide, a compound injected into the blood to make the liver and spleen radio-opaque so that X-ray pictures may be taken of them, produces such definite changes in the liver, spleen, and bone marrow that its use should be restricted to incurable cases. When a solution of thorium dioxide is injected into a vein, it does not leave the human system, but becomes deposited in a special type of cell which is present in the spleen, the liver, and the bone marrow, and it remains there. The result of the injections is injury to the organs similar to that sometimes found in acute infections. The opinion of these investigators was based on results obtained by two years of research on the effects of the compound on the body organs.

The British Association for the Advancement of Science met at Leicester from September 6-13. Color was one of the main topics discussed by the Chemistry Section. The presidential address was delivered by Prof. R. Robinson, F.R.S. It was entitled "Natural Colouring Matters and Their Analogues." Why are some flowers *blue* and others, containing the same pigments, *red*? Professor Robinson gave a summary of his anthocyan work. He has succeeded in establishing the nature of the colored *anthocyan*s in the various plants and in synthesizing most of them. It has been discovered that a particular anthocyan alone does not determine the color of the petal; there are also other factors concerned. The anthocyanins, like certain hydroxides, are amphoteric in nature. Thus, cyanin is red in acid and blue in alkaline solution. In consequence of this, R. Willstätter assumed that the sap of the red rose was acid and that of the blue cornflower alkaline, for both flowers contain cyanin. As a matter of fact all cell-saps are decidedly acid, and the explanation of the blue of the cornflower must apparently be sought in the colloidal state of the cyanin which is present in a complex form, giving a stable aggregate with a negative charge which may be further stabilized by the presence of polysaccharides in the cornflower. It now appears that all blue flowers owe their color to the presence of colloidal solutions of their respective pigments. In this connection it is of interest to note that in recent years many new coloring matters of the *carotene*-group have been discovered. The first products of synthesis in plants are dyestuffs with 40 carbon atoms, from which carotenoids, containing fewer carbon atoms, are produced by oxidative disintegration. The splitting of the carbon chains may occur in many different ways, giving rise to a variety of products such as the carotenes and vitamin A. α -, β -, and γ -carotene are provitamins A. Widely distributed in nature are certain water-soluble dyestuffs, colored yellow and fluorescing intense green. They have been named *flavines*. Ovoflavin from egg albumin and lactoflavin from milk have been prepared in crystalline form. The flavines can be reversibly reduced ($\text{flavine} + 2\text{H} \rightleftharpoons \text{leuco-flavine}$), and therefore act in the cell as transporters of oxygen.

Work on *hormones* is still progressing. Professor F. Kögl presented, at the meeting of the British Association, a paper on "Plant Growth Hormones (Auxin a and Auxin b)." A distinction must be made between division and elongation of plant cells. The purification of these plant hormones has been accomplished. Crystallized *auxin a* has been isolated for the first time from human urine and subsequently from vegetable material such as maize germ oil and malt. *Auxin a* has the formula $\text{C}_{10}\text{H}_{16}\text{O}_5$. Also, a second crystalline substance—*auxin b*—has been isolated from vegetable material. The formula $\text{C}_{10}\text{H}_{16}\text{O}_4$ has been assigned to it, and it is closely related to *auxin a*. Adults excrete independently of age or sex about 2 milligrams of *auxin a* daily.

Professor E. C. Dodds read a paper entitled "The Significance of Synthetic Oestrogenic Compounds." The following is a brief summary: Hitherto the oestrus reaction has been regarded as a specific response to oestrin and its derivatives, none of which has as yet been synthesized. It has been shown that compounds of widely differing chemical structure may be synthesized, capable of causing a full oestrus reaction. In addition, it has been shown that calciferol will produce oestrus when injected in large quantities, as also the two carcinogenic (Greek, meaning *cancer-producing*) hydrocarbons 1:2-benzpyrene and 5:6-cyclopenteno-1:2-benzanthracene. It would thus appear that it is possible to have one molecule possessing pharmacological activity of two entirely different varieties. The theoretical importance of these observations is great, since it may mean that the processes of oestrus-production, cancer production, and vitamin D actively are related in some unsuspected manner.

Professor L. Vegard read a paper entitled "The Auroral Spectrum and the Upper Atmosphere." Most of the results are based on spectrographic work carried out in Northern Norway. Apart from the strong green line and a couple of red lines, probably due to oxygen, the auroral spectrum is dominated by nitrogen bands. The type of nitrogen spectrum agrees well with the theory of Birkeland; namely, that the luminescence is produced by electric rays from the sun. The auroral spectrum gives no indication of an upper atmospheric layer dominated by hydrogen and helium.

One of the outstanding features in Section A was Lord Rutherford's review of 25 years' work on transmutation. He mentioned the remarkable properties of the neutron which is proving so effective in producing transformations of a novel type in certain elements: for example, oxygen can be transformed into carbon and lithium, and nitrogen into boron and helium. Lord Rutherford explained that particles of a different kind are now required for bombardment, and these are being produced by means of electrical discharge in a gas, as much as 5,000,000 volts being required to effect acceleration. Attention was called to the fact that Cockcroft and Walton at Cambridge are breaking up certain elements by means of artificially produced projectiles, much lower voltages being employed. Looking to the future 20 or 30 years, he said that voltages of millions of volts would probably be unnecessary as a means of accelerating bombarding particles. He thought that ultimately all elements would be transformed. Anyone, however, who is looking for a source of power in the transformation of the atoms is "talking moonshine."

On October 24 Prof. Harlow Shapley, of Harvard University, announced that Dr. D. H. Mengel, of Harvard, and J. C. Boyce, of the Massachusetts Institute of Technology, had discovered that the sun's corona consists, in part at least, of oxygen in a high state of excitation. The sun's corona has always been one of the great mysteries of the universe. According to the announcement of Professor Shapley, three of the strongest lines of the sun's corona are due to neutral oxygen atoms in the high solar atmosphere. Mengel and Boyce employed, in their analysis of the solar coronal spectrum, astronomical pictures taken at the time of the total eclipse of the sun in August, 1932. "The present analysis identifies three of the five strongest coronal lines with neutral oxygen atoms in the high solar atmosphere. These atoms are in peculiar states of excitation." In this connection it is interesting to note that in recent years the mysterious light of the aurora has been found to be due to ionized oxygen. Oxygen is "ionized" when one or more outer electrons are stripped from the oxygen atom.

Dr. Henry Eyring, of Princeton University, has applied *quantum mechanics* to several problems of chemistry. In his calculations he utilized the binding energies between atoms in solving problems of how rapidly chemical reactions occur. Among the notable achievements of Dr. Eyring was the study of the interaction of hydrogen with fluorine and other halogens. Contrary to what was frequently supposed, he showed that fluorine is really the least active of the halogens with hydrogen. Nearly all of the chemical literature stated the opposite; namely, that fluorine is much more active than the elements chlorine, bromine, and iodine. Dr. H. von Wartenburg of Germany at about the same time performed experiments which agreed with Dr. Eyring's calculations. He prepared pure hydrogen and pure fluorine and discovered that they would not react at room temperature. Dr. Eyring has also applied quantum mechanics to the problem of separating ordinary hydrogen from heavy hydrogen. (See *Proceedings of the National Academy of Sciences*, vol. lxxii, no. 4, 1933.)

AWARDS AND MEDALS. In recognition of Dr. Henry Eyring's notable contribution to quantum mechanics, the \$1000 Prize of the American Association for the Advancement of Science was awarded to him. The award was made at the Atlantic City meeting, at which Dr. Eyring read a paper entitled "Quantum Mechanics with Particular Reference to Reactions Involving Conjugate Double Bonds."

At the September meeting of the American Chemical Society held in Chicago, the Willard Gibbs Medal was presented to Dr. Richard Willstätter, of Munich, Germany. Dr. Willstätter is noted for his fundamental work in organic chemistry, particularly on cocaine, atropine, hemin, chlorophyll, anthocyanins, and enzymes. His latest field of study is that of enzymes, which has carried him into the very heart of life processes.

The Langmuir Medal, established by the American Chemical Society in 1931, was awarded to Dr. Frank H. Spedding of the University of California. This award recognizes "the accomplishment in North America of outstanding research in pure chemistry." It carries a prize of \$1000.

The Mendel Medal of Villanova College was awarded to Prof. Hugh S. Taylor, David B. Jones professor of chemistry at Princeton Uni-

versity. This honor is "conferred upon a Catholic who has given distinguished service in the advancement of Science." Professor Taylor was elected to a Fellowship of the Royal Society, in 1932, and was formally admitted in June, 1933.

The Schoellkopf Medal was awarded to Dr. Frank A. Hartman, professor of physiology at the University of Buffalo, for his work on cortin. This medal is bestowed annually by the Western New York Section of the American Chemical Society, for outstanding achievement in science.

The William H. Nichols Medal was awarded to Prof. Wilder D. Bancroft, of Cornell University, on March 10, for his work on the application of colloid chemistry to physiological problems.

The Herty Medal was presented to Dr. Fred Allison, of Auburn, Ala., on May 26, at the meeting of the Georgia Section of the American Chemical Society at Milledgeville. This medal was awarded in recognition of his work on magneto-optics. It is awarded annually for the most outstanding work done in the field of chemistry in the South.

BIBLIOGRAPHY. The following are the titles of some of the more important books published during the year: Daynes, *Gas Analysis by Means of Thermal Conductivity*; Kalechevsky and Stagner, *Chemical Refining of Petroleum* (Monograph No. 63, American Chemical Society); Laurens, *Physiological Effects of Radiant Energy* (Monograph No. 62, American Chemical Society); McAdams, *Heat Transmission*; Maxted, *Catalysis and its Industrial Applications*; Oppenheimer, *Chemische Grundlagen der Lebensvorgänge*; Rhodes, *The Phase Rule*; Tamman, *Die Glaszustand*; von Oettingen, *Therapeutic Agents of the Quinoline Group* (Monograph No. 64, American Chemical Society); Weeks, *Discovery of the Elements*; Weiser, *Colloidal Elements*; Wieland, *Mechanism of Oxidation*; Willard and Furman, *Elementary Quantitative Analysis*.

NECROLOGY. George P. Adamson, born in Philadelphia, Pa., on Aug. 24, 1864; died in New York City on February 16; director research department, General Chemical Co.; an authority on chemical reagents. E. H. S. Bailey, born Middlefield, Conn., on Sept. 17, 1848; died on June 1; professor emeritus of chemistry at the University of Kansas (Lawrence); chemist Kansas State Board of Agriculture and State Board of Health; an authority on water, and sewage; author of numerous books. Arthur M. Comey, born in Boston, Mass., on Nov. 10, 1861; died in Cambridge, Mass., on April 6; until his retirement he was prominently connected as chemist with E. I. duPont de Nemours and Co., Inc.; chairman sub-committee on Explosives, National Research Council, 1917; author of Dictionary of Chemical Solubilities. John M. Thomson, born in Old College of Glasgow on Mar 7, 1849; died on March 22; emeritus professor of chemistry at King's College, University of London; authority on composition of ancient glasses and of building materials; known for his work on putrefaction and antiseptics. Lyman Churchill Newell, born at Pawtucket, R. I., on Sept. 18, 1867, died at Brookline, Mass., on December 13; professor of chemistry at Boston University; author of numerous textbooks on chemistry; awarded the Justus von Leibig Medal by Giessen University (Germany) for his contributions to historical chemistry; dept. editor *Jour. of Chem. Edn.*

CHEMISTRY, INDUSTRIAL OR APPLIED. According to C. C. Concannon and A. H. Swift, of the Chemical Division, Bureau of Foreign and Domestic Commerce, Washington, D. C., as published in *Chem. and Met. Eng.* for September, the chemical industry as a whole has withstood the depression better than most others and the year 1932 ended in a relatively satisfactory condition. They say: "During the first quarter of 1933 the trend was downward, but since then it has been completely reversed. Employment in the chemical industries has improved and prices for many chemical products have advanced. Chemical foreign trade to-day is at a low level, but the United States has been holding its own in comparison with its five leading competitors. Viewed in summary, the year was one of corporate consolidations, reductions in the costs of operation and in the book values of properties, increased efficiency, through both technical and commercial research, expansion of present uses of products, development of new uses for old commodities and growth in the marketing of synthetic and other new materials."

There was considerable variation reported in the rate of productive activity within the chemical industry for September. Some branches made substantial gains over the preceding month, but some producers, due to the lessened demand for materials, failed to maintain the operating rate established in August. The index number for September was 130.4, identical with that reported for July. For August it was 131.2.

According to *The Chemical Age*, the past year in Canada was one of consolidation rather than new development. The outlook in the immediate future is a little uncertain. The discovery of rich radium-bearing deposits in the Great Bear Lake region, Canada, promises to open a new source of this element, thus breaking the Belgian monopoly. The United States is the world's largest consumer, producer, and importer of chemicals and allied products. It is second to Germany as an exporter.

During the last decade the chemists, engineers, and manufacturers of the United States have made such rapid progress in the development of coal-tar and other synthetic organic products, that it is now possible to supply almost all the chemicals consumed in American industry.

Higher priced chemical goods (paints and varnish, medicinal and toilet preparations, etc.) are produced largely in the North. There is considerable concentration of these industries in New York, New Jersey, and Pennsylvania. Four southern states (Alabama, Florida, Georgia, and South Carolina) produce nearly all of the rosin and turpentine; while Alabama, Florida, Georgia, North Carolina, South Carolina, and Virginia ordinarily produce about one-half of the commercial fertilizer manufactured in the United States.

HYDROCARBON OILS. Striking advances have been made by chemical engineers in the petroleum industry during the depression years. Thus, in the oil fields certain corrosion problems have been solved, and new methods have been developed for increasing the recovery of oil from the earth. This is in line with the conservation of natural resources. Chemical Engineering has also advanced in refineries. There have been improvements "in cracking and other distillation practices, in recovery of by-products, in developing and applying radically new refining processes such as hydrogenation, in utilizing new agents

and methods in chemical treatment." In 1932 Standard Oil of Indiana built a cracking unit capable of completely processing 19,000 barrels of charging stock per day. This is the largest cracking unit in the world. *Vacuum distillation* is increasing. Vapor-phase cracking, employed for producing high anti-knock gasoline, also has made rapid progress. *Hydrogenation* of petroleum has achieved remarkable results. In 1930, a 5000-barrel per day unit commenced operations at Bayway, N. J., to be followed a year later by a similar plant at Baton Rouge, La. The first product to be marketed was a hydro-refined lubricating oil, "Essolube." Liquefied petroleum hydrocarbons are now extensively utilized. This is a very convenient fuel.

At the September meeting of the American Chemical Society Dr. Gustav Egloff, of the Universal Oil Products Company, read a paper entitled "Economics of Petroleum." He told how chemistry, by the "cracking" process, has developed an industrial process which has produced a 300 per cent increase in the yield of refined gasoline of higher quality, and he also showed that it is an important factor in the gas and coal industries, and in other industries. In 1932, 43 per cent of the gasoline marketed was produced by the cracking process. This type of motor fuel is generally recognized to have improved properties and anti-knock value. This process means the conservation of 500,000,000 barrels of crude oil annually and savings of over \$100,000,000 a year to motorists. The cracking process produces 250 billion cubic feet of high heating value gases annually, which means that the supremacy of coal is being challenged by fuel gas. Since 1913 the coal industry has declined 35 per cent, while the fuel oil industry has increased 150 per cent. On July 17, Prime Minister MacDonald made a very important statement in the House of Commons concerning the production of petrol, or motor fuel, from coal: in order to stimulate the domestic production of motor spirit, he stated that the government proposed to guarantee for 10 years a preference at the rate of four pence per gallon in respect of light hydrocarbon oils manufactured in Great Britain from indigenous coal, shale, or peat, or from products derived from these materials. The plant in mind would have a capacity of 30,000,000 gallons annually, which would require 350,000 tons of coal. Seven thousand men would be directly employed. The production of petrol in such a plant would be about 1/40th the amount needed in Great Britain. According to the October number of *Chemical and Metallurgical Engineering*, the I. G. Farbenindustrie, of Germany, has made so much improvement in *hydrogenation*, due to newly discovered catalysts, that it is possible to increase the capacity of the hydrogenation plant at Louna 200-300 per cent. "As a last and most important achievement resulting from the experiences with new catalysts in the 'sump' phase (liquid phase) I. G. has now developed the successful hydrogenation of lignite on a commercial scale. Lubricating oils, equally as good as the Russian types, may also be produced from lignite by this procedure. About 3,500,000 tons of coal—that is, about 2.5 per cent of the German output, are necessary to produce the hydrogen and the power required in the manufacture of 1,000,000 tons of gasoline from coal tar."

At the May meeting of the American Petroleum

Institute held in Tulsa, Oklahoma, Dr. P. D. Trask and his collaborators of the U. S. Geological Survey presented a theory to account for the origin of petroleum. According to their theory, dead bodies of myriads of sea plants are attacked by bacteria which appropriate materials required for their needs, and the residue gradually yields petroleum. With great increase in sedimentary thickness, pressure and heat are produced, which "squeeze and fry out the material which eventually becomes petroleum." The oil seeps through sandy strata and collects in pools.

FERTILIZERS. America is becoming less dependent upon foreign countries for *potash*, particularly since the exploitation of the important deposits in New Mexico. According to the Bureau of Mines, the potash produced in the United States in 1932 amounted to 143,120 short tons of potassium salts, equivalent to 61,990 tons of pure potash (K_2O). The amount imported (K_2O) was 113,505 tons. The principal sources of potash salts were from the salines at Trona, Calif.; molasses distillery waste at Baltimore, Md., and the potash mines and refinery at Carlsbad, N. M. The dust from cement near Hagerstown, Md., was another source of potash. The production of pure potassium chloride from the Carlsbad sylvanite is one of the most significant industrial developments in the United States since 1929. It has been demonstrated that the Permian basin of Texas and New Mexico holds sufficient potash of high grade to meet all American needs for centuries. C. A. Ward says: "With reasonable freight rates, there is no apparent reason why this new industry should not be able to compete successfully with its older foreign competitors and make the United States permanently independent as regards its potash supply." Before the World War the United States imported about 99 per cent of its potash from Europe.

Phosphoric acid can now be produced by a blast-furnace method. Under the direction of H. W. Easterwood, chemical engineer, there has been erected at Nashville, Tenn., a large blast-furnace with the capacity to produce 250,000 pounds of phosphoric anhydride (P_2O_5) daily. Briquettes of phosphate rock, silica sand, and coke are burned in a large furnace. The anhydride is converted into phosphoric acid by the addition of water. It is shipped in rubber-lined cars, and is utilized in the production of phosphates for fertilizers, drugs, etc.

Ammoniated peat, a product obtained by heating ammonia and peat under pressure, gives promise of being a valuable fertilizer. This new material has been developed in the laboratories of the U. S. Department of Agriculture. It appears to combine many of the good features of the two familiar types of nitrogen-carrying fertilizers. While raw peat is of relatively little value as a nutritive ingredient in fertilizer, it is a highly desirable material in mixed fertilizers because of its value as a conditioner, preventing the caking of the product, and because it supplies to the soil a desirable form of organic matter.

RUBBER. At the meeting of the American Chemical Society held in Chicago in September, Dr. W. H. Carothers, research chemist employed by the duPont Company, reported the production of the first synthetic materials which have elasticity and strength equal to those of natural rubber. Like rubber, these new materials crystallize when stretched, and return to their original amorphous condition when allowed to contract.

Chloroprene and bromoprene, produced from vinyl acetate, appear to be superior to other substances which have been used to produce the rubber-like materials.

Musk. At the Washington meeting of the American Chemical Society synthetic musk was announced which practically reproduces the costly material imported from Asia. This fragrant material is found in the abdominal glands of male musk deer of the highlands of Tibet. The dried musk pods are shipped in metal-lined boxes. Since only 2 per cent of this musk is the active odorous principle, its cost, based on current prices, is about \$16,000 per pound. Due to patient research, the chemist has learned how to synthesize musk-like substances from vegetable oils and other materials. These "large ring" compounds possess characteristic odors, some of which are virtually identical with the musk obtained from the deer. It is likely that the synthetic musks will be produced commercially and that they will meet the requirements of the perfumery trade.

PLASTICS. The plastic industry continues to change and grow. H. V. Potter defines the term, plastic, as follows: "The technical plastics covered by what is now known as the 'Plastic Industry' may be described as materials which take shape or form by the application of heat with or without pressure and retain that form on cooling." Some important plastics are as follows: natural resin plastics, bituminous plastics, celluloid plastics, synthetic resin plastics, and cellulose plastics. Only a few of the new plastics are more than 10 or 15 years old. They have proved to be strong, convenient, and beautiful. Lovely color effects can be obtained. An interesting plastic which has come on the market recently is called "benzyl cellulose," a product made from natural cellulose. This material can be produced in flexible form, more flexible than celluloid. The *British Plastics Year Book* for 1933 has devoted 80 pages to proprietary and general names of synthetic resins.

RAYON. The world is consuming enormous quantities of rayon, or the so-called artificial silk. On July 1 the American rayon mills had the capacity to produce over 233,000,000 lbs. annually by the following processes: viscose rayon, 180,700,000 lbs.; acetate rayon, 35,500,000 lbs.; cuprammonium rayon, 8,900,000 lbs.; nitrocellulose rayon, 8,300,000 lbs. The United States produced 150,000,000 lbs. of rayon in 1932, 80,000,000 lbs. of which were used in dress fabrics and other woven materials. It is reported that the production of rayon in Japan rose during the first six months of the year from 12,000,000 to 18,000,000 kg. This increase makes Japan the second largest producer in the world, taking the place of Great Britain.

FOOD. The Report of the Food Investigation Board (of England) for the year 1932 was published late in the summer of 1933. This report contains about 300 pages of particularly interesting material. The Food Investigation Board is a branch of the Department of Scientific and Industrial Research, and its director is Sir William B. Hardy, F.R.S. The work was concerned with various problems, such as the effect of low temperature upon food. As the result of certain experiments having to do with the rapid and slow freezing of meats, it was found that the most fastidious experts could detect no difference between meat preserved by these two methods. The report contains an interesting chapter on apples,

Many fruits, including the apple, take up oxygen from the air and produce carbon dioxide long after they are gathered. It appears that carbon dioxide is not the only gas or vapor given off by apples. It has been discovered that a few ripe apples placed among potatoes prevent their sprouting as they usually do, possibly due to the evolution of ethylene in slight amount. While the vapor given off by apples delays the normal sprouting of potatoes and peas, it hastens the ripening of tomatoes and bananas. The vapor of ripe bananas induces the ripening of green bananas. It is said that ethylene, propylene, and acetylene are the only gases known which have this effect upon tomatoes and bananas; it is therefore suspected that ethylene is responsible for the effect of apples upon potatoes and peas.

According to Dr. F. Bergius, the German inventor of the process for the hydrogenation of tar and coal, notable progress has recently been made in the *production of food by chemical means*. Sugar, for example, can now be produced from wood on a commercial basis. Dr. Bergius says that in countries where wood is obtainable in large quantities, wood sugar can be produced at lower cost than cane sugar is produced in the torrid zone. Not only is wood sugar a cattle food but a source for the production of yeast and of sucrose for human consumption. Dr. Bergius says: "For the over-populated and industrialized European countries wood may become an important factor towards independence of food supply from abroad in the same way that the coal hydrogenation process will ensure independence of a foreign oil supply."

SOAPLESS DETERGENTS. An American corporation has been licensed by German concerns to manufacture a new type of soapless detergents (Gardinols). This group of compounds contains a variety of double sulphates of sodium and fatty alcohols. All these sodium alkyl sulphates are produced from various soap oils. "By hydrogenation under high pressure and temperature with a copper catalyst, the fatty acid molecule is reduced to the corresponding alcohol form, a departure from the usual hydrogenation procedure in fat hardening and the like in which additional hydrogen atoms become attached to the unsaturated molecules." These fatty alcohols are allowed to interact with sulphuric acid and soda. It is claimed that the soapless detergents have very active emulsifying and cleansing action, and lather quite freely in hard water. The Gardinols possess unusual penetrating power with resulting high wetting-out of textiles. One American firm is offering "Drift," the packaged form of Gardinol, to be sold for use like soap chips.

WEED DESTRUCTION. Experiments are being conducted in England with a view to the large-scale destruction of weeds by means of chemicals. Dilute sulphuric acid which contains from 7 to 10 per cent of H_2SO_4 is used. Normally about 100 gallons per acre are required on grain-fields. This strength of acid kills the charlock, a very common weed. The outer skin of the weed is thin and is readily permeated by the acid, while that of the cereal is thick. In France several thousand acres are sprayed with sulphuric acid annually, as much as 27,000 tons of acid having been used in 1931.

For spraying English gardens, a 10 per cent solution of sodium chlorate and calcium chlorate is employed. About a gallon of the solution is

applied to 12 square yards. It is quite deadly to weeds and grass.

SULPHUR MINING. One of the important chemical achievements of the year is the successful *mining of sulphur under water*. The Frasch process for mining sulphur has been employed very successfully for a number of years. Due to the labors of Lawrence O'Donnel, chemical engineer, and his associates, the Frasch process is now being applied to the mining of vast deposits of sulphur under lakes and swamps in Louisiana. According to *Science Service*, the mining is carried out by sinking a shaft 700 feet below the bottom of a lake where a stratum of sulphur 200 feet thick lies. Pipes leading to the plant on the shore are sunk and the sulphur, liquefied by superheated water, is forced out by means of compressed air. To date (October, 1933) 200,000 tons of sulphur 99.92 per cent purity have been taken from the wells. The yields of sulphur have far exceeded expectations. One plant has reached a production of 1400 tons per day and regularly produces 1200.

ELECTRICAL PRECIPITATION. The electrostatic method of separating solid or liquid particles from gases is now extensively employed in industry. As is well known, it is applied in the manufacture of sulphuric acid, both for the removal of dusts from hot burner gases and the elimination of mists in the contact process. It also is employed in connection with the roasting and smelting of ores, such as those of copper, lead, tin, and arsenic. A large field is now developing in the separation of dust particles from combustion gases, especially power stations which use pulverized fuel. This is an immense undertaking for power stations, because huge volumes of gas are involved, averaging 500,000-600,000 cu. ft. of gases at, say, 275-300° F. (135-150° C.) per ton of burnt coal.

METALS AND ALLOYS. At a meeting of the Electrochemical Society held in Chicago on September 7, Prof. O. P. Watts, of the University of Wisconsin, expressed the opinion that hydrogen is the sole defender against the *corrosion* of metals, which costs enormous sums annually. Many years ago Dr. R. W. Whitney, of the General Electric Company, propounded the electrochemical theory of corrosion, which has been pretty generally accepted. When a metal comes in contact with an acid, hydrogen is displaced from the latter and it forms a layer on the metal, which tends to prevent corrosion. Under ordinary conditions, however, oxygen combines with the hydrogen, thus exposing once more the surface of the metal, followed by further corrosion. The extent of the corrosion depends on the supply of oxygen. According to Watts, if oxygen is excluded, copper will not corrode in a solution of sulphuric acid, a reaction which occurs readily in the open. *Corrosion research on light metals* is being carried on. The elements which may be classed as light metals are aluminium, magnesium, beryllium, and lithium. Silicon, also, has some metallic properties, but it is really a non-metal. Owing to the fact that aluminium is used so extensively in industry, particularly in aircraft, it is very important to study its corrosion. More recently *magnesium* has come to be considered of likely importance for structural work. Much attention, it is reported, is being given in Germany to the possibility of using *lithium* in light alloys. Silicon alloys are important, and useful applications of beryllium will no doubt be found. Fortunately

the rate of corrosion of the light metals is small compared with that of the ferrous metals. From the study of the problem of corrosion two facts stand out in a sea of conflicting theories, namely, "that corrosion of metals is essentially an electrolytic phenomenon, and that whatever resistance to corrosion is exhibited by any metal is due to the presence of a microscopically, or even sub-microscopically, thin film of oxide which forms on exposure to air or other gas containing measurable quantities of oxygen." It should follow from this that a chemically pure metal of uniform physical condition when totally immersed in a chemically pure simple solution will not corrode, and there seems to be increasing evidence to show that this is really the case.

At the meeting of the Electrochemical Society in Montreal, Dr. Colin G. Fink and C. Y. Wong, of Columbia University, reported a *new electroplating solution* for copper plating steel to take the place of the poisonous cyanide bath. The solution contains the complex substance disodium diquodioxalatocuprate ("oxalato" bath). A satisfactory coating of copper can be obtained in one minute with a low electrical current density.

The large-scale production of *thallium* compounds from zinc blende as a by-product of lead and zinc manufacture has been recently undertaken in Belgium. A surprising number of uses and potential applications of thallium have developed; therefore the large-scale production will make it more readily available for industrial uses. In 1928 the price of thallium sulphate was quoted at \$15 per lb. and at \$7.50 per lb. in 1932. It is probable that in large quantities the price will be much lower. According to the *Journal of the Society of Chemical Industry*, the industrial uses of thallium and its compounds which appear to be most promising are in the manufacture of certain special alloys, as a rat poison, an insecticide, for medical purposes, in the production of photoelectric cells, for treating fabrics, etc., to render them water and insect proof, and in the preparation of anti-knock motor fuel.

Indium (element 49) was discovered in 1863 by the German chemists Reich and Richter. According to W. S. Murray of Utica, N. Y., a consistent mineral deposit bearing indium has been found, and a commercial process for its production has been developed. The process involves flotation, concentration, roasting of the concentrate, dissolving the soluble portion of the roasted concentrate in sulphuric acid, followed by precipitation of the metal. Indium can be precipitated by metallic displacement, or it can be plated out. The element is now ready for commerce. "Indium plate as it comes from the bath is soft, uniform, and gray. It can be diffused into the base metal and thereby hardened. This procedure both hardens and stabilizes the surface so treated; that is, the surface is very resistant to oxidation and tarnish. Little has been done with indium outside the field of plating and alloying."

In a paper read before the Institute of Metals (England) on March 8, W. Singleton and Brinley Jones gave their results of an investigation of the effect of the addition of small amounts of other elements to *lead* and *lead alloys*. It has been discovered that the addition of a small amount of tellurium (about 0.06 per cent) to lead increases its resistance to corrosion and also increases its toughness and tensile strength. The lead-tellurium alloy is more resistant to the ac-

tion of boiling concentrated sulphuric acid than is pure lead. It is also of interest to note that selenium compounds have been found to have a great influence to protect magnesium from corrosion. It appears that tellurium reduces the corrosion of lead to about one-seventh of what it is in the case of pure lead.

The growth of the *alloy part of the steel industry* has been marked. In 1902 only 2 per cent of the total steel ingots and castings were alloy, but it has climbed steadily until it is now 6 per cent. The corrosion, rust, and heat resisting steels are very important. For example, the use of stainless steel in nitric acid plants; in the paper industry high chromium-nickel castings are employed for handling sulphite liquors; in the reaction chambers of the chemical industry high-nickel alloys find employment. E. E. Thum says: "The most spectacular advances are being made in the high chromium-nickel alloys, which have proven so enduring against hot gases that all manner of furnace parts are being made of them (even for high temperatures in the ceramic industries) such as containers, muffles, heat exchangers, conveying mechanisms, resistors, and burner parts. The enthusiast pictures the ovens, kilns, and furnaces of the future as made of a little brick, but mostly of metal and insulation materials." *Theatre proscenium curtains* made wholly of steel or of two-ply asbestos cloth with steel frames will provide the maximum protection to audiences, an investigation recently conducted by the Bureau of Standards revealed. Steel curtains, it was found, would insure safety for a half-hour, while steel-framed asbestos curtains could be depended on for about half that time. Since most auditoriums are designed so that the audience can make its exit within 5 minutes, either of these types of theatre curtains should offer a sufficient margin of safety.

The Institute of Metals held its Silver Jubilee Autumn Meeting in Birmingham, Eng., from September 18-21, under the presidency of Sir Henry Fowler. The arrangements included a lecture on "Twenty-Five Years' Progress in Metallurgical Plant," by W. R. Barclay, Vice-president, and a series of 14 papers dealing with various phases of metallurgical work.

A POWERFUL SOLVENT. Professor O. F. Stafford, of the University of Oregon, has discovered that *acetamide*, a compound produced cheaply from acetic acid and ammonia, has a wider range of solvent action than any other known substance. Acetamide is a white, crystalline solid which melts at 80° C. to form a mobile liquid. Hitherto water and ammonia have been regarded as the best solvents, but acetamide is said to be superior to both. According to *Science Service*, "its ability to dissolve many things, at present nearly or quite insoluble, is expected to lead to important industrial applications."

SOCIETY OF CHEMICAL INDUSTRY. The fifty-second Annual Meeting of the Society of Chemical Industry was held at Newcastle-on-Tyne from July 10-14. The proceedings were conducted by Dr. R. H. Pickard, F.R.S., the president of the Society. The Society's Medal was presented to Prof. W. A. Bone, head of the Department of Chemical Technology at the Imperial College of Science and Technology, London. The award was made in recognition of his work on the subject of combustion. Professor Bone delivered an address entitled "Forty Years of Combustion Research." The address gives a clear account of the

essential principles of a vast amount of work done during the last half century. While his research on combustion has dealt with a variety of problems, Professor Bone discussed only two at length. The first is concerned with the propagation of flames and explosions and the determination to the speed of propagation; also with the photographic recording of the flame, a difficult feat, for the front of the flame is rotating some thousands of times per second. The second problem deals with the preferential treatment displayed by oxygen when exploded by hydrocarbons. It is most interesting that oxygen prefers a hydrocarbon to hydrogen or carbon monoxide, but the reason for this is not entirely clear.

At the 64th meeting of the American Electrochemical Society held in Chicago in September, Prof. R. S. Hutton delivered an address to commemorate the hundredth anniversary of Faraday's discovery of his two fundamental laws of electrolysis. A session on corrosion was also held.

The annual meeting of the Chemical Society of France which was held in Paris from June 15-17, was made the occasion of a French commemoration of the birth of Priestley, who was a French citizen by decree of the National Assembly at the time of the Revolution. Sir William Pope presided at the opening meeting held at the Pasteur Institute when C. Matignon, professor of chemistry at the Collège de France, delivered a comprehensive presidential address on Priestley.

A meeting was held in London on April 6 to commemorate the life and work of Joseph Priestley who was born near Leeds, on Mar. 13, 1733 (O.S.). He left 12 books and some 50 papers dealing with physics, chemistry, and physiology. His most important discovery was oxygen, which was made on Aug. 1, 1774.

Carbon dioxide has become a very important refrigerant. Solid carbon dioxide was discovered by Thilorier 98 years ago, but was not produced commercially until 1924. The output of "dry ice" has increased enormously in the United States. In 1925 only 170 tons were produced, but in 1930 the output was 70,000 tons, and in 1932 about 61,000 tons.

Several industries have been established in Palestine, such as cement works, bricks, and tiles for building. The extraction of chemicals from the Dead Sea has been most successful. Regular shipments of potash to the United States has been planned, and it is anticipated that in 1933 the annual production will be about 10,000 tons. Leather, shoe-polish, scouring powders, tooth paste, shaving soap, aluminium ware, etc., are also produced in Palestine.

Industrial and Engineering Chemistry (Oct. 10) gave an account of plans for the scientific organization of the Ninth International Congress of Pure and Applied Chemistry at a gathering of chemists of Spain and other countries held at the summer University of Santander, August 8-18. The committee set Apr. 5-11, 1934, as the date for the congress. The year 1934 will be especially advantageous for American chemists to visit Europe, for in addition to the International Congress at Madrid, the Third International Congress of Agricultural Industries will be held in Paris the preceding week. This congress will be devoted particularly to such industries as sugars, fermentation and distillation, fertilizers, foods, and tropical products.

At the September meeting of the American

Chemical Society in Chicago, Miss Cornelia Burwell, a young research worker of Ann Arbor, Michigan, reported a promising remedy for such skin diseases as ringworm, eczema, and acne. It consists of complex organic compounds produced in the laboratory, as salts of certain fatty acids obtained from petroleum. The application of the remedy tends to restore the normal condition of the skin.

Trypan blue, an aniline dye product, is now being used in the treatment of leprosy, and remarkable results are claimed for it. Treatment consists of six injections of the dye. A few minutes after the injection the body turns entirely blue, but this disappears in about six weeks, and the leprosy is said to be completely cured. It is hoped that trypan blue may be used as a remedy for tuberculosis.

On Oct. 16, 1846, William Morton, a young Boston dentist, successfully demonstrated that surgical operations could be performed under ether. The eighty-seventh anniversary of this important discovery was celebrated at the Harvard Dental School. The room in which the first operation took place is still preserved in the old main building of the Massachusetts General Hospital.

An extensive investigation has been carried out at Savannah, Georgia, under the direction of Dr. C. H. Herty, to determine the possibilities of producing newsprint and other grades of white paper from young southern pines. The preliminary tests were quite promising.

The Perkin Medal was awarded to George Oenlager, research chemist of the B. G. Goodrich Company, Akron, O. The Perkin Medal may be awarded annually by the American Section of the Society of Chemical Industry for the most valuable work in applied chemistry.

The Chandler Medal was awarded to Dr. George O. Crume, Jr., research director of the Carbide and Carbon Chemicals Corporation, New York, in recognition of his synthesis and large-scale production of many aliphatic chemical compounds.

CHESS. Not called upon to defend his world's championship crown, wrested from Jose Capablanca in 1927, Dr. Alexander Alekhine, of Paris, continued his exhibition chess tours in 1933 and established one new record. At the Century of Progress Exposition in Chicago in the summer, Alekhine set a new standard for blindfold play by conducting thirty-two games simultaneously against that number of opponents without sight of board or men. This mental feat was performed in twelve hours at the end of which the champion had nineteen victories, four losses and nine drawn games.

The chess year was notable for the fine showing of the United States players in international competition. In the biennial international team tournament of the International Chess Federation held at Folkestone, England in July, in a field of 15 countries, the United States team emerged victorious, after a close battle with the representatives of Czechoslovakia. The American team thus retained possession of the Hamilton-Russell Trophy, first won by the United States forces in 1931 at Prague. For the most part the successful team was made up of youngsters who had learned the game in New York City. Frank J. Marshall, United States champion since 1909, and captain of the team, was the lone veteran player. The other players were Isaac Kashdan, Reuben Fine,

Arthur W. Dake, and Albert C. Simonson. Sweden, Poland, and Hungary tied for third place at Folkestone; Austria was sixth, Lithuania seventh, France eighth, Latvia ninth, and Great Britain tenth.

Honors in the championship meetings of the Western Chess Association and the New York State Chess Association fell to two New York City players, Reuben Fine winning at Detroit and Fred Reinfeld at Syracuse. Fine won the Marshall Chess Club championship and Abraham Kupchik that of the Manhattan Chess Club.

Lieutenant John D. Matheson of West Point topped a field of twelve to win the intercollegiate tournament at the Chicago Fair with Nathan Beckhardt of City College of New York second and Willis E. Lamb, Jr. of the University of California, third. City College won the Intercollegiate Chess League honors in New York and Harvard took the title in the H.Y.P.D. College Chess League. Martin C. Stark of Harvard won the individual college championship in the New York tournament.

CHICAGO. See ILLINOIS under *Political and Other Events*; MUSIC; ART EXHIBITIONS.

CHICAGO, THE UNIVERSITY OF. An institution of higher education and research in Chicago, Ill., founded in 1890. The university is privately endowed, coeducational, and non-sectarian, although one-third of its 30 trustees must be Baptists. John D. Rockefeller founded the university, and his personal gifts amounted to a total of \$35,000,000 over a period of 20 years.

The educational reorganization of the university (see the NEW INTERNATIONAL YEAR BOOKS for 1930, 1931, and 1932, for details) entered its third year of operation at the opening of the autumn quarter, 1933. As in the first year of the "New Plan," various improvements as to details were made but the essential basis of the educational programme was unchanged. President Hutchins stated the aim of the college in these terms: "Our college is devoted to understanding collegiate education. We think of course that in the process of trying to understand college education we are administering the best in the world. We think our college students are profiting greatly by such things as the New Plan, which is one of the first fruits of our efforts to discover what a college education ought to be." At the opening of the autumn quarter, another step in President Hutchins' programme of defining the functions and organization of education was taken with the consolidation of the last two years of University High School with the first two years of the college.

President Hutchins initiated also discussions with Northwestern University as to the desirability of some form of coöperation between the two institutions. This consideration centred around the possibility of a merger. If such a merger proves, after careful investigation, to be educationally desirable and possible of accomplishment, President Hutchins believes the consolidation would be of great value to higher education in the United States, as a notable step in the elimination of duplications and overlapping and in offering an opportunity for the clarification of educational organization.

During the year, Gilbert A. Bliss, professor and chairman of the department of mathematics, was appointed Martin A. Ryerson Distinguished Service Professor; Edgar J. Goodspeed, chairman of the department of New Testament and early

Christian literature, was appointed Ernest DeWitt Burton Distinguished Service Professor; Frank R. Lillie, dean of the division of the biological sciences, was appointed to an Andrew McLeish Distinguished Service Professorship; William F. Ogburn, professor of sociology, was appointed Sewell L. Avery Distinguished Service Professor; Harry A. Bigelow, dean of the law school, was appointed John P. Wilson professor of law.

In the summer quarter, 1933, the enrollment was 4952 students, of whom 2108 were men and 2844 were women. In the college and divisions in arts, literature, and sciences there were 1171 men and 1146 women in the graduate classification; 227 men and 384 women undergraduates, and 95 men and 269 women unclassified. In the professional schools there were 665 men and 490 women; in University College (downtown division), 84 men and 600 women. In the autumn quarter, 1933, the total enrollment was 7891, a gain of 8 per cent over the same quarter of 1932. Of the total, 4402 were men and 3489 were women. In the college and divisions there were 2382 men and 1471 women; in the professional schools, 1092 men and 488 women; and in University College, 919 men and 1529 women. Of the total enrollment in the divisions of arts, literature, and sciences and in the professional schools, 1675 men and 744 women were classified as graduate students; 1782 men and 1176 women were undergraduates; and 21 men and 51 women were special students. (Small discrepancies in totals are due to duplications.) The Home Study, or correspondence department, had an average of 5100 students.

On Dec. 15, 1933, the members of the faculty, exclusive of assistants and teachers in the laboratory schools, was 852, including 102 in University College. In all departments and in all grades of service the university employed approximately 3000 persons. The assets held by the university as of June 30, 1933, were \$111,131,191, divided as follows: Endowment, \$60,242,064; plant, \$40,831,672; other assets, \$10,057,454. The total income under the university's combined budget for the fiscal year 1932-33 was \$7,335,529, while expenditures amounted to \$7,324,958. Students' fees provided 30.60 per cent of the university budget income, and endowment funds 34.52 per cent. The salary cost of instruction and research constituted 36.91 per cent of the budget expenditures, or \$2,703,587. The total amount of gifts paid in was \$4,865,745.

The University of Chicago Press published 122 books during 1933, in addition to 16 scholarly journals and a considerable number of publications for such groups as the National Advisory Council on Radio in Education. The most important publications were *The University of Chicago Survey*, in 12 volumes; *The Short Bible*, edited by Edgar Johnson Goodspeed and J. M. P. Smith; *What Plato Said*, by Paul Shorey. The Press distributed also the educational talking pictures, production of which was undertaken in 1932 in coöperation with Erpi Picture Consultants, Inc. Six films of a series of 20 in the physical sciences have been completed. Accessions to the university libraries increased the number of bound volumes to 1,048,001. The number of periodicals received totaled 5322. President, Robert Maynard Hutchins, LL.D.

"CHICAGO PLAN." See UNIVERSITIES AND COLLEGES.

CHIERA, EDWARD. An American educator and Orientalist, died in Chicago, Ill., June 21, 1933. Born in Rome, Italy, Aug. 5, 1886, he came to the United States in early manhood, attending the Crozer Theological Seminary at Chester, Pa., and the University of Pennsylvania, receiving from the latter the Ph.D. degree in 1913. Until 1927 he served on the faculty of the University of Pennsylvania, first as an instructor in Assyriology (1913-19) and then as an instructor in Semitics (1919-22), assistant professor of Assyriology (1922-26), and professor of Assyriology (1926-27). At the time of his death he held the chair of Assyriology at the University of Chicago and was editor of the *Assyrian Dictionary*, under compilation by that institution since 1921.

Becoming associated with the American School of Oriental Research in Bagdad in 1924, Dr. Chiera directed excavations at Nuzi, Iraq, during the next four years and in 1928 uncovered near Kharsabad ruins of the ancient Assyrian civilization from the stone to the bronze ages. His publications included: *Legal and Administrative Documents from Nippur* (1919); *Lists of Personal Names from the Temple School of Nippur* (3 parts, 1916-19); *Catalogue of the Babylonian Cuneiform Tablets in the Princeton University Library* (1921); *Selected Temple Accounts from Telloh, Yokla, and Drehem* (1922); *Old Babylonian Contracts* (1922); *Sumerian Religious Texts* (1924); *Adoption Documents* (1927); *Sumerian Lexical Texts* (1930); and *Exchange and Security Documents* (1931). He was also cooperative editor of the *American Journal of Semitic Languages*, and in 1918 was made a chevalier of the Order of the Crown of Italy.

CHILD LABOR. Early in the year it became increasingly evident that all the forces for social welfare were being mobilized in an effort to eradicate the evil of child labor in industry. The deepening of the depression, while it had its effects on child workers, had presented this peculiar irony: because they were prepared to work for smaller wages in the labor market wherever possible, they were being utilized as replacements for higher paid adult workers. The progress of the depression indicated that there were upwards of two million boys and girls still being employed while at least seven times as many adults had been rendered jobless; child exploitation had once again raised its head particularly in the textile and clothing trades; and that increasingly there were appearing evidences of violations of child labor laws and factory codes as affecting young workers. Organizations watchful for the welfare of children in industry pointed out that because there were absent suitable openings for young workers, these were accepting ill paid and blind alley jobs; that there was an increase of children in those occupations which were not coming under the purview of child labor laws, such as tenement home work and street trades; that the problem of idleness among children who had dropped out of school and could not find work was serious; and that the sharp reduction in educational services as a result of the practically bankrupt condition of many local jurisdictions was a sign of the times which could scarcely augur well for the future. All these aspects of the situation were nothing less than tragic and it seemed as though the slow progress that had been attained as a result of the concentrated efforts of welfare workers of a gen-

eration was being dissipated practically over night. It was, therefore, heartening to observe the rallying of forces from so many different quarters for the rescuing of the children of the nation during the year 1933.

A continuing committee, appointed by the Children's Bureau Conference on Present-Day Child Labor Problems, clarified the legislative programme of the conference to sharpen up its objectives. The most important of these was the following: The establishment of a basic 16-year minimum for all gainful employment, allowing, however, certain exceptions of carefully selected occupations for the 14 and 15 year old groups outside of school hours. Suitable provision for the group not able to profit by the ordinary school programme up to the age of 16 was also to be made. At a meeting held in the office of the New York State Industrial Commissioner, which had the support of Governor Lehman, a committee was established to further the establishment of a 16-year age minimum, to obtain additional protection for young workers in hazardous occupations, and to create a minimum wage board for minors in industry. In Massachusetts a special commission, established by the legislature, filed a report which included recommendations for the raising of the compulsory school attendance age from 14 to 16 years. Similar programmes were being formulated for legislative action early in the year. The fact was, in the first two legislative months the investigators of the National Child Labor Committee found that fully one hundred bills had been introduced in various legislatures concerning child labor and school attendance. It was important to observe, however, that such measures were meeting with greater resistance than ever before largely because of the strenuous efforts of tax reform groups to cut public budgets to the bone. Bills providing for a 16-year minimum age were introduced in Connecticut, Massachusetts, New York, South Dakota, Texas, Utah, and Wisconsin. Minimum wage legislation was laid before legislators in Connecticut, New Hampshire, New Mexico, New York, Rhode Island, and Utah. Bills further restricting hours of work or night work, particularly as relating to minors, were brought up in the legislatures of Connecticut, Georgia, Indiana, Massachusetts, Michigan, Minnesota, New York, North Carolina, Pennsylvania, Rhode Island, and South Dakota. In the States of Connecticut, Massachusetts, Minnesota, Nevada, New Jersey, and Rhode Island measures were presented for the purpose of strengthening the minimum wage, work permit, and dangerous occupations sections in child labor codes. Also in Minnesota and Tennessee, street trades bills were being supported; while in Georgia, Indiana, New Hampshire, and Tennessee reformers were working for the enactment of compensation laws insuring double compensation for minors suffering injuries who were being illegally employed.

The legislative history of the year indicated some interesting departures. Utah in one session moved from the rear to the very forefront of the States having progressive child labor codes. The new Utah law set a minimum age of 16 years for all employment during school hours and in many occupations, including any work in connection with machinery; and a minimum of 18 years for specified dangerous occupations. Work permit provisions and a 44 hour week were established for minors under 18, and night work between

the hours of 6 P. M. and 7 A. M. was banned, except for boys over 16. Children over 14 were to be permitted to work without permits in agriculture or domestic service outside of school hours, while street trading was prohibited for boys under 12 and girls under 16, except that boys between 10 and 12 years might distribute papers over fixed routes. Double compensation was to be paid to young workers injured while illegally employed. In Wisconsin a 16-year minimum was established for child labor; also all children between 14 and 16 who had formerly attended vocational school half-time were to attend vocational schools or the regulation high schools full-time. In Connecticut the working hours for minors under 16 as well as women in mercantile establishments, restaurants, cafés, public dining rooms, etc., were reduced. In New Hampshire and Indiana double compensation for minors under 18 injured while illegally employed was established. Mandatory minimum wage rules applying to minors under 21 and to women were set up in Connecticut, Illinois, New Hampshire, New Jersey, New York, Ohio, and Utah. Penalties for the violation of street trades laws were imposed in Minnesota and for the violation of the law prohibiting dangerous occupations for minors under 18 were imposed in New Jersey.

One must observe, however, that bills to establish 16 years as the minimum age for employment during school hours were lost in Connecticut, Illinois, Iowa, Massachusetts, New York, Pennsylvania, South Carolina, South Dakota, and Texas. Revisions of the entire child labor code failed in Nevada, New Hampshire, and Tennessee.

A sudden victory for the cause of child labor came with the signing of the cotton textile code under the aegis of the National Recovery Administration. This, what must be regarded as an historic document, was promulgated on July 9, and barred the employment of children under 16 years from what had always been considered as the stronghold of child labor, the textile industry. On July 20, President Roosevelt made public a blanket agreement for all industries not yet submitting codes under the NRA and the first section provided that children under 16 were not to be employed, except that the 14 and 15 year olds not in manufacturing and mechanical industries might work a three hour maximum between 7 A. M. and 7 P. M. in such activities as would not interfere with hours of day school. Thereafter the 16-year minimum increasingly appeared in all codes which began to receive the examination and sanction of the NRA administrators. The cloak and suit industry code even went further and specified an 18-year age minimum for manufacturing employees. Among the first thirty industrial codes only two allowed the employment of children under 16 years of age under any circumstances. In legitimate theatres child actors were to be permitted in special parts. In the bituminous coal code, a clause prohibiting employment under 16 years in any capacity in the industry was omitted but provision was made for the banning of child workers under 17 years underground or in hazardous occupations above ground. Although in the cotton textile code the employment of learners or apprentices was not strictly regulated as to the number permitted, wages and length of the apprenticeship period, the wool textile code allowed no exception from the minimum wage rates for learners or any other class of workers; while the lace manufac-

turing code restricted the learning period to six weeks, the numbers of learners to one for every 6 skilled workers, and the learners' pay to not less than 80 per cent of the basic rate. A great victory gained was the elimination of the home work system in the major garment industries. Here with one clean blow child labor in industrial home work was wiped out. The code for the retail trades and drug stores followed the blanket code in allowing employment for three hours a day for children between 14 and 16 years. Under the terms of this code an alternative was incorporated permitting such children to work eight hours a day for one day a week. In either case such work was to take place between 7 A. M. and 7 P. M. and was not to interfere with the child's hours at school. The code also prohibited children under 16 years from delivering merchandise from motor vehicles. The following summary indicates a partial list of industries in which age minimums were established: Straight 16-year minimums were incorporated in the codes of these industries: artificial flowers and feathers; automobiles; corsets and brassières; cotton textiles; electrical manufacturing; fishing tackle; hosiery; iron and steel; lace manufacturing; leather, linoleum and felt base; men's clothing; motion picture laboratory; oil burners; petroleum; photographic manufacturing; rayon and synthetic yarns; ship building and ship repair; textile bag; transit industry; underwear manufacturing; wall paper manufacturing. In addition to the modifications cited above, the following also may be noted: in the cast iron soil pipe industry the minimum was fixed at 18 for hazardous foundry operations; in gasoline pumps the minimum was 18 on metal working machines; in lumber the minimum was 18 except for boys over 16 in non-hazardous occupations during school vacations or if no wage earners over 18 were in the family; in salt producing the minimum was 21 for all underground work in mines.

Before the year was over it was estimated that as a result of the operations of the codes under the NRA fully 100,000 children had gone back to school. However, the depression was causing a real crisis in education. The demands for economy in the public services and the increasing inability of local jurisdictions to provide adequate educational facilities, not to speak of meeting of teacher payrolls and the maintenance of schools already in existence, had brought about an alarming state of affairs. In Arkansas, Alabama, Idaho, North and South Dakota, as well as in other mid-western and southern States, thousands of school districts were unable to maintain their schools as much as 120 days during 1932-33. It was estimated that approximately 100 city school systems and 4500 rural schools had reduced their terms a month or more. While 100,000 children, thanks to the elimination of child labor, had been turned back to the schools, fully another 100,000 children were shut out of schools because of inability to finance before the year had closed. The National Education Association pointed out that the expenditure for new school buildings fell from \$400,000,000 in 1925-26 to \$155,000,000 in 1932-33; 250,000 children were attending school part time because of the drop in school rooms and that another 150,000 were housed in temporary or portable schools. It was hoped that the Public Works Administration, set up under the New Deal, would make

available funds for the construction of new school buildings in areas where they were sorely needed, and friends of child education were making all efforts to bring the lamentable state of affairs in school construction to the attention of Administrator Ickes. But these public works funds were moving slowly due to the necessity for close scrutiny of all the projects submitted with the result that little relief seemed in sight as the year closed.

CHILD LABOR AMENDMENT. The child labor amendment in 1933 was taking on a new lease of life. The 14 States of Illinois, Michigan, New Hampshire, New Jersey, North Dakota, Ohio, Oklahoma, Oregon, Iowa, West Virginia, Minnesota, Maine, Pennsylvania, and Washington ratified during the year bringing up to 20 the number of States which had taken favorable action on the measure since its passage by Congress in 1924. States which had previously ratified were Arizona, Arkansas, California, Colorado, Montana, and Wisconsin. The curious change in opinion of course in large measure was hastened by growing unemployment among adults while children continued to be favored for available jobs because of their willingness to accept lower wage levels. From Pennsylvania, the State employing the largest number of children under 16 years of age in manufacturing and mechanical occupations, according to the census of 1930, there issued the following warning (*Philadelphia Public Ledger*):

This pending amendment is a reminder that unless the States which for years have tolerated child labor in its most vicious form shall of themselves reform that situation, national opinion and constitutional change will yet be invoked. Unless reforms are made within the next few years, it is virtually certain that there will be renewed agitation for ratification of this amendment.

The text of the amendment reads as follows:

Section 1. The Congress shall have power to limit, regulate, and prohibit the labor of persons under 18 years of age.

Section 2. The power of the several States is unimpaired by this article except that the operation of State laws shall be suspended to the extent necessary to give effect to legislation enacted by the Congress.

CHILD LABOR IN TOBACCO FIELDS. Tobacco growers, representing 95 per cent of the industry in Connecticut and Massachusetts, signed a voluntary agreement not to employ children under 14 years on tobacco plantations. As the *American Child* points out this was a great victory. For many years those interested in child labor had protested in vain against exploitation of children on tobacco plantations. This acceptance, without legislative mandate, of the 14-year-old minimum was calculated to bring about improvement of conditions without giving any single employer an advantage.

CENSUS REPORT. From 1910 to 1920 the number of children from 10 to 15 years of age gainfully employed in the United States decreased from 1,990,225 to 1,060,858, or 46.7 per cent; from 1920 to 1930 the decrease was from 1,060,858 to 667,118, or 37 per cent. In the earlier decade there was a rise in school attendance in the same age group from 9,203,671 to 11,132,527, or 21 per cent; by 1930 the number of children attending school was 13,495,044, or an increase of 21.2 per cent over 1920.

On the other hand there were a few increases which stand out vividly. In several southern States the percentage of textile workers of 16

and 17 years showed an increase since 1920. In the clothing industries in some of the New England and Middle-Atlantic States a shift from older to younger workers took place. In Connecticut and Rhode Island, for instance, the number of workers 16 and 17 years old in the clothing industry increased from 123 per cent to 283 per cent respectively; in New Jersey, the increase was 81 per cent; in Pennsylvania, it was 62 per cent; and in Massachusetts, it was 52 per cent.

CHILDREN IN SWEATED INDUSTRIES. In some States children in sweated industries were becoming increasingly common. In Connecticut, particularly, the conditions in the so-called "runaway shops" of the garment-making industry earned the condemnation of all friends of children in industry. Sweating in runaway shops was also being noted in Pennsylvania and Massachusetts. In Massachusetts attention was called to the situation through the efforts of the State minimum wage commission to enforce the minimum wage law. The following statement was more or less typical of hours and conditions of employment that child workers were being compelled to submit to. (*Monthly Labor Review*; March, 1933.)

An investigation made by the Massachusetts Minimum Wage Commission last spring disclosed that rates as low as 10 cents, and in one case, 5 cents an hour were paid to girl workers in Fall River; hundreds were earning less than \$5 a week. In five plants investigated, manufacturing men's furnishings, women's underwear, house dresses, children's dresses, only five employees earned more than \$15 a week. Of 1616 employees in 13 plants making women's apparel 71 per cent earned less than \$10 a week, and 97 per cent earned less than \$15 a week. In one of the worst-paid shops hourly rates ranged from 10 cents to 16 cents an hour; the earnings of these workers, if employed for a full week of 48 hours, would range from \$4.80 to \$7.68 a week. Practically all the shops paying these low wages had started business in the town since the beginning of the present depression. Many factories of similar character have been established in other Massachusetts cities during this period. In New Bedford, for instance, it was found that wages paid were even lower than in Fall River, and check ups at later dates revealed that, even after investigation by the minimum wage commission, wages were continuing downward.

A report made by the Pennsylvania State Department of Labor and Industry, as regards industrial home work in that State in 1931, found that because of hard times conditions in some work had grown worse and the process of deterioration was continuing because of the inability to closely supervise such activities. The report went on to state: Violations of the child labor law have nearly doubled and violations of the woman's law have quadrupled. Many employers, rushed to fill orders, have in turn pressed their home workers into violations of the labor laws. Workers, many of them living in poverty whether from unemployment, low earnings, or both, often put their children at the tasks or themselves worked overtime in order to keep their employer's favor and to earn a few cents. Employers and workers alike have grown careless of labor standards and have ignored the fact that, in their attempts to keep going at any price, all tend to be reduced to the same low standard from which each would escape.

GREAT BRITAIN. A report issued by the British

Ministry of Labor on the work during 1931 of the local committees for juvenile employment made public the following conditions as affecting child labor in Great Britain. There were 80,000 fewer juveniles available for work in 1931 than in 1930, the lowered birth rate due to the war having affected for the first time the 16- and 17-year olds, the age of entry into employment insurance. Thus, the number of insured juveniles showed a decline for the first time since 1928, the total for 1931 standing at 1,010,000 for the whole of Great Britain. Employment was better among girls than among boys, and the disparity increased during the year, girls apparently replacing boys in the lighter manufacturing industries and in clerical and commercial work. Juvenile unemployment was less pronounced in London and the south than in the industrial north and in Wales. The percentage of insured juveniles unemployed was much lower than among adults; the average for the year was 7.6 per cent in 1931 as compared with 5.7 per cent in 1930, while the insured adults unemployed was 22.7 per cent in 1931 and 16.8 per cent in 1930. The local committees concerned themselves also with vocational guidance, during 1931, finding 306,821 jobs for juveniles which were about equally distributed between boys and girls. Short time working among juveniles decreased but non-progressive occupations were still prevalent and were causing serious concern to the agencies. See LAW.

CHILD PSYCHOLOGY. See PSYCHOLOGY.

CHILDREN'S BUREAU. See CHILD WELFARE.

CHILD WELFARE. A study made by the Children's Bureau indicated that work for the protection of the health and lives of children has had a long history in the United States.

MOTHERS' ASSISTANCE. A survey made by the Children's Bureau of the status of mothers' aid in the various States in 1931 showed that more than 250,000 dependent children were being cared for in their own homes in the 44 States and the District of Columbia where mothers' aid laws were in operation. The number of families thus assisted increased from 45,825 in 1921 to 93,620 in 1931. While but four States—Kentucky, Mississippi, North Carolina, Rhode Island—and the District of Columbia passed such legislation over the period 1921–31, the increase was really due to the many more counties granting aid. In 1931 the number of families averaged 10 for every 10,000 population, the rates varying, however, from 1 per 10,000 in Maryland to 24 in Wisconsin. Over \$33,000,000 was spent for such grants to mothers in the year ended June 30, 1931. Annual per capita expenditures based upon the population of reporting areas varied from 3 cents per capita in Louisiana and North Carolina to 82 cents in New York. The high per capita expenditure in such States as Massachusetts, Michigan, New York, and Wisconsin brought the expenditures for all areas to 38 cents per capita. The size of the monthly allowance to the individual family varied widely. The average monthly grant ranged from \$69.31 in Massachusetts to \$4.33 in Arkansas; South Carolina was the median State with an average monthly grant of \$21.78. Within the decade 1921–31 there was an increasing progress manifested in the nature of the legislation, benefits of the law being made available to more children and efforts being taken to make the grants more nearly equal to the needs of the families. There was a gradual broadening in the

definition of the persons eligible for assistance and an increase in the number of States granting aid to children up to the age of 16.

MATERNAL DEATHS. According to a report published by the Commonwealth Fund and made by a sub-committee of the Committee on Public Health Relations of the New York Academy of Medicine, nearly 66 per cent of the mothers who died of child birth in New York City in the years 1930, 1931, and 1932 could have been saved by the application of proper medical knowledge. In the three years indicated, 2041 maternal deaths occurred in New York City, of which 1343, or 65.8 per cent could have been prevented "if the care of the woman had been proper in all respects." Responsibility for these deaths was distributed among physicians, patients, and midwives. To the medical group 61.1 per cent of all the preventable deaths were charged; patients were held responsible for 36.7 per cent; and midwives for only 2.2 per cent. The committee, on the basis of a case work analysis of each death that occurred, was able to declare that the following factors were significant in affecting maternal mortality: the widespread use of anesthesia, the decline in spontaneous deliveries, the greater frequency with which operative measures were employed, Cæsarean sections, inadequate pre-natal care, the economic status of the patients, and the like. The report pointed out that according to authoritative estimates not more than 5 per cent of all delivery cases required operative interference. On the other hand in 67 hospitals in which almost 75 per cent of all hospital deliveries occurred, operative interference was practiced in 24.3 per cent of all the cases. The committee, in comparing maternal deaths in operative delivery with those in which delivery was spontaneous, found that the maternal mortality was five times as high among the operative deliveries as among the spontaneous ones. A little less than 30 per cent of all deliveries studied took place in the home. It is interesting to note that only 14.5 per cent of the 1343 preventable deaths followed delivery in the home. The relative death rates per 1000 live births for hospital and home deliveries were 4.5 per 1000 live births in the hospital, and only 1.9 per 1000 live births in the home. The committee, however, makes an observation that should be borne in mind: "It should be remembered . . . that only those deliveries which are unassociated with serious abnormalities are usually undertaken in the home."

The results of a similar investigation, but on a much wider scale, were made public by the Children's Bureau based upon a detailed and scientific investigation of 7380 deaths of mothers in 15 States. This inquiry covered every maternal death in 19 States for 2 years and in 2 additional States for 1 year, including personal interviews with the attendant of the woman who died. The Obstetric Advisory Committee of the Bureau pointed out, after an analysis of the data, that probably one-fourth of all the maternal deaths indicated were not due to maternal mortality as the general public accepted this term. Follow-up of death records revealed that 1825 women died following ending of pregnancy so premature that the infant could not survive. Of this number 1324 died from sepsis, and in 50 per cent of the cases of known type these deaths followed attempt by the women themselves to avoid motherhood. Another important fact revealed by the study was the large proportion of women who

had little or no maternal care. Of the women on whom a report on pre-natal care could be obtained, 54 per cent had no pre-natal examination by a physician. This lack of pre-natal care was held a factor in the second largest cause of maternal deaths. Since 30 per cent of the deaths studied was preceded by some presumably toxic condition, 26 per cent being due to albuminuria and convulsions, special emphasis was placed by the committee on the education of the public as a necessity for pre-natal care. The report pointed out that physicians and communities had important tasks to perform in the education of expectant mothers and the provision of proper clinical and hospital facilities for care before, during and after pregnancy. Said the report: "The community has a definite responsibility to provide adequate medical and nursing facilities for the care of women during pregnancy, labor, and post-partum. This predicates the proper organization of hospitals, out-patient services, and medical and nursing personnel, and applies to both home and hospital care."

HEALTH AND NUTRITION OF CHILDREN. On the basis of a study made by the Children's Bureau it was ascertained that the depression was having a real and increasingly severe effect on the health and nutrition of children. Data which were compiled through interviews or correspondence with persons interested in the problem pointed to the fact "that the nutritional condition of children in many communities is showing increasingly serious effects of the long periods of unemployment and want." It was estimated that somewhere in the neighborhood of one-half of all pre-school and school children in the United States were showing the effects of poor nutrition, inadequate housing, lack of medical care, and of the anxiety and insecurity prevailing in homes where there was no employment. Statistical corroboration for this belief was based upon the New York City's Health Department annual study of more than 300,000 school children. During the three years 1927, 1928, and 1929, the percentage of malnutrition was only 13 per cent; in 1930, it was 16 per cent; in 1931, 17 per cent; and in 1932, 21 per cent. A Detroit study made in the fall of 1932 showed that out of a group of 1140 school children, 11 per cent were definitely malnourished and 7 per cent additional were underweight for height. Of those showing clinical evidences of malnutrition, 68 per cent were declared to be anæmic. Fully one-third of the children in this malnourished group were thought by those making the study to be "primarily due to the economic restrictions caused by the present depression." A report made by the Community Health Centre of Philadelphia indicated an increase of malnutrition among children of school age from an average of 30 per cent of those examined during 1928-30 to 42 per cent of those examined in 1932. Among children under six the percentage of malnourishment showed a definite rise, increasing from 11 per cent in the period 1928-30 to 23 per cent in 1932. Of the 2381 school children in coal mining regions in two States examined by the American Friends Service Committee in 1931, more than half were 10 per cent underweight; in some schools as many as 90 per cent of the children were in the underweight group. The Children's Bureau report also declared that there were indications pointing to the fact that malnourishment among mothers was having its effect upon new born

babies and nurselings. Increases in the incidence of rickets were reported from several localities in Maryland, Pennsylvania, New York, and Connecticut.

CONFERENCE ON CHILD HEALTH AND NUTRITION. At the call of the United States Children's Bureau there was assembled in Washington on October 6 a conference to consider the general subject of malnutrition among children as well as measures for coping with it. Delegates representing organizations having over 50,000 members and coming from the groups of medical and health workers, educationalists, nutritionists and home economists, and social service agencies, were present from all parts of the country. A preliminary report, submitted by an executive committee, in pointing out the seriousness of the problem, presented two objectives to advance the united efforts of all different groups concerned with the health, education, and training of children. These were: 1. the location of under-nourished children by physical examinations; 2. the initiation and development of plans to overcome existing malnutrition through dietary measures and corrective medical procedure. Discussion among the conferees indicated that agreement existed on these two points: 1. That before the depression began there were decided evidences of malnutrition among the children of the country. It was, therefore, pointed out that any effort simply to annul the effects of the depression would be inadequate; any campaign in order to be effective must have as its goal the improvement of conditions over the situation existing before the depression had occurred. 2. Malnutrition and under-nourishment, it was pointed out, were not necessarily nor solely due to poverty. Therefore, an educational campaign was as important as a campaign for relief. Reports were submitted to indicate that malnutrition had increased during the depression and that immediate and effective remedial action was imperative. Dr. Earl G. Browne, state health officer of Kansas, reported that the examination of 38,000 school children in that State had shown that 25 per cent were suffering from malnutrition, and that 70 per cent of those in agricultural districts were not drinking milk. From other regions came reports similarly stressing the need for united action along relief, preventive and educational lines. The objectives presented by the executive committee of the conference were approved with the suggestion that there might be possible modifications to apply to the special conditions of the different States.

SCHOOL CHILDREN. In an effort to ascertain how many public schools throughout the land were being slowly undermined because of the drive for economy and the lack of public funds, the National Education Association, through one of its committees, made a survey of the rural school situation in several representative States. Inquiries were sent to 3520 county school superintendents or equivalent rural or State school officers, and replies were received from 1886 such officials. These replies indicated that in September, 1933, there were 2016 rural schools which failed to open because of lack of funds, indicating that 110,800 children who would ordinarily have been pupils at such schools were denied educational opportunities. In addition, 715 schools were unable to operate more than three months and as a result, 35,750 children's school year was sharply curtailed. Another 18,290 schools were

not in a position to keep open more than 6 months and in these 914,500 children were affected. In an effort to ascertain existing minimum wage levels for school teachers, with the \$750 annual wage set in the President's blanket code as a basis for comparison, the N.E.A. committee also made inquiries along these lines. It was ascertained that in the 1886 counties from which replies were received, 209,573 teachers were receiving less than \$750 a year while 84,036 teachers were receiving less than \$450 a year. In short, out of the approximately 450,000 school teachers in the rural areas, one out of every two was receiving an annual salary less than \$750, and one in every five was receiving less than \$450.

FAMILY ALLOWANCES. In *Belgium* on Dec. 31, 1932, there were 86 primary family allowance funds operating under the family allowance act of Aug. 4, 1930. These funds covered 83,994 enterprises employing 1,273,701 workers and toward whose support employers had paid assessments for the year which totaled \$6,742,240. Up to the end of 1932 the primary funds had disbursed in family allowances a total of \$6,373,701. In *New Zealand* during the year ending Mar. 31, 1932, the number of family allowance claims handled under the act passed in 1926 totaled 3722 of which 3040 were approved. The total number of families receiving allowances on Mar. 31, 1932, was 7332; and during the year ending on that date the total amount paid out in allowances was £90,100 and the total paid for the four years ending Mar. 31, 1932, was £307,159. The number of children in the 7332 families in receipt of allowances was 34,546 of whom 19,882 were in families having more than two children. The average number of children per family was 4.71. Of the 3040 families whose claims for allowances were granted in the year 1931-32, 1206 had weekly incomes over £3 and up to £3. 12s. The weekly rates at which the allowances were granted were as follows: weekly rate of 1s., 6 families; 2s., 1127 families; 3s., 10 families; 4s., 946 families; 5s., 9 families; 6s., 508 families; 8s., 264 families; 10s., 105 families; 12s., 52 families; 14s., 7 families; 16s., 4 families; 18s., 2 families.

CHILE, chē'lā, or chī'l. A South American republic. Capital, Santiago.

AREA AND POPULATION. With an area of 280,396 square miles, Chile had an estimated population on Jan. 1, 1933, of 4,402,000 (4,287,445 at the 1930 census). The people are mainly of European descent. The census population of the chief cities in 1930 was: Santiago, 696,231; Valparaíso, 193,205; Concepción, 77,589; Antofagasta, 53,591; Viña del Mar, 49,488; Iquique, 46,458; Talca, 45,020. The registered movement of population in 1932 was: Living births, 149,471; deaths, 99,664; marriages, 28,812.

EDUCATION. Primary education is free and compulsory. In 1932-33 there were 3344 public elementary schools, with 437,944 pupils; 712 private elementary schools, with 57,427 pupils; 81 secondary schools, with 24,869 pupils; and 3 universities, with 6360 students.

PRODUCTION. The chief occupations are agriculture (central Chile), mining (northern zone), and lumbering and stock raising (southern Chile). A total of 8,344,000 acres (4.6 per cent of the area) was arable; meadow and pasture, 51,646,000 acres; forest, 11,232,000 acres. Crop yields in the 1931-32 season (thousands of units, bushels except as indicated) were: Wheat, 21,187; bar-

ley, 3097; oats, 4923; corn, 2951; potatoes, 15,053; beans, 2340; peas, 623; wine (gallons), 63,695. The wool production in 1932 was 32,500,000 pounds (29,600,000 in 1931). Mineral output in 1931, with 1932 figures in parentheses where available, was: Gold, 16,716 fine ounces (38,096); silver, 372,000 fine ounces (73,422); copper (smelter), 215,700 metric tons (97,500); iron ore, 712,000 metric tons (171,000); nitrate of soda, 1,125,000 metric tons (2,446,000 in 1930 and 3,233,000 in 1929); iodine, 184,000 pounds in 1930; coal, 1,442,000 metric tons (1,107,000). The nitrate mines employed 65,000 persons in 1930. For the 1933 situation of the industry, see *History*.

Due to the restriction of imports the index of industrial production (Base: 1927-29 equals 100) rose from 74.4 in 1931 to 107.6 in 1932; it was 116.1 in 1929. There were 8585 manufacturing establishments, with 97,832 employees, in 1928.

COMMERCE. Preliminary 1932 foreign trade figures showed imports of 213,800,000 pesos (\$16,890,000), compared with 705,902,000 pesos (\$85,202,000) in 1931. Exports amounted to 350,300,000 pesos (\$27,709,000), against 824,739,000 pesos (\$99,546,000) in 1931. (Conversions to dollars made at average exchange rates of \$0.1207 in 1931 and \$0.079 in 1932; par value of gold peso equals \$0.1217.) The chief exports in 1932 were: Copper ingots and bars, \$10,693,000 (\$36,999,000 in 1931); sodium nitrate, \$4,034,000 (\$43,296 in 1931 and \$116,483,000 in 1929); sheep's wool, \$1,955,000 (\$2,687,000 in 1931); iodine, \$1,447,000 (\$1,028,000). The principal 1931 imports, in order of value, were machinery, iron and steel manufactures, cotton fabrics, sugar, chemicals, etc. In 1932 the United States took 28.1 per cent of Chile's exports (33.4 per cent in 1931); the United Kingdom, 26.9 per cent (16.3); Germany, 7.9 (9.0); and France, 4.7 (11.7). Of the total imports, the United States supplied 23.1 per cent (34.2 per cent in 1931); Germany, 14.8 (16.5); the United Kingdom, 12.9 (16.0). The 1933 imports were 181,600,000 pesos; exports, 368,100,000 pesos.

FINANCE. Closed budget accounts for 1932 showed total revenues of 831,401,000 pesos (ordinary, 514,757,000; extraordinary, 316,644,000) and total expenditures of 1,136,699,000 pesos (ordinary, 703,609,000; extraordinary, 431,990,000). The deficit was 304,198,000 pesos, including 196,122,000 pesos overdrawn at the end of 1931 and 2,424,000 pesos of unpaid obligations from the 1931 budget. Budget estimates for 1933 called for ordinary receipts and expenditures of 945,662,000 pesos and 945,593,000 pesos, respectively. The expenditures included 207,658,000 pesos for public works and unemployment relief previously included in the extraordinary budget. The 1934 budget, as approved by Congress, authorized expenditures of 830,495,995 pesos and estimated revenues at 830,499,000 pesos.

The direct public debt on Dec. 31, 1932, amounted to 3,786,020,000 pesos (external, 2,430,829,000; internal, 934,119,000; bank and short-term advances, 421,072,000), compared with 3,309,630,000 pesos on Dec. 31, 1931. The indirect debt, guaranteed by the government, was 1,281,524,000 on Dec. 31, 1932 (external, 1,227,306,000; internal, 54,218,000). Service on the entire foreign debt was suspended July 30, 1931. Internal debt service was continued.

COMMUNICATIONS. Chile had in operation in 1931, 5515 miles of railway line, of which the State Railways operated about 3600 miles. In 1931 all lines carried 13,855,000 passengers and

21,282,000 metric tons of freight, gross receipts totaling 289,428,000 pesos (\$33,727,000 at average exchange rate). The State lines in 1932 reported a deficit of 30,000,000 pesos (31,000,000 in 1931). Of some 25,000 miles of highway, about 16,000 miles were fit for motor traffic. National air lines link the chief cities of Chile from Santiago to the northern boundary and the Pan American Airways connected Chile with most of the other American countries. The net tonnage of vessels entered at Chilean ports with cargo and in ballast in 1932 was 1,163,000 registered tons; cleared, 1,175,000 tons.

GOVERNMENT. The Constitution of Oct. 18, 1925, vested executive power in a president, assisted by a cabinet responsible to him. Legislative power rests in a national congress, consisting of a senate of 45 members, elected for eight years and representing nine provincial groups of departments, and a chamber of 142 members elected for four years by departments or groups of departments. The President is elected for six years by direct popular vote and is ineligible to succeed himself. President in 1933, Arturo Alessandri (Moderate Socialist), who assumed office Dec. 24, 1932.

HISTORY

ECONOMIC RECOVERY. Chile experienced a definite improvement in basic economic conditions during 1933. The economic depression was not banished, but its rigor was checked and economic suffering of the people somewhat alleviated. The business recovery was attributed to a combination of monetary and other policies. Drastic restriction of the export markets for Chilean nitrate, minerals, and agricultural products resulted in the abandonment of the gold standard, the depreciation of the peso, and the practical exclusion of imports due to the lack of foreign exchange. This in turn stimulated manufacturing for the domestic market. Exports of Chilean manufactured products were encouraged by the fact that the peso depreciated more rapidly on the international exchange market than within Chile. The index of national industrial production (1927-29 equals 100) rose from 92.7 in August, 1932, to 110.1 on Aug. 31, 1933. Gains were reflected in both internal and external trade. The government supplemented the industrial pickup by aiding 100,000 unemployed to find work in gold mining and in agriculture. As the year progressed, recovery in other parts of the world stimulated Chilean exports of nitrate and copper. Government revenues increased and the Alessandri Administration was able to balance the budget and restore public confidence in the currency.

The government's inflationary policy had benefited raw material producers, debtors generally, and the unemployed. But the workers and savers had suffered through a sharp rise in the cost of living. Toward the end of the year the government acted to check a further depreciation of the currency and to restore an equilibrium between living costs and wages. One result of Chile's economic semi-isolation was the establishment of many new industries. New blast furnaces, able to supply one-fifth of Chile's iron and steel requirements, were opened at Corral, near Valdivia, on Sept. 23, 1933.

THE NITRATE INDUSTRY. The nitrate industry, which in previous years had been a leading factor in Chilean economy, continued in the doldrums. In August, 1933, only 7600 workers were employed

in the industry, compared with 58,000 in 1929. Throughout 1933, the government continued its efforts to rehabilitate the industry. The so-called Cosach nitrate monopoly, established by President Ibañez and owned jointly by the Chilean government and foreign nitrate companies, was ordered liquidated on January 2. A new government bill for the establishment of a new sales corporation to replace Cosach was before the Chilean Congress during the latter part of the year. After numerous amendments it was ready for passage as the year closed. It invested a government-created corporation with a 35-year monopoly to sell all Chilean nitrate and iodine, paying the producers cost plus \$1.50 per ton on nitrate.

POLITICAL DEVELOPMENTS. During 1933, comparative order and peace succeeded the succession of revolts and disorders which had marked the previous years of the depression. Several plots against the Alessandri régime were nipped in the bud. Discovery of an alleged Communist plot, involving soldiers and sailors, caused the arrest of some members of the Workers' Federation on February 25. Col. Marmaduke Grove, former Minister of Defense and a leader of the Socialist revolt of July, 1932, was arrested on charges of subversive activity August 10. The threat of a new radical outbreak against President Alessandri's moderately socialistic government was met by the organization of a semi-Fascist militia, headed by Eulogio Sanchez Errazuriz. This organization, known as the Milicia Republicana, paraded 15,000 members through Santiago on May 7. It was reported to be fully armed and equipped. It was pledged to defend constitutional government, and repudiated fascism.

A rival organization to the Milicia Republicana appeared later in 1933 in the Chilean National Socialist party, headed by Jorge Gonzalez and Fernando Ortuzar Vial and modeled on the German Nazi movement. It was frankly Fascist in aim, demanding the elimination of party government. Despite the Milicia Republicana's support, the government on December 13 secured extraordinary powers for six months to crush threatened subversive movements.

FOREIGN RELATIONS. Chile remained on friendly terms with all its neighbors during 1933. The Foreign Office joined with those of Argentina, Brazil, and Peru in attempting to end the struggle between Bolivia and Paraguay in the Chaco. Dr. Miguel Cruchaga Tocornal, Chilean Foreign Minister, met Foreign Minister Saavedra Lamas of Argentina in Mendoza, Argentina, early in February for a two-day conference. They signed a comprehensive Chilean-Argentinian treaty, which was later ratified (see ARGENTINA under *History*). They also elaborated the so-called Mendoza proposals for settlement of the Chaco war (see BOLIVIA under *History*). Following Paraguay's declaration of a state of war on May 10, 1933, Chile declared her neutrality May 13. Contrary to Paraguayan hopes, Chile refused to bar the passage of Bolivian arms and war supplies through the Pacific port of Arica. On May 30, she officially notified Bolivia that the port would remain open. On October 10, the Chilean government joined those of Argentina and Brazil and several other Latin American governments in signing the Argentina anti-war pact and nine other multi-lateral treaties (see ARGENTINA and BRAZIL under *History*).

CHINA. A republic of eastern Asia. Capital, Nanking.

AREA AND POPULATION. Including the four northeastern provinces of Liaoning (Fengtien), Kirin, Heilungkiang, and Jehol united in the Japanese protectorate of Manchoukuo, and the dependencies of Sinkiang (Chinese Turkestan), Mongolia, and Tibet, China has a total area of about 4,300,000 square miles and a population estimated at 474,821,000. The area is approximately that of the United States and Mexico combined and the population comprises about one-fourth of the world's inhabitants. The estimated area and population of the Provinces and dependencies in 1930 is shown in the accompanying table. Capitals of the respective Provinces are in parentheses.

AREA AND POPULATION OF CHINA BY PROVINCES

Province (Capital)	Sq. miles	Population
Anhui (Anking)	55,090	21,715,000
Chahar (Kalgan)	99,928	1,997,000
Chekiang (Hangchow)	39,020	20,643,000
Fukien (Foochow)	56,737	10,017,000
Heilungkiang * (Tsitsihar)	223,151	3,755,000
Honan (Kaifeng)	66,469	30,566,000
Hopeh (Tientsin)	54,257	81,233,000
Hunan (Changsha)	83,188	31,501,000
Hupeh (Wuchang)	70,312	26,699,000
Jehol * (Chengteh)	67,166	6,594,000
Kansu (Lanchow)	147,051	6,281,000
Kiangsi (Nanchang)	64,956	20,323,000
Kiangsu (Chinkiang)	40,774	34,126,000
Kirin * (Kirin)	109,008	7,635,000
Kwangsi (Nanning)	84,894	13,648,000
Kwangtung (Canton)	86,426	32,428,000
Kweichow (Kweiyang)	68,139	14,746,000
Liaoning * (Mukden)	96,839	15,233,000
Outer Mongolia * (Ulan Bator Hoto)	622,744	6,160,000
Ningxia (Ningsia)	116,776	1,450,000
Shansi (Taiyuan)	62,487	12,230,000
Shantung (Tsinan)	59,348	25,673,000
Shensi (Sian)	75,319	11,802,000
Sikang (Kangting)	182,510	8,806,000
Sinkiang (Tihwari)	633,802	2,552,000
Suiyuan (Kueihuaicheng)	117,896	2,123,000
Szechwan (Chengtu)	115,843	47,893,000
Tibet * (Lhasa)	349,419	3,722,000
Tsinghai (Sining)	281,156	6,195,000
Yunnan (Yunnanfu)	153,892	13,821,000
Total (approximate) ..	4,314,097	474,821,000

* The "three eastern provinces," Liaoning (Fengtien), Kirin, and Heilungkiang constitute the geographical region referred to as Manchuria, which on Feb. 18, 1932, was proclaimed the free state of Manchoukuo (State of the Manchus). Jehol was incorporated in Manchoukuo in 1933. * Dependencies.

The population of the chief cities, as estimated for 1931 by the Chinese Maritime Customs Office, was: Shanghai area, 3,259,114; International Settlement of Shanghai, 1,007,868; Peiping, including suburbs, 1,297,718; Tientsin, 1,387,462; Harbin, 330,436; Dairen, 282,665; Newchwang, 106,040; Chefoo, 131,659; Tsingtao, 390,337; Chungking, 635,000; Wanhsien, 210,837; Changsha, 606,972; Hankow, 777,993, (including Wuchang and Hanyang); Wuhu, 135,385; Nanking, 633,452; Chinkiang, 199,776; Soochow, 260,000; Hangchow (municipal area), 506,930; Ningpo, 218,774; Wenchow, 631,276; Foochow, 322,725; Amoy, 234,159; Canton, 861,024.

Foreigners in China in 1931 were estimated by the Customs authorities at 380,393, including 260,621 Japanese, 66,479 Russians, 13,344 British, and 8637 Americans. The number of Chinese resident abroad was estimated in 1928 at about 6,245,682, including 1,456,264 in British India and the South Seas. The population is predominantly Buddhist, although most Chinese profess Confucianism and Taoism also. Mohammedans number about 20,000,000; Roman Catholics (1929),

about 2,486,841; Protestants (1922), 806,926.

EDUCATION. Attendance of children and adults of both sexes at schools of all grades in 1931 was estimated at about 10,000,000. In 1928-29 there were 34 universities and colleges and 16 technical high schools with an enrollment of 19,453. These included eight government universities. In 1929-30 a total of 1484 students were granted certificates to study abroad.

PRODUCTION. The population of China is 80 per cent agricultural, but only about 10 per cent of the total area is cultivated. Farms average from 2 to 8 acres in extent and produce from two to four crops per year. China is the world's leading producer of rice, soy beans, tea, kaoliang, sweet potatoes, millet, and vegetable oils, is second in the production of raw silk, and about third in the production of wheat and cotton. The average wheat crop is about 800,000,000 bushels; the 1932-33 cotton crop was 1,099,000,000 pounds (813,000,000 in 1931-32). Corn, tobacco, fruits, and vegetables are other leading crops. China is also the world's principal exporter of eggs.

China is one of the world's leading producers of antimony, tin, tungsten, and manganese ores. It has extensive coal deposits, the annual output amounted to about 29,000,000 metric tons (11,000,000 tons from the Fushun field in Manchuria). Iron ores are mined in Shansi, Hopeh, Shantung, and Manchuria; total output, about 2,000,000 tons annually. Salt, petroleum, wolfram, molybdenum, bismuth, gold, and silver are produced.

Industrialization is proceeding rapidly in the larger cities. The cotton textile industry is most highly developed; in 1932 there were 128 spinning mills, 4,493,000 spindles, and 44,000 looms, which consumed 1,195,000,000 pounds of cotton. Other industrial enterprises include flour mills (173 in Shanghai alone), iron foundries, shipyards, railway shops, cement plants, cigarette factories, engineering plants, knitting mills, silk filatures and looms, rubber-shoe factories, printing and publishing houses.

COMMERCE. In 1932 general imports into China were valued at 1,062,617,000 haikwan taels (\$361,290,000), compared with 1,448,187,000 haikwan taels (\$521,347,000) in 1931. Exports of Chinese products totaled 492,641,000 haikwan taels (\$167,498,000), against 909,476,000 taels (\$327,411,000) in 1931. The figures are provisional and conversions to U. S. dollars are made at average exchange rates. The chief import items in 1932 were: Raw cotton, \$40,736,000; rice, \$40,514,000; cotton piece goods, \$26,381,000; kerosene, \$20,537,000; wheat, \$17,587,000; sugar, \$15,678,000; paper, cardboard, pulp, and books, \$14,719,000. The main exports of Chinese products were: Soy beans, \$14,870,000; raw silk, \$10,187,000; tea, \$8,419,000; raw cotton, \$7,023,000; cotton yarn, \$6,507,000; peanuts, \$5,140,000. Of the 1932 general imports, the United States supplied 25.3 per cent (22.2 per cent in 1931); Japan and Formosa, 14.2 per cent (20.4); United Kingdom, 11.2 (8.3); Germany, 6.8 (5.8); and Hong Kong, 5.7 (15.3). Japan and Formosa took 23.2 per cent of the 1932 exports of Chinese products (29.1 per cent in 1931); Hong Kong, 15.3 per cent (16.3); United States, 12.2 (13.2); United Kingdom, 7.6 (7.1); and Germany, 6.1 (2.5).

FINANCE. For the fiscal year ended June 30, 1931, ordinary revenue and expenditure of the Nanking (Nationalist) government was reported

at 560,926,199 and 714,377,453 yuan (silver) dollars, respectively. Estimates for 1931-32 placed revenue at 632,644,906 dollars and expenditure at 682,990,864 dollars, excluding military expenditures of about 406,617,220 dollars. Chinese customs revenues totaled 340,000,000 yuan dollars for 1933, compared with 315,000,000 for 1932. Only a small surplus remained for government administrative expenses after reduction of the collecting charges and the requirements for meeting obligations on foreign loans and internal consolidated debts. Of the total customs revenue, 52 per cent was collected at the port of Shanghai. Besides numerous internal loans, a national lottery was instituted for the first time in 1933, the first lottery netting about 1,500,000 yuan dollars, which was to be spent on aviation and highway development. The national debt on Jan. 1, 1933, was divided as follows: Internal, \$151,442,000 gold (U. S. currency) and 246,064,000 yuan dollars; external, \$317,524,000 gold (U. S.).

Commencing Apr. 6, 1933, Chinese banks, exchanges and commercial concerns were ordered to discontinue the use of the Shanghai and Haikwan tael in favor of the official yuan dollar. Some of the principal coins in use in 1932, with their average exchange equivalents in United States dollars, were: Shanghai tael, \$0.3065; haikwan tael, \$0.34; Hong Kong dollar, \$0.2346; yuan dollar, \$0.2174; Mexican dollar, \$0.2176.

COMMUNICATIONS. There were 10,404 miles of public railways in China and its dependencies in 1931, of which 7715 miles were government and 2689 miles concessioned lines. The chief concessioned lines were the Chinese Eastern (1423 miles), the South Manchuria (786 miles), and the Yunnan railway (389 miles). In 1932 the railways carried 41,415,000 passengers, and 23,530,000 metric tons of freight, the gross receipts totaling 149,488,000 yuan dollars. During 1933 a new standard-gauge light railway between Hangchow and Yushan, on the border of Kiangsi Province, a distance of about 200 miles, was placed in operation. Work was under way on the extension of the Lunghai railway westward from Tungkwan to Sian, capital of Shensi Province. Another light railway between Wuhu and Chapu in eastern Anhwei and Northern Chekiang Provinces, about 156 miles long, was under construction.

A highway survey in 1933 indicated a total of 40,400 miles of completed motor roads, with approximately 30,000 miles under construction. Completion of the Kwangsi-Kweichow interprovincial highway from Wuchow to Kweiyang, a distance of 650 miles, reduced the traveling time between the two points from four weeks to four days. Air mail and passenger lines also were extended during 1933. The China National Aviation Corporation, a Sino-American concern, inaugurated in November a regular biweekly passenger service between Shanghai and Canton, via coast ports. It continued to operate its Shanghai-Nanking-Hankow and Hankow-Chungking lines. A Sino-German company operated a mail and passenger service over the Shanghai-Nanking-Sian-Lanchow route.

Direct trans-Pacific radio communication between Shanghai and San Francisco was opened on May 19, 1933. It was announced that similar service between Shanghai and London would begin Jan. 15, 1934.

GOVERNMENT. The Kuomintang (Nationalist) party exercised all political power and controlled

the Nanking government. For the form of government established by the Organic Law of 1928, see 1932 YEAR BOOK. Effective power throughout the period 1928-33 rested mainly in the hands of Gen. Chiang Kai-shek, commander-in-chief of the Nanking armies. The Chairman of the State Council, or nominal President of the Nationalist government, at the beginning of 1933 was Lin Sen. The Chairman of the five Yuans were: Executive, Wang Ching-wei; Legislative, Sun Fo; Judicial, Chu Cheng; Examination, Tai Chi-tao; Control, Yu Yu-jen. The Cabinet Ministers, functioning under the Executive Yuan, were: Interior, Hwang Shao-hsiung; Foreign Affairs, Lo Wen-kan; Military Affairs, Ho Ying-ching; Navy, Chen Shao-kuan; Finance, T. V. Soong; Industries, Chen Kung-po; Education, Wong Wen-hao; Railways, Ku Meng-yu; Communications, Chu Chia-hwa.

HISTORY

COLLAPSE OF RESISTANCE TO JAPAN. On Feb. 24, 1933, the League of Nations Assembly adopted a report placing upon Japan the onus for the Sino-Japanese conflict in Manchuria since Sept. 18, 1931. The following day the Japanese military launched their offensive against the Province of Jehol. Sweeping aside weak Chinese resistance, they captured Chengteh, the capital, on March 4 and swept on south of the Great Wall to within a few miles of Peiping and Tientsin (see JAPAN under *History* for a more detailed account). Facing the loss of these important cities and satisfied that the continuance of the military struggle with Japan was hopeless, the Chinese on May 31 concluded a formal truce with the Japanese at Tangku. The truce provided for the demilitarization of a large section of China Proper lying between the Great Wall, the Gulf of Chihli, and a line running roughly east and west a short distance north of Peiping and Tientsin.

By signing the truce China tacitly abandoned Manchuria and Jehol to Japan. Equally significant, China's surrender was forced by direct military pressure and in violation of the principle laid down by the League of Nations that Japan and China should reach a settlement of their difficulties under neutral supervision. Finally, the acquiescence of the League powers in China's surrender demonstrated that China could hope for no outside assistance against further Japanese aggression.

The Tangku truce, in effect, marked the establishment of Japanese hegemony over China and abolished the status quo in the Far East established by the Washington Conference of 1922. It was destined to have far-reaching effects upon the relations of the Great Powers. It had no less important effect upon the internal political situation in China. The defense of Jehol had devolved mainly upon Marshal Chang Hsiao-liang (Hsüeh-liang), the Manchurian war lord who ruled North China from Peiping, and his ally Gen. Chiang Kai-shek, actual head of the Nationalist government at Nanking. The Nanking government took only a perfunctory part in the defense of the menaced province. T. V. Soong Nanking Finance Minister, flew to Chengtu with Marshal Chang previous to the Japanese onslaught and exhorted the troops to stand firm. Marshal Chang's troops bore the brunt of the fighting, and with their crushing defeat his strength was broken. His resignation as Nanking's commander in North China was accepted

on March 10 and shortly afterward he left for an indefinite sojourn in Italy.

General Ho Ying-ching, Nanking's Minister of War, replaced Marshal Chang in Peiping, placing North China under Chiang Kai-shek's actual control for the first time since the establishment of the Nationalist government. Huang Fu, a former Foreign Minister at Nanking, was made civil head of North China. With Marshal Chang's former troops, reinforced by some contingents from Nanking, General Ho opposed a stubborn resistance to the Japanese advance south of the Great Wall. His poorly equipped troops were decimated by the well-armed Japanese, however, and to prevent the loss of Peiping and Tientsin the Nanking government capitulated and signed the Tangku truce.

Following the same course had aroused so much criticism during the Japanese attack on Shanghai in 1932, Gen. Chiang Kai-shek, commander-in-chief of the Nanking armies, rejected the popular demand that he lead the Chinese forces in North China against the invaders. He advanced the same reason as in 1932—the necessity of crushing the Communists in south central China and unifying the country before attempting to oppose the Japanese. The Nanking government had become increasingly a bourgeois régime, whose main strength came from the wealthy bankers, industrialists, and business men of Shanghai. The latter feared communism more than they did the Japanese, and the failure of four successive campaigns against the Communists filled them with alarm. General Chiang was making extensive preparations for a fifth anti-Communist campaign when the Japanese invaded North China.

REVOLT AGAINST NANKING. While the military necessity of the Tangku truce was generally recognized in China, capitulation to the Japanese was nevertheless highly unpopular. Chiang Kai-shek was bitterly attacked by the Cantonese, who maintained a semi-independent régime in South China, and by various elements throughout the country. Feng Yu-hsiang, the so-called "Christian General," seized the opportunity to emerge from his retirement at Kalgan, Inner Mongolia. Repudiating the Tangku truce, he announced that he would defend Chahar, the province adjacent to Jehol on the west, against the Japanese. Feng captured Dolon Nor, a city 200 miles north of Kalgan, from Manchoukuo forces on July 14 and defied the Nanking government, which sent an army of 60,000 men against him. He failed, however, to enlist sufficient support to establish an independent régime in North China. Threatened by Nanking and Japanese forces, Feng resigned on August 6 and in return for a handsome bribe turned over control of Chahar Province to a Nanking commander.

NEGOTIATIONS WITH JAPAN. Meanwhile the Japanese had been attempting to secure official Chinese recognition of the new state of Manchoukuo. Such recognition would nullify the policy of non-recognition adopted toward Manchoukuo by the United States and the members of the League of Nations. Foreign Minister Hirota of Japan announced on September 29 that his ultimate aim was "to establish an Asiatic union comprising China, Japan, and Manchoukuo, pledging, through a definite protocol, close economic and political collaboration." Throughout the summer and early autumn the Japanese brought pressure to bear at Nanking, Shanghai, and Peiping for

the reestablishment of postal and railway service between China and Manchoukuo and the opening of customs offices along the Great Wall. China's acceptance would have constituted *de facto* recognition of Manchoukuo. The negotiations were carried on chiefly in Peiping between the Japanese Minister to China and the Peiping Political Council under Huang Fu.

Acceptance of these demands by the Peiping Political Council, with the assent of Chiang Kai-shek, was apparently postponed early in November because of the opposition of other members of the Kuomintang Central Executive Committee at Nanking. On October 29 the split among the Nationalist leaders on the policy to be pursued toward Japan resulted in the resignation of Finance Minister T. V. Soong, long a leading ally of Chiang Kai-shek. Soong had strongly urged resistance to Japan. During the summer of 1933, as head of the Chinese delegation to the World Economic Conference, he secured a \$50,000,000 cotton and wheat credit from the United States and arranged for the appointment of League of Nations experts to assist in the economic rehabilitation of China. On his return he announced plans for an increase in Chinese customs duties. All these activities earned Soong the enmity of the Japanese, who sought to eliminate the influence of the League and of the Western powers in China. Following his resignation, the Japanese demanded a reduction in Chinese tariffs, and the complete suppression of the anti-Japanese boycott.

THE FUKIEN REVOLT. Soong's resignation strengthened the belief of many Chinese that Chiang Kai-shek had reached a secret understanding with Japan, whereby he was to receive Japanese support against the Communists and other hostile factions in return for compliance with their demands. This conviction was reported to be a leading cause of the revolt of the Nineteenth Route Army against Nanking toward the end of November. The Nineteenth Route Army, composed largely of Cantonese and headed by Gen. Tsai Ting-kai, put up the heroic resistance against the Japanese at Shanghai which surprised the world. Since the Shanghai armistice of May, 1932, it had been engaged almost continuously in fighting the Communists in Fukien Province. Hostile to Nanking's policy of temporizing with Japan while waging a war of extermination against the Communists, the Nineteenth Route Army made peace with the Communists and launched a movement to unseat Chiang Kai-shek.

With the aid of Eugene Chen, former Chinese Foreign Minister, and other Left-wing members of the Kuomintang, a revolutionary government was established in Fukien Province. Its programme was more nationalistic and more socialistic than Nanking's. It called for complete tariff autonomy for China, for a struggle to the end against Japan, and for immediate abolition of the unequal treaties. While promising liberty of speech and assembly, it advocated state control of national resources, abolition of land titles and taxes, and redistribution of the land among the peasants.

General Chiang, who had mobilized 300,000 men for a final blow at the Communists, interrupted this campaign to put down the Fukien revolt. Contrary to expectations, the Fukien government failed to win over the semi-independent Cantonese government and other anti-Nanking

factions. It suffered a series of military defeats and at the end of the year appeared ready to collapse. Meanwhile the political effect of the Fukien revolt forced the Nanking government to reject Japanese demands for the time being.

OTHER CIVIL WARS. Besides these major disturbances, China was afflicted with the usual quota of struggles between minor war lords for control of certain provinces. Civil wars of no particular significance continued throughout most of the year in Szechwan and Kweichow Provinces. Foreign Minister Lo Wen-kan, returning in November from an inspection of distant Sinkiang Province, reported it ravaged and oppressed by contending war lords and bandits. At the end of the year, outbreak of another civil war in Tsinghai Province, in Northwest China, was reported. Heavy fighting between the Communists and Nanking troops continued to the end of the year. On October 29, the Mongol princes of Inner Mongolia established a semi-independent government in Suiyuan Province. Sections of China adjacent to Tibet were reported to have come under the control of invading Tibetan forces.

OTHER DEVELOPMENTS. The floods which devastated China during the summer of 1931 were repeated, although on a somewhat smaller scale, in 1933. Floods along the Yellow River in August drove 3,000,000 persons from their homes in Honan and Western Shantung and caused damage estimated at \$30,000,000. The collapse of farm prices and the heavy taxation for military expenditures reduced the masses to a state of desperation, which offered fertile ground for the spread of communism. In contrast with these discouraging factors was the rapid modernization of China in areas under the control of the Canton and Nanking governments. In South China, especially, many cities broadened their streets, constructed modern buildings, built water works, sewage systems, and municipal lighting plants. Construction of motor highways was widespread. In the Yangtze Valley great progress was reported in the construction of roads and other communication facilities. The League of Nations assisted in this work by sending to China 12 technical experts to advise the government in as many different fields. The Chinese interest in modernization of the country both from a military and civil standpoint was illustrated by the purchase during 1933 of some 200 airplanes in the United States alone. In December it was announced that the Curtiss-Wright Aircraft Corp. of the United States had arranged with the Nanking government to erect a \$5,000,000 airplane factory at Hangchow.

On Oct. 6, 1933, the Nanking government published its proposals for a new Constitution to be adopted in 1934, whereupon the "period of tutelage" through which Nanking was supposed to be guiding the country would come to an end and a constitutional régime inaugurated. The proposals called for the election for a six-year term of a President and Vice President, both ineligible for reelection. The candidate receiving the greatest number of votes was to be President and his nearest competitor Vice President. In addition to the five Yuans already established, the proposals called for a National Affairs Court to interpret the Constitution, and a National Congress. The constitutional proposals were subject to three formal revisions before going into effect.

See **TIBET, MONGOLIA, MANCHOUKUO, JAPAN**, under *History*; **LEAGUE OF NATIONS**.

BIBLIOGRAPHY. Consult Ralph Townsend, "China Submits to Chaos," *Current History*, June, 1933; Wilbur Burton and William Martin, "Japan Dominates the Far East," *Current History*, October, 1933; Edgar Snow, "Weak China's Strong Man," *Current History*, January, 1934; also the following *Foreign Policy Reports*: "Ten Years of the Kuomintang," Feb. 15, 1933; "The Communist Movement in China," Apr. 26, 1933; and "The New Status in the Pacific," Jan. 17, 1934.

CHORAL SOCIETIES. See **MUSIC**.

CHOSEN. See **KOREA**.

CHRISTIAN CHURCH. See **CONGREGATIONAL AND CHRISTIAN CHURCHES**, and articles on various religions.

CHRISTIAN ENDEAVOR, INTERNATIONAL SOCIETY OF. An organization founded in Portland, Me., in 1881 by the Rev. Francis E. Clark, D.D., a Congregational minister, for the purpose of pledging young people to certain forms of Christian devotion, expression, and service. In 1933 it consisted of 58,000 societies in the United States and Canada, with a membership of more than 2,500,000. Throughout the world there were in the same year approximately 80,000 societies, with a membership of more than 4,000,000, in 105 countries, dominions, and island groups, representing more than 80 evangelical and reformed denominations. These societies were united into national unions which, in turn, composed the World's Christian Endeavor Union. For the activities of this society consult **THE NEW INTERNATIONAL YEAR BOOK** for 1932.

At the biennial convention of the International Society of Christian Endeavor, held in Milwaukee, Wis., July 8-13, 1933, the Rev. Daniel A. Poling, D.D., LL.D., was reelected president and the Rev. William Hiram Foulkes, D.D., and the Rev. Howard B. Grose, D.D., vice-presidents. The official magazine is the *Christian Endeavor World* (monthly). Headquarters are in the World's Christian Endeavor Building, Mt. Vernon and Joy Streets, Boston, Mass.; Carlton M. Sherwood, general secretary.

CHRISTIAN SCIENCE. A system of metaphysical or spiritual healing, discovered by Mrs. Mary Baker Eddy in 1866 and set forth in her textbook of the movement, *Science and Health with Key to the Scriptures*, first published in 1875. The first church was established by Mrs. Eddy in Boston in 1879. In 1892 it was reorganized as a voluntary religious association, known as The First Church of Christ, Scientist, in Boston but called more frequently by its adherents "The Mother Church."

The total number of recognized branches of The Mother Church reported for the fiscal year ending May 31, 1933, was 2639, of which 47 were college and university organizations. During the year 72 churches and societies were recognized as branches, 42 being in North America, 21 in Europe, 5 in Australasia, 2 in South America, and 2 in Africa. In 1933 there were more than 10,000 advertised practitioners of Christian Science in the United States and other countries, devoting their entire time to healing the sick through prayer.

The affairs of The Mother Church are administered by a board of directors, which supervises the work of the board of education, board of lectureship, and committee on publication. The board

of education instructs and authorizes students to teach Christian Science. The board of lectureship consists of 23 members who are engaged in delivering free lectures on Christian Science throughout the world; during 1933 they delivered 3080 lectures, of which 2664 were in the United States, Canada, and Alaska and 416 in foreign fields. The committee on publication aims to correct impositions on the public in regard to Christian Science and endeavors also to guard the rights of Christian Scientists against restriction by public authority.

The Christian Science Publishing Society, whose affairs are administered by a board of trustees according to the *Manual* of the church, issues the daily paper of the organization, *The Christian Science Monitor*. Other periodicals include the *Christian Science Journal*, *Christian Science Sentinel*, *Christian Science Quarterly*, and four editions of the *Herald of Christian Science* in the German, French, Dutch, and Scandinavian (Danish, Swedish, and Norwegian) languages, each with the English translation opposite, and in braille.

The benevolent association of the church conducts sanatoria in Brookline, Mass., and San Francisco, Calif. Pleasant View Home at Concord, N. H., is a home for Christian Scientists of advanced years. The Hon. Ralph O. Brewster was president of The Mother Church for the year ending May 31, 1933. Headquarters are at 107 Falmouth Street, Boston, Mass.

CHRISTMAS ISLAND. The name applied to two separate islands: (1) An island in the Indian Ocean forming a part of the Straits Settlements (q.v.). (2) An atoll in the Pacific (about 2° N. and 157° W.), over 100 miles in circumference, included in the (British) Gilbert and Ellice Islands Colony.

CHRONOLOGY. The following chronology lists the more important happenings of the year 1933 according to the dates of occurrence. In most cases these are treated in more detail under their respective headings. To such articles, particularly those on leading countries and states, such as UNITED STATES, GREAT BRITAIN, and NEW YORK, the reader is referred for additional information. For a list of prominent persons who died during the year, reference should be made to the article NECROLOGY and the important obituary notices there listed.

January 1—The Soviet Union's first Five-Year Plan ended in four years and three months.

President Hoover's Research Committee on Social Trends submitted its exhaustive report.

2—The United States completed the evacuation of its marines from Nicaragua.

In Chile, the Cosach nitrate combination was ordered dissolved by President Alessandri.

3—The Japanese captured Shanhaikwan, strategic Chinese city near the Great Wall.

The Irish Free State Dáil was unexpectedly dissolved by President de Valera.

4—The new 41,000-ton French liner *L'Atlantique*, with only the crew aboard, burned off the Channel Islands; 17 lives were lost.

5—Ex-President Calvin Coolidge died at Northampton, Mass.

The U. S. House of Representatives passed the "Jones Parity Plan" for agricultural bonuses.

8—A wave of Communist riots in Spain was crushed by the government.

11—The programme for the Soviet Union's second Five-Year Plan was announced.

18—A daughter was born to King Boris and Queen Joanna of Bulgaria. Her baptism in the Orthodox faith on January 15 was protested by the Pope.

16—Electrification of the Pennsylvania Railroad between New York and Philadelphia was completed.

17—The Yugoslav Government announced a three-

year moratorium on all payments to foreign owners of its bonds.

The U. S. Senate passed the Philippine Independence Bill.

President Hoover sent an emergency budget message to Congress.

19—Democrats in the U. S. House defeated Mr. Hoover's governmental reorganization measure.

20—Rumania accepted League supervision of its finances.

23—The Disarmament Conference reconvened at Geneva.

The Guatemalan-Honduran boundary dispute was settled by decision of an arbitral tribunal headed by Chief Justice Charles Evans Hughes.

Missouri was the 36th State to ratify the Twentieth Amendment, putting the measure into effect.

Italy announced plans for industrial reconstruction.

24—President de Valera's adherents won a decisive victory in the elections to the Free State parliament.

25—Communist demonstrations in German cities were broken up by police after severe rioting.

The U. S. Senate passed the Glass Bill regulating Federal Reserve Banks.

Secretary of State Stimson warned Peru that it would violate the Kellogg-Briand Pact by giving armed support to the illegal occupation of Leticia.

28—The Yugoslav Government banished various Opposition leaders to isolated parts of the country.

The von Schleicher Ministry resigned in Germany when President von Hindenburg refused to dissolve the Reichstag.

The U. S. House reduced the Federal prohibition-enforcement appropriation.

30—Adolf Hitler became Chancellor of Germany.

Leading American insurance companies announced a respite in farm mortgage foreclosures.

The House extended the Glass-Steagall Credit Expansion Act to Mar. 3, 1934.

31—Denmark's Socialist government made all strikes and lockouts illegal for one year.

February 1—Edouard Daladier succeeded Joseph Paul-Boncour as Premier of France.

1-2—The Argentine and Chilean Foreign Ministers met at Mendoza, Argentina, and agreed to undertake mediation of the Chaco dispute in collaboration with Brazil and Peru.

2—The U. S. House approved a \$966,838,634 bill for the Veterans' Administration.

Gen. Augusto Sandino met President Sacasa of Nicaragua in Managua and agreed to lay down his arms.

Gen. Tiburcio Carías succeeded Vicente Mejía Colindres as President of Honduras.

4—Louisiana decreed a bank holiday.

East Indian sailors on the Dutch warship *De Zeven Provinciën* seized control and put to sea; pursued by other Dutch war vessels they were forced to surrender on February 10.

6—The Prussian Diet and Cabinet were ousted by decree of the Hitler Government and new elections were called for March 5.

7—The U. S. Senate gave the President drastic powers to reorganize the government.

8—British airmen, Gayford and Nichollette, ended a 5841-mile non-stop flight from Cranwell, England, to Walvis Bay, Southwest Africa, in 57 hours 25 minutes.

10—The Little Entente states formed a closer economic and political union to resist treaty revision.

11—Britain and France protested to Austria against the shipment of arms from Italy to Hungary via Austria.

The Hungarian "standstill agreement" was extended.

12—In Germany, 12 people were killed and 27 wounded in Nazi-Communist fights.

14—Michigan declared an eight-day bank holiday.

15—Ratifications of the Franco-Soviet non-aggression pact were exchanged in Moscow.

Giuseppe Zangara, a bricklayer of Paterson, N. J., fired six shots at close range at President-Elect Franklin D. Roosevelt at Miami, Fla. Mr. Roosevelt escaped injury, but Mayor Anton Cermak of Chicago, who was standing near him, was fatally wounded and died on March 6. Four other bystanders were wounded. Zangara was executed March 20 at Raiford, Fla.

16—A Senate resolution, adopted 63 to 23, formulated the Twenty-first (prohibition repeal) Amendment to the U. S. Constitution.

17—The League of Nations broadcast by wireless its report condemning the Japanese occupation of Manchuria.

The "standstill agreement" between German bankers and their foreign creditors was extended to Feb. 28, 1934.

18—Colombia invoked Article XV of the League Covenant, asking League intervention in the quarrel with Peru over Leticia.

19—The Japanese commenced their invasion of Jehol Province.

20—The House passed the Senate prohibition repeal resolution, 289 to 121.

21—Several clashes between President Machado's troops and insurgent bands occurred in the Cuban provinces.

22—Michigan banks reopened under restrictions; in Detroit depositors were allowed to withdraw only 5 per cent of their deposits.

Indiana declared a bank holiday; in the next three days Maryland, Arkansas and Ohio followed suit.

24—The League of Nations Assembly adopted a report blaming Japan for the Manchurian crisis; the Japanese delegates left the League chamber.

Judge Harold Louderback of California was impeached by the U. S. House of Representatives, 183 to 142.

25—The Couzens banking bill was signed by President Hoover.

27—Charles E. Mitchell resigned as chairman of the National City Bank of New York City.

Great Britain placed an embargo on exports of arms to China and Japan. The embargo was lifted March 13 when no other nation followed suit.

A fire of mysterious origin destroyed the Reichstag building in Berlin.

March 2—Henry Thomas Rainey won the Democratic contest for the Speakership of the next U. S. House.

Senator Thomas J. Walsh of Montana, named Attorney General in President Roosevelt's Cabinet, died suddenly while on his honeymoon.

3—Debtors secured relief with the signing of the LaGuardia-McKeon bill by President Hoover.

Northern Japan was devastated by an earthquake and tidal waves, which killed 2500.

4—Franklin Delano Roosevelt and John Nance Garner were inaugurated President and Vice President of the United States, respectively.

President Hoover's "pocket veto" killed the \$1,000,092,195 Independent Offices Appropriation Bill.

5—President Roosevelt called the 73rd Congress in special session for March 9. Banks of the nation were ordered closed from March 6 to March 9 or later.

After outlawing the Communists, Hitler's National Socialists won a majority in the Reichstag.

The Royalists under Tsaldaris won the Greek elections and General Plastiras made an abortive attempt to establish a dictatorship.

Japanese troops captured Jehol City, capital of Jehol Province, which was subsequently incorporated in Manchoukuo.

7—The granting of loans on policies was ended by New York life insurance companies.

9—President Roosevelt extended the bank moratorium pending further notice.

The 73rd Congress convened in special session in Washington, and passed immediately the President's emergency banking measure.

10—Severe earthquakes wrecked Long Beach and other Southern California towns, killing 120 and causing damage of more than \$40,000,000.

The President urged the U. S. Congress to balance the budget as the first step toward national recovery.

12—Mr. Roosevelt made the first of his popular radio addresses on national affairs.

The Soviet Government executed 35, including several high officials, for opposing its efforts to collectivize agriculture.

13—The President urged Congress to modify the Volstead Act and raise revenues from light wines and beers.

The national banking holiday ended with the reopening of solvent Federal Reserve Banks.

14—Six British engineers employed by the Metropolitan-Vickers Co. in the Soviet Union were arrested by the Soviet Government for alleged sabotage.

15—Most of the stock and commodity exchanges in the United States reopened.

16—Prime Minister MacDonald of Great Britain placed a new arms limitation proposal before the Disarmament Conference.

18—The League of Nations Council decided that Peru was unjustified in supporting the occupation of the Colombian town of Leticia by private Peruvian citizens. Scheme for a new Federal constitution for India was published by the British Government.

19—A new Portuguese constitution was approved at a national election.

20—Mussolini, with Prime Minister MacDonald's approval, issued his project for a Four-Power pact to secure peaceful revision of the peace treaties.

The Economy Bill, signed by the President, lopped \$500,000,000 from civil service salaries, veterans' compensation, and pensions.

21—The U. S. House passed a Senate bill restricting interstate traffic in 8.2 beer.

22—The Cullen Bill, permitting sale of 8.2 beer and wine, was signed by President Roosevelt.

The U. S. House authorized the Secretary of Agriculture to cut production and supervise transactions in nine farm products.

23—The German Reichstag gave Hitler dictatorial powers for four years and adjourned *sine die*.

24—The National Bank of Detroit was established,

with half of its capital subscribed by the Reconstruction Finance Corporation.

27—Japan announced her withdrawal from the League of Nations.

Farm credit agencies and the Federal Farm Board were merged at Washington in a new Federal Credit Administration, headed by Henry Morgenthau, Jr.

American Jews held protest meetings in New York, Chicago, Boston, and other cities against anti-Semitism in Nazi Germany.

28—One million U. S. government employees received pay cuts.

29—Another Presidential message to the U. S. Congress urged legislation to protect investors.

30—Premier J. B. M. Hertzog formed a new Ministry in South Africa.

31—Legislation was signed by Mr. Roosevelt authorizing the establishment of the Civilian Conservation Corps.

President Terra of Uruguay dissolved Congress and established a dictatorship.

April 1—The President's order reduced U. S. pension payments by \$400,000,000.

The Nazi Government in Germany inaugurated its anti-Semitic campaign.

2—The conservatives regained control of the government of Siam, only to be ousted on June 21 by the progressive group which seized control first in 1932.

3—The President submitted his farm mortgage relief programme to the U. S. Congress.

Mount Everest, world's highest peak, was viewed from above for the first time when two British airplanes flew over the summit.

The first State to ratify the Twenty-first Amendment was Michigan.

4—The *Akron*, prize airship of the U. S. Navy, carried 73 men, including Rear Admiral Wm A. Moffett, to their deaths in the Atlantic Ocean.

5—The Eastern European states held an agricultural conference in Bucharest, Rumania.

A Presidential order required gold hoarders to return their gold to Federal Reserve Banks.

The World Court decided the Danish-Norwegian controversy over East Greenland in favor of Denmark.

6—The U. S. Senate approved the Black Thirty-Hour Week bill, 53 to 30.

7—Lieut. Norman Baillie-Stewart was sentenced to five years' imprisonment by a British court martial for selling military secrets to Germany.

8—Western Australia voted to secede from the Australian Commonwealth, but actual secession did not occur.

Enlistment of recruits for the Civilian Conservation Corps commenced in the United States.

9—At Athens, Ga., Circuit Judge J. E. Horton set aside the conviction of Haywood Patterson, Negro defendant in the Scottsboro case, as contrary to the evidence.

10—Mr. Roosevelt announced that 11 nations would send representatives to Washington to discuss plans for economic revival.

11—George Bernard Shaw stopped off at New York City on a round-the-world tour to make a speech at the Metropolitan Opera House.

12—The President's home mortgage relief plan was submitted to the U. S. House.

13—Assassinations and terrorism in Havana, Cuba, cost the lives of six students.

14—The British Government barred imports from the Soviet Union in retaliation for the imprisonment of British engineers in Moscow on sabotage charges.

The United States abandoned the gold standard.

20—The U. S. Senate received the Administration bill for controlled inflation.

The U. S. Senate, by a vote of 64 to 20, adopted an Administration amendment to the Farm Mortgage Bill empowering the President to control inflation.

21—The *Macon*, U. S. N., sister airship of the *Akron*, completed its first trial flight.

23—Conservatism won victory in the Spanish municipal elections.

24—An Anglo-Danish Trade agreement was signed.

26—Prime Minister MacDonald of Great Britain sailed from New York after conferring with President Roosevelt on economic policies.

27—For his refusal to agree to sign no more farm mortgage foreclosures, District Judge Charles O. Bradley was dragged from his courtroom at La Mars, Iowa, and mistreated by a crowd of farmers.

28—Terms of the new Persian concession to the Anglo-Persian Oil Company were agreed upon.

President Alessandri received dictatorial powers from the Chilean Congress.

30—President Sánchez Cerro of Peru was assassinated.

May 1—An Anglo-Argentine commercial and financial agreement was signed in London.

Opening of canal sluices at the Dnieprostroy dam in the Soviet Union made the Dnieper River navigable for 1000 miles.

Compulsory manual labor for every German youth was decreed by Chancellor Hitler.

8—Japan informed the United States that the "open door" would be observed by Manchoukuo.

The Irish Free State Dáil repassed the bill eliminating the oath of allegiance to the King of England.

4—A Senate amendment to the Reconstruction Finance Corporation Act of 1932 prohibited loans to corporations any of whose paid officials or employees received more than \$17,500 a year.

A Federal coordinator of transportation was called for under the Emergency Relief (railway) Bill sent to Congress by President Roosevelt.

6—A new Soviet-Italian customs convention and credit agreement was signed in Rome.

7—President Roosevelt, in a radio broadcast, outlined his plans for raising commodity prices.

8—Mahatma Gandhi was released from jail at Poona, India, following the suspension of his civil disobedience campaign.

Ignacy Moscicki was reelected President of Poland.

10—Books by Jewish and non-German authors were burned in many German cities.

Austria suspended payments to the Bank for International Settlements on the League of Nations loan.

The Paraguayan Government declared that a state of war existed with Bolivia.

12—The United States and seven other powers agreed on a tariff truce until the end of the World Economic Conference.

A general strike voted by the (American) National Farmers' Holiday Association was postponed due to the prospect of relief legislation.

President Roosevelt signed the State Relief Bill, appropriating \$500,000,000 for distribution to the States by a Federal Relief Administrator.

13—A milk strike went into effect in 19 of Wisconsin's 71 counties.

16—An international crisis in Europe produced Mr. Roosevelt's dramatic peace plea to the heads of 54 nations.

The Republic of Panama defaulted on \$11,000,000 of its 5 per cent bonds held in New York.

17—In Spain, the Cortes voted to nationalize Catholic Church property worth \$500,000,000 and to abolish religious schools.

Chancellor Hitler summoned the Reichstag in emergency session to hear his defense of Germany's foreign policies.

Premier J. B. M. Hertzog's Nationalist party was returned to power in the South African elections.

18—The Muscle Shoals Bill, authorizing public development of the Tennessee River Valley, was signed by the President.

20—An Anglo-Norwegian trade agreement was signed.

23—Federal Reserve banks commenced open market purchases of \$25,000,000 worth of government securities in order to release cash for business purposes.

J. P. Morgan testified before the U. S. Senate Committee on Banking and Currency that his firm paid no income tax in 1931 and 1932.

24—The U. S. Senate, after hearing impeachment proceedings against Federal Judge Harold Louderback, acquitted him of charges of irregularities in receiverships.

26—Peru agreed to evacuate Leticia and place the disputed territory under a League commission pending final settlement with Colombia.

27—President Roosevelt signed the Securities Bill. Postmaster General Farley opened the Chicago Century of Progress Exposition.

28—The Nazis won control of the Free City of Danzig in the Diet elections.

29—Mahatma Gandhi ended his three-weeks fast of "purification."

31—A truce signed at Tangku, China, terminated fighting between Chinese and Japanese forces near Peking.

June 1—The Hitler Government announced a "four-year plan" for national recovery.

Soviet Russia opened at Cheliabinsk in the Ural Mountains the biggest tractor plant in the world.

5—Abrogation of the gold clause in U. S. monetary obligations was effected by joint Congressional resolution, signed by the President.

6—An unsuccessful attempt was made to assassinate ex-Premier Venizelos of Greece.

The League Council ruled that anti-Semitic measures adopted in German Upper Silesia violated Germany's pledges under the minorities convention.

President Roosevelt signed a bill to coordinate interstate employment.

7—The Four-Power pact between Germany, France, Great Britain, and Italy was signed in Rome.

9—A moratorium on German external indebtedness was officially announced as from July 1.

11—The Spanish aviators, Barberan and Collar, landed at Camagüey, Cuba, after a 4375-mile flight from Seville, Spain. They were lost June 20 on a flight from Havana to Mexico, D. F.

12—The World Economic Conference convened at London, recessing indefinitely on July 27.

13—Both Houses of the U. S. Congress approved conference reports on the Glass-Steagall Banking Reform Bill and on the Industrial Recovery Bill.

15—Of war-debt installments totaling \$143,604,856 due the U. S. Treasury, only 8 per cent was received.

16—President Roosevelt declared the NRA envisaged permanent stabilization and the preservation of American standards.

The special session of the 73rd Congress ended at Washington.

18—Chancellor Dollfuss of Austria took drastic measures to curb the Nazi agitation for the incorporation of Austria in Germany.

21—Reemployment of 1,500,000 of its members since April 1 was announced by the American Federation of Labor.

22—Hitler ordered the dissolution of the powerful German Social Democratic party.

The Illinois ship canal, linking the Great Lakes and the Gulf of Mexico, was officially opened by Secretary of War Dern.

24—Conflict between Hitler's Government and the German Protestant Churches opened with the resignation of Reichsbishop Friedrich von Bodelschwingh.

26—Representatives of Japan, Manchoukuo and the Soviet Union met in Tokyo to discuss the sale of the Russian interest in the Chinese Eastern Railway.

27—The Washington Commission of Neutrals announced the end of its efforts to settle the Chaco dispute.

29—Primo Carnera won the world's heavyweight championship by knocking out Jack Sharkey in the 6th round.

30—Joseph Avenol of France succeeded Sir Eric Drummond as Secretary General of the League of Nations.

The United States fiscal year closed with a deficit of \$1,786,000,000.

July 1—Diplomatic relations between Britain and the Soviet Union, broken off in April, were resumed.

2—The RFC announced a \$4,000,000 credit to American exporters to permit the disposal of 75,000 bales of cotton in the Soviet Union.

3—The President's message to the World Economic Conference ended hopes for a currency stabilization agreement among the powers.

The "gold bloc" at the World Economic Conference signed a declaration of adherence to the gold standard.

A pact repudiating and defining aggression was signed at London by Maxim Litvinov for the Soviet Union with representatives of seven neighboring countries.

4—A second convention defining aggression was signed in London by the Soviet Union, Turkey, and the countries of the Little Entente.

Dissolution of the Catholic Centre, the Bavarian People's, the Populist, and Young German parties was announced at Berlin.

6—With the release of the two British engineers imprisoned in the Soviet Union the British embargo on Soviet goods was removed.

8—A concordat was signed in Rome between the Third Reich and the Vatican.

9—The cotton textile code, the first under the NRA, was approved.

11—President Roosevelt established a super-Cabinet, known as the Executive's Cabinet Advisory Board.

12—President Roosevelt ordered all postmasters placed under Civil Service rules.

14—A Federal processing tax of 4.2 cents a pound was placed on cotton in the United States.

20—The NRA blanket-code, shortening hours and raising wages, was decreed by President Roosevelt.

21—The Disarmament Conference adjourned until October 16.

Trading on the N. Y. Stock Exchange aggregated 9,573,000 shares, the heaviest since Oct. 30, 1929.

22—An agreement regulating the production and marketing of silver was signed at the London Economic Conference by eight countries, including the United States.

Wiley Post completed the first solo flight around the world in 7 days 19 hours, landing at New York.

25—The Republican government in Spain crushed a rising by Communists and Conservatives.

26—The largest dry dock in the world was opened at Southampton, England, by King George.

27—The death sentence was imposed upon Walter H. McGee in Kansas City for kidnaping Mary McElroy.

The World Economic Conference recessed indefinitely.

29—Governor Pinchot called out the National Guard to prevent further violence in the Fayette Co., Pa., coal strike.

August 1—Mahatma Gandhi was rearrested for resuming his civil disobedience campaign.

The "blue eagle" emblem of the NRA made its official appearance throughout the United States.

2—Speculation on the New York Stock Exchange was discouraged by the raising of margin requirements.

The Baltic-White Sea Canal in the Soviet Union was officially opened.

3—The U. S. Navy Department awarded contracts for the construction of 21 ships, to cost more than \$130,000,000.

4—Britain and France protested to the Hitler Government against its propaganda in Austria.

5—Polish and Danzig authorities signed an agreement regulating use of the port of Danzig and Polish rights in Danzig.

7—Havana crowds, celebrating a false report that President Machado had resigned, were fired on by troops, 40 being killed.

Rossi and Codos, French flyers, established a distance record of 5657.387 miles from Brooklyn, N. Y., to Rayack, Syria.

Withdrawal of U. S. Marines from Haiti by Oct. 1, 1934, and a new financial setup were arranged for in a United States-Haiti pact signed at Port-au-Prince.

12—President de Valera invoked the Public Safety Act against Gen. Owen O'Duffy's Fascist "Blue Shirts."

President Machado was forced to flee Cuba due to disaffection in the Army. Carlos Manuel de Cespedes became Provisional President.

Gen. Italo Balbo landed his fleet of 23 hydroplanes near Rome on the return voyage from the Chicago Exposition.

15—Constitutionality of the National Industrial Recovery Act insofar as it applied to restriction of oil production was upheld by Justice Joseph Cox of the District of Columbia Supreme Court.

16—A new Atlantic speed record of 4 days and 14 hours from Gibraltar to New York was set by the Italian liner *Rex*.

17—Floods along the Yellow River had driven more than 1,500,000 Chinese from their homes.

18—Government purchases of pork products for distribution to relief agencies was announced as a move to aid hog raisers.

19—The oil, steel, and lumber NRA codes were signed by President Roosevelt.

20—Mussolini announced a severe shakeup in his Cabinet.

24—The 1933 cotton crop of the U. S. had been reduced by 4,000,000 bales through the plowing under of 10,000,000 acres of cotton.

25—International agreement for reduction of wheat acreage was reached at London.

27—Prof. Raymond Moley, once a leading member of President Roosevelt's "brains trust," resigned as Assistant Secretary of State.

An NRA code regulating the U. S. automobile industry was signed.

30—The biennial Congress of the National Socialist party was held at Nuremberg, Germany.

September 1—A storm in Cuba killed more than 100 and made 100,000 homeless.

2—A Soviet-Italian non-aggression pact was signed in Rome.

The powers authorized Austria to increase her army from 8000 to 30,000 men as a protection against Nazi agitation.

Secretary of the Interior Ickes restricted production of United States oil fields to 2,409,700 barrels daily.

4—The de Cespedes régime in Cuba was overthrown.

6—Opponents of President de Valera in the Irish Free State formed a United Ireland party, led by General O'Duffy.

8—King Feisal of Iraq died at Berne, Switzerland.

10—Dr. Ramon Grau San Martin was named Provisional President of Cuba by a revolutionary junta.

King Albert of Belgium formally opened the new vehicle and pedestrian tunnels under the Scheldt River at Antwerp.

14—Greek and Turkish officials signed a 10-year pact of non-aggression at Ankara, Turkey.

18—The American bituminous coal industry came under an NRA code.

A Japanese army court-martial sentenced 11 army cadets to prison for the assassination of Premier Inukai in May, 1932.

Contracts to reduce their wheat acreage by 15 per cent had been signed by the Agricultural Adjustment Administration with 219,818 growers controlling 21,000,000 acres.

20—Chancellor Dollfuss tightened his dictatorship in Austria by assuming five portfolios in the reorganized Cabinet.

21—The Agricultural Adjustment Administration was instructed to purchase food and clothing for 3,500,000 families on relief rolls in the United States.

The Polish balloonists Hynek and Burzynsky traveled 846 miles to win the international balloon race for the Gordon Bennett Trophy.

24—Abdel Fattah Zehia Pasha replaced Sidky Pasha as Premier of Egypt.

25—Col. Roscoe Turner flew from Los Angeles to New York in 10 hours 5 minutes 30 seconds, setting a new trans-continental record.

The Argentine Senate voted to join the League of Nations, with a reservation against the Monroe Doctrine.

26—The United States Government rejected the British proposal for the postponement of the construction of four 10,000-ton cruisers during the period of the Disarmament Conference.

Great Britain and Argentina signed a supplementary tariff pact at Buenos Aires.

30—Three Russian balloonists ascended to 62,340 feet, the highest reached by man.

Argentina, Brazil, Chile, and Peru declined a mandate of the League of Nations to attempt settlement of the Chaco dispute.

An Oklahoma City jury convicted five kidnapers of Charles F. Urschel. Four received life sentences.

October 2—The American Federation of Labor took its stand against inflation and in favor of a six-hour day and a five-day week.

President Roosevelt, addressing the American Legion convention in Chicago, placed veterans with non-service-connected disabilities in the same category as other citizens.

Cuban army officers, besieged in the National Hotel in Havana, were forced to surrender by government forces. Casualties, 119 killed and more than 200 wounded.

5—A new German press law made every newspaperman responsible to the state for his professional activities.

6—The U. S. Government established the Community Credit Corporation to buy, sell, or lend money on commodities.

7—The New York Giants (National League) defeated the Washington Senators (American League), 4 to 3, to win the 1933 World Series.

Non-union American coal mines were placed under the collective-bargaining provisions of the coal code.

President Alcala Zamora of Spain dissolved the Cortes and named Martinez Barrios Premier in place of Manuel Azafia.

9—President Roosevelt held a White House conference with President Harmodio Arias of Panama.

10—An anti-war treaty was signed at Rio de Janeiro by six Latin American nations.

11—Switzerland doubled its military budget in fear of German aggression.

13—The American Federation of Labor voted to boycott German-made products.

14—Germany withdrew from the League and from the Disarmament Conference.

15—A Deposit Liquidation Division of the Reconstruction Finance Corporation was formed to aid depositors in closed banks.

17—With a reduction of 2,600,000 in the ranks of the unemployed in the United States they still numbered approximately 10,000,000.

Governor Langer of North Dakota declared an embargo on wheat shipments from the State.

Albert H. Wiggin, former chairman of the Chase National Bank of New York City, testified in Washington before the Senate Banking Committee.

18—The Senate of Ecuador voted to impeach President Martinez Mera. He was forced to resign his office.

20—President Roosevelt announced the opening of negotiations for a resumption of diplomatic relations with the Soviet Union.

Joseph Stalin, Soviet dictator, freed more than 12,000 political prisoners.

21—A "farm strike" was called in sections of the American Middle West.

22—Mr. Roosevelt announced his gold-buying plan as an adjunct to his price-raising policy.

24—The Daladier Ministry was defeated in the French Chamber on the budget issue and resigned.

25—The U. S. Government, through the RFC, commenced gold-buying operations.

26—Albert Sarraut organized a new French Government.

27—Arab demonstrations against Jewish immigration to Palestine resulted in clashes with troops in which 20 were killed and 130 injured.

28—T. V. Soong resigned as Finance Minister of the Nanking Government in China.

31—The Greek Supreme Court rejected the second application of the United States Government for the extradition of Samuel Insull.

November 2—The language dispute in Malta again led to the dissolution of Parliament by the British Governor.

4—The United States Government denounced its extradition treaty with Greece, owing to the refusal to extradite Samuel Insull.

6—Anglo-American negotiations for an adjustment of the British war debt were indefinitely postponed, with the understanding that Britain would make another "token payment" on December 15.

The U. S. Federal Government placed in effect a processing tax of 28 cents a bushel on wheat.

7—Fusion forces, led by Fiorello LaGuardia, overthrew the Tammany administration in New York City.

8—King Nadir Shah of Afghanistan was assassinated and was succeeded by his son, Zahir Shah.
 The Civil Works Administration, with a \$400,000,000 credit, was established to provide work for the U. S. unemployed.
 9—A revolt against the Grau San Martin government in Cuba by pro-Céspedes elements was crushed after severe fighting.
 18—A new Rumanian Cabinet was formed by I. G. Duca.
 Hitler's foreign policy was overwhelmingly approved at a special Nazi referendum.
 16—President Roosevelt announced the resumption of diplomatic relations between the United States and the Soviet Union.
 17—Henry Morgenthau, Jr., was named Acting Secretary of the Treasury.
 18—President Roosevelt assailed "modern Tories" in his address at Savannah, Ga.
 19—Elections to the Spanish Cortes showed strong Conservative gains.
 21—Newfoundland reverted from a dominion to a crown colony as a result of its financial difficulties.
 The American balloonists, Comm. T. G. W. Settle and Maj. C. L. Fordney, ascended 61,243 feet in a sealed balloon car.
 Prof. O. M. W. Sprague resigned as adviser to the U. S. Treasury.
 24—The Sarraut Cabinet fell in France on the budget issue.
 26—A San Jose, Calif., mob lynched two men who had kidnaped and murdered Brooke Hart. Approval of the lynching by Governor Rolph stirred a nation-wide controversy.
 27—Camille Chautemps (Radical Socialist) formed a new French Cabinet.
 29—A new war cabinet was formed in Bolivia by Carlos Calvo.
 December 1—A jury at Decatur, Ala., for the third time convicted Heywood Patterson, Negro defendant in the Scottsboro case, of attacking a white woman.
 2—Federal District Judge Alexander Akerman of Tampa, Fla., held the National Industrial Recovery Act unconstitutional insofar as it affected local industry.
 8—The Seventh Pan American Conference convened at Montevideo, Uruguay.
 5—Utah was the 36th State to ratify the Twenty-first Amendment to the Constitution, the Eighteenth Amendment was repealed by proclamation of President Roosevelt December 6.
 The Fascist Grand Council announced that Italy would not remain in the League of Nations, unless it was reformed.
 Mr. Roosevelt vigorously condemned "lynch law" in an address before the Federal Council of Churches.
 6—The jury in the Scottsboro, Ala., cases condemned two of the seven Negro defendants to death.
 The National Emergency Council, a new coordinating agency, was established by President Roosevelt.
 10—The Fascist Grand Council proclaimed legislation designed to reorganize Italian political and economic institutions on a corporative basis.
 12—Commander Byrd's second Antarctic expedition sailed from Dunedin, New Zealand, for the Bay of Whales.
 13—William C. Bullitt, first United States Ambassador to the Soviet Union, presented his credentials to President Kalinin.
 15—Of the \$152,952,637 war-debt instalment due the United States Government from 11 European nations, \$8,898,123 was received from six nations.
 16—Alejandro Lerroux formed a minority government in Spain.
 18—Gen. Owen O'Duffy, opponent of President de Valera of the Irish Free State, was arrested while attempting to address a political meeting.
 19—Col. and Mrs. Charles A. Lindbergh returned to New York after a 30,000-mile air tour lasting five months and 10 days.
 Great Paraguayan victories in the Chaco terminated in a truce with Bolivia.
 21—President Roosevelt announced that the government would purchase 24,421,410 ounces of domestic silver annually for four years at 64½ cents per ounce.
 23—The Reichstag fire trial ended at Leipzig with the sentencing of the Dutchman, Marinus van der Lubbe, to death and the acquittal of the four other defendants.
 A Crown Prince of Japan was born in Tokyo.
 24—A train collision at Lagny, France, caused 180 deaths.
 The French Parliament finally approved a budget bill and adjourned to Jan. 9, 1934.
 26—The Pan American Conference at Montevideo ended its sessions in unexpected harmony.
 27—The U. S. Government sued the New York Clearing House for the sum of the 11,000 deposits tied up in the bankrupt Harriman National Bank and Trust company.

28—The Argentine Government declared a state of siege after uprisings in four provinces.
 29—A member of the outlawed anti-Semitic Iron Guard assassinated Premier Ion G. Duca of Rumania.
 30—Tammany ended its 16-year rule of New York City.
 31—The NRA reported that 4,000,000 workers had been rehired by American industry.

CHURCH OF JESUS CHRIST OF LATTER-DAY SAINTS. See LATTER-DAY SAINTS, CHURCH OF JESUS CHRIST OF.

CINCINNATI, UNIVERSITY OF. An institution for the higher education of men and women in Cincinnati, O., founded in 1870. The registration in the autumn of 1933 was 8617. The summer-school enrollment for 1933 was 648. There were 546 members on the faculty. The endowment funds of the university for the year ended Dec. 31, 1932, amounted to \$9,162,586; the income for the same period was \$2,161,665. The library contained 330,097 volumes. President, Raymond Walters, A.M., LL.D.

CINCINNATI RAILROAD STATION. See ARCHITECTURE.

CINEMA. See MOTION PICTURES; PHOTOGRAHY.

CIRENAICA. See CYRENAICA.

CITY AND REGIONAL PLANNING. With the exception of Idaho, Montana, and South Dakota, every State in the Union had one or more official municipal planning commissions on Jan. 1, 1933, according to a bulletin issued by the Division of the Building and Housing of the U. S. Bureau of Standards. The total number of commissions, including one in the District of Columbia, was 806, a net loss of 22 during 1932, for although 45 new commissions were formed 67 went out of existence. Massachusetts led the list with 119 commissions. New York almost tied with 118. California had an even 100; Ohio, 79; Pennsylvania, 52; Illinois, 41. Compared with the 16,598 incorporated places in the United States, the 806 municipalities having commissions are small, but, as will be seen by the accompanying table, the larger municipalities and by far the

NUMBER AND POPULATION OF PLACES IN THE UNITED STATES HAVING OFFICIAL PLANNING COMMISSIONS

Population Group	NO. OF PLACES		
	Total	With commissions	Per cent
Over 100,000	93	81	87
25,000 to 100,000	283	162	57
10,000 to 25,000	606	208	33
5,000 to 10,000	851	185	16
Under 5,000	14,765	220	1
Total	16,598	806	5

Population Group	POP. TO NEAREST THOUSAND		
	Total	With commissions	Per cent
Over 100,000	36,326,000	27,470,000	82
25,000 to 100,000	12,917,000	7,845,000	67
10,000 to 25,000	9,097,000	3,297,000	36
5,000 to 10,000	5,897,000	987,000	17
Under 5,000	13,901,000	561,000	4
Total	78,188,000	40,160,000	51

greatest part of the population are provided with official planning authorities. In addition, 35 places have unofficial commissions. Although city planning itself entails little cash outlay, so straitened financially have been many cities of late that even the small expenditures for planning work have been curtailed. The Federal report cited states that in at least 12 cities of more than 25,000 population the services of important planning engineers or other officials have been dispensed with while in some cases the office staff

has been reduced. Over 100 planning boards, of which about 50 serve the larger cities of the country, reported that their functions had been curtailed in the last two years on account of the depression, but some 300 reported little or no change in this respect.

REGIONAL PLANNING. Besides the 806 municipal planning commissions, there were on Jan. 1, 1933, 59 official regional planning commissions, of which 46 were county organizations. Twenty States were represented. Of these, California had 26 regional commissions, of which 25 represented counties. New York had 12; Illinois, 6; New Jersey, and Pennsylvania, 5 each.

England and Wales had 120 regional planning areas for which joint committees were formed; 48 of the 120 committees had "executive power." For a list and sketch may see *Town and Country Planning* (London), August, 1933.

ZONING. The number of zoned areas—counties, cities, towns, townships, and unincorporated areas—totaled 1236 on Jan. 1, 1933, against 806 municipal and 59 regional official planning bodies. The population in zoned areas was 48,400,000, not including some areas for which the population was not available. Every State has zoned areas. By population groups the division was: over 100,000, 83 (out of 93); 10,000 to 100,000, 470; 1000 to 10,000, 563; under 1000, 93; unclassified, 19. Counties which have adopted zoning number 8. By States, New York leads with 215 zoned municipalities. Next come New Jersey with 132; California, 113; Illinois, 93. The U. S. Bureau of Standards, from whose bulletin these figures have been taken, has for several years past issued a yearly bulletin of State enabling legislation on zoning and of local zoning ordinances.

Progress on the *Civico Centre* for St. Paul, Minn., including a new city hall, court house, and Federal building and an esplanade along the Mississippi River, was described and illustrated in *Engineering News-Record* (New York) Mar. 30, 1933. Among articles on specific planning work in *City Planning* (Boston) during the year were: "A New Plan for Historic Alexandria, Virginia," and "Planning Geneva, Switzerland," in the January and July issues. A new British journal in this field, the first issue of which appeared in November, 1932, is *Town and Country Planning* (London) published under the auspices of the Garden Cities and Town Planning Association. Other British journals are the *Town Planning Review* (Liverpool) and the *Journal of the Town Planning Institute* (London) a monthly which details action under the Town and Country Planning Act, 1932, and reports the papers and discussions before the Institute. In America, the annual *Proceedings of the National Conference on City Planning* (New York City) contains numerous papers and discussions. See also: Abercrombie, *Town and Country Planning* (New York); Black and Black, *Planning for the Small City* (Chicago); British Ministry of Health, *Town and Country Planning, England and Wales* (London); Comey, *Transition Zoning* (Cambridge, Mass.); Macfayden, *Sir Ebenezer Howard and the Town Planning Movement* (Manchester, England); Poole, *The Town and Country Planning Act, 1932, Explained* (London); Regional Plan Association, *From Plan to Reality* (New York) a review of four years' progress in carrying out elements of the Regional Plan of New York and Environs.

CITY MANAGERS. See **MUNICIPAL GOVERNMENT.**

CIVIC FEDERATION. See **NATIONAL CIVIC FEDERATION.**

CIVIL ENGINEERS, AMERICAN SOCIETY OF. An association of professional engineers, founded in 1852 to advance engineering and architectural knowledge and practice, to maintain high professional standards, and to encourage intercourse among men of practical science.

The membership as of Nov. 6, 1933, consisted of 18 honorary members (persons of acknowledged eminence in engineering), 5770 members (civil, military, naval, mining, mechanical, electrical, and other engineers in active practice 12 years and qualified to design as well as to direct engineering work), 6276 associate members (those who had been practicing eight years), 2903 junior members (beginners in the profession), 112 affiliate members (persons qualified to cooperate with engineers but not themselves engineers), and five fellows (contributors to the permanent funds of the society, who may not be eligible to membership). There were 56 local sections and 107 affiliated student chapters in colleges and universities throughout the United States.

Two general meetings of the society were held in 1933, the annual meeting and the annual convention. At the annual meeting, held in New York City, January 18-21, the following medals and prizes were awarded for papers published in the *Transactions*: The J. James R. Croes Medal to David L. Yarnell and Floyd A. Nagler, the Thomas Fitch Rowland Prize to Clifford Allen Betts, the James Laurie Prize to Earl I. Brown, the Arthur M. Wellington Prize to Fred Lavis, and the Collingwood Prize for Juniors to Arthur R. C. Markl. The sixty-third annual convention, held in Chicago June 27-30, devoted its general session to a symposium on the problem of tax reduction, arranged under the auspices of the engineering-economics and finance division of the society.

At each of the meetings some sessions were under the direction of one or more of the 10 technical divisions, for which papers were presented on their special branches of engineering. Eight research committees, with a total personnel of about 60, were engaged throughout the year in special investigations. Nearly 100 members served on joint boards and committees, with representatives of other societies, for research and standardization.

The society publishes two monthly magazines: *Proceedings*, containing technical papers which are later collated, with discussions, in the yearly volume of *Transactions*; and *Civil Engineering*, which presents news of society affairs and articles of more popular appeal. The *Year Book* contains a list of members and general information about the society. A series of *Manuals*, published at irregular intervals, deal with various topics of engineering interest.

The officers of the society in 1933 were: president, Alonzo J. Hammond; vice-presidents, D. C. Henny, Arthur S. Tuttle, F. O. Dufour, and Frank G. Jonah; secretary, George T. Seabury; treasurer, Otis E. Hovey. Headquarters are in the Engineering Societies Building, 33 West Thirty-ninth Street, New York City.

CIVILIAN CONSERVATION CORPS. See **FORESTRY; MILITARY PROGRESS; UNITED STATES under Administration.**

CIVIL SERVICE REFORM LEAGUE, NATIONAL. Organized in 1881 for the purpose of putting to an end the so-called spoils system of making appointments to public office, this organization has sought to accomplish its end by promoting administrative efficiency through the application of the merit system to the appointment, promotion, and tenure of government officials. It also had advocated, on the principle that public office is a public trust, that those best fitted through demonstrated ability and capacity should serve the State.

During 1933 the League urged that an end be made of appointment of presidential postmasters on a political basis. It sought the competitive classification under the civil service law of employees of the new government agencies to carry out the administration's recovery programme; urged the reemployment of former federal workers, who had been laid off for reasons of economy, to fill positions in these agencies. It vigorously protested against the use of federal offices to reward unqualified party workers in the 1932 election.

The league endeavors to secure the adoption and improvement of civil service in various States and cities. Reports of its work are issued periodically. *Good Government* is the official organ. The officers in 1933 were: George McAneny, president; W. W. Montgomery, Jr., chairman of the executive committee; Howard R. Guild, chairman of the council; Ogden H. Hammond, treasurer; and H. Eliot Kaplan, secretary. Headquarters are at 521 Fifth Avenue, New York City.

CIVIL WORKS ADMINISTRATION. See PAINTING; WELFARE WORK; ARCHITECTURE.

CIVITAN INTERNATIONAL. An organization composed of selected professional and business men throughout the United States and Canada, who have dedicated themselves to unselfish service to their city, county, State, and nation. The first Civitan Club was founded in Birmingham, Ala., in 1917, the name being formed from the Latin "civitas." The organization of field work was begun in 1920, when the international association was formed in Birmingham, and by 1921, when the first annual convention was held, there were 30 clubs. A total of 278 clubs had been chartered by Nov. 1, 1933.

Among the outstanding achievements of the Civitan Clubs in 1933 were the awarding of medals to students of the Citizens' Military Training Camps who possessed outstanding attributes of citizenship. Many clubs were sponsoring the "Sunbeam and Shadow" radio programme, the plan of which originated with the Miami (Fla.) Civitan Club. It consists of broadcasting appeals of those in distress by number; these appeals are known as "shadows," while the responses for the relief of such unfortunates are known as "sunbeams." The various clubs continued also their work of curbing crime, eliminating tuberculosis and carrying out a general health programme, and eradicating communistic activities wherever found. There were the usual agencies of Big Brothers work, Boy Scout camps, parole of first offenders to Civitans for personal observation, Americanization work, city beautification, sponsoring of essay contests on "Good Citizenship," and, in general, participation in all matters of civil improvement and humanitarian betterment.

The 1933 convention was held in Memphis, Tenn., June 11-14, and the 1934 convention was

to be held in Toronto, Canada. The official organ is *The Civitan* (monthly). The officers for 1933 were: President, Maurice L. Townsend, Washington, D. C.; vice-presidents, William H. Buscombe, Toronto, Canada; C. Francis Cowdrey, Fitchburg, Mass.; Dr. J. D. Jordan, Little Rock, Ark.; and J. P. Simmons, Miami, Fla.; international secretary, Arthur Cundy, Birmingham, Ala.; and international treasurer, Everett N. Brown, Atlanta, Ga. Headquarters are at 905-6 Farley Bldg., Birmingham, Ala.

CLAIMS COMMISSION. See ARBITRATION, INTERNATIONAL.

CLARK UNIVERSITY. A nonsectarian university in Worcester, Mass., founded in 1889. It comprises a college for men, a coeducational graduate division of arts and sciences, and a coeducational senior college (extension courses) granting the degree of bachelor of education. The registration for the autumn of 1933 was 502 including 288 undergraduates, 74 graduate students, 25 special students, and 115 extension students. The enrollment for the summer session was 149. There were 39 members on the faculty. The productive funds amounted to approximately \$5,000,000. The library contained 142,000 volumes. President, Wallace W. Atwood, Ph.D.

CLEARWATER, ALPHONSO TRUMPBOR. An American jurist, died at Kingston, N. Y., Sept. 23, 1933. He was born at West Point, N. Y., Sept. 11, 1848, attended private schools in New York City, and after studying law in the offices of Hardenburgh and Schoonmaker was admitted to the bar in 1871, practicing thereafter in Kingston. Elected district attorney of Ulster Co. in 1877, he served by successive relections until 1886, and was also judge of Ulster Co. from 1889 to 1898. On the elevation of Alton B. Parker to the bench of the Court of Appeals in the latter year he was appointed justice of the Supreme Court. Judge Clearwater was an ardent advocate of judicial reform, being associated with David Dudley Field in the preparation of the Penal Code and Code of Criminal Procedure of the State of New York. Originally appointed a member of the New York State Probation Commission in 1909, he was reappointed in 1913 and after 1919 served as vice-president of that body. In 1915 he was delegate-at-large to the convention to revise the Constitution of the State of New York, in 1920 member of the convention to consider and adopt rules of civil practice in the courts of New York, and in 1921 member of the convention to revise the judiciary article of the State Constitution. He was also president after 1918 of the State Reservation Commission of Niagara Falls, and in 1925 was appointed commissioner to make recommendations to the New York Legislature on the consolidation of departments of the State government.

Judge Clearwater served as commissioner during 1895-98 in supervising the translation from Dutch into English of the early records of Ulster Co. He was also an authority on the history of the Dutch and Huguenot settlers of America, publishing such articles as "The Influence of the Dutch and Huguenots in the Formation of the American Republic"; "Louis XIV and the Revocation of the Edict of Nantes"; "The Founders of New Amsterdam"; "The Dutch of Albany and the Iroquois"; and "Dutch Governors of New York." His avocation was collecting early American silver, which he lent on various occasions to the Metropolitan Museum of Art.

CLIPPERTON ISLAND. A coral island in the Pacific Ocean (10° 13' N. and 109° 10' W.) about 500 miles southwest of Mexico and 1500 miles northwest of the Panama Canal. In dispute between France and Mexico, it was awarded to France in January, 1931, by the King of Italy acting as arbitrator. It is less than a square mile in area, with about 30 inhabitants, and has small phosphate deposits.

CLOUDS. See METEOROLOGY.

COAL. Preliminary estimates by the U. S. Bureau of Mines place the total coal production in the United States during the year at 377,339,000 net tons, of this total the output of bituminous coal was 327,940,000 tons, and of anthracite, 49,399,000 tons. Bituminous production showed an increase of 5.9 per cent over the final total of 309,710,000 tons for 1932, which was probably due in large part to the increased production of pig iron. There was little change in the amount consumed by public utilities and railroads during the year, but pig-iron production, according to *Coal Age*, New York, upon whose annual review number this article is based, showed an increase from 8,550,000 tons in 1932 to approximately 13,200,000 tons in 1933. A substantial increase in lake shipments accounted for much of the remaining increase, rising from 25,173,211 tons in 1932 to 32,333,393 tons in 1933.

The U. S. Bureau of Mines estimates that stocks of bituminous coal in the hands of industrial consumers on Jan. 1, 1934, were about 25,614,000 tons, as against 22,411,000 tons a year

to preliminary estimates of the U. S. Bureau of Mines. This slight decrease is considered as a favorable indication that the steady slump since 1926, as shown in the accompanying table, has reached its low mark.

ANTHRACITE PRODUCTION OF UNITED STATES [Net tons]

1914	90,821,000	1924	87,927,000
1915	88,895,000	1925	81,817,000
1916	87,578,000	1926	84,437,000
1917	99,612,000	1927	80,096,000
1918	98,826,000	1928	75,348,000
1919	88,100,000	1929	73,828,000
1920	89,598,000	1930	69,385,000
1921	90,473,000	1931	59,646,000
1922	54,683,000	1932	49,855,000
1923	93,339,000	1933	49,399,000

CODES. In accordance with the provisions of the National Recovery Act, the coal industries through operators, miner representatives, and dealers held many conferences for the purpose of drafting codes of fair competition in which divergent views might be reconciled. By October, the Code of Fair Competition for the Bituminous Coal Industry had been approved and had become effective. By the end of the year, despite much earnest effort to reconcile all differences, no other code had reached general agreement. The provisions of the bituminous code are briefly abstracted in *Coal Age*, vol. 39, no. 21, as follows:

To meet the insistent demand for the fullest measure of autonomy in the conduct of the internal affairs of the

COAL PRODUCED IN THE PRINCIPAL COUNTRIES OF THE WORLD IN THE CALENDAR YEARS 1931, 1932, AND 1933, IN THE USAND METRIC TONS*

[Prepared by L. M. Jones, Bureau of Mines]

Country	1931	1932	1933	Country	1931	1932	1933
North America:				Europe—Continued			
Canada—				Russia—			
Coal	8,466	7,507	7,722	Coal	50,400	53,600	59,200*
Lignite	2,640	3,142	3,052	Lignite			
United States—				Spain—			
Anthracite	54,109	45,228	44,814	Coal	7,186	6,854	5,730*
Bituminous and lignite	346,624	280,963	297,501	Lignite	353	336	284*
Other countries	927	692	(b)	United Kingdom—			
South America	1,849	1,825	(b)	Great Britain	222,981	212,083	210,309
Europe:				Other countries	13,251	13,076	(b)
Belgium	27,042	21,424	25,278	Asia:			
Czechoslovakia—				China	27,682	28,000†	(b)
Coal	13,103	10,961	10,640	India, British	22,065	20,477	20,000†
Lignite	17,932	15,858	15,125	Japan (inc. Taiwan and Karafuto)—			
France—				Coal	29,876	28,100	(b)
Coal	50,011	46,266	47,941	Lignite	118	112	
Lignite	1,085	991		Other countries	14,825	16,150	(b)
Germany—				Africa:			
Coal	118,640	104,741	109,921	Southern Rhodesia	587	438	484
Lignite	133,311	122,647	126,796	Union South Africa	10,881	9,921	10,714
Saar ^d	11,367	10,438	10,564	Other countries	456	366	(b)
Hungary—				Oceania:			
Coal	776	895	840	Australia—			
Lignite	6,111	5,931	5,619	New South Wales	6,536	6,898	7,160
Netherlands—				Other States	4,230	4,450	
Coal	12,901	12,756	12,574	New Zealand—			
Lignite	122	124	(b)	Coal	995	943	(b)
Poland—				Lignite	1,197	928	
Coal	88,265	28,885	27,300	Other countries	...	...	...
Lignite	41	38	(b)				
				Total	1,258,000	1,124,000	1,154,000

* One metric ton equivalent to 2,204.6 pounds. † Estimate included in total. ‡ Exclusive of mines in the Saar under French control. † Mines under French control. * Estimated on the basis of nine months' figures. † Approximate production.

earlier. Prices showed a general rise during the year, reflecting the wage increases made mandatory by the coal code adopted under the provision of the National Recovery Administration.

ANTHRACITE PRODUCTION IN 1933. The production of Pennsylvania anthracite dropped slightly less than 1 per cent in 1933 from 49,855,000 tons produced in 1932 to 49,399,000 tons, according

industry, for code administrative purposes the country is divided into five major divisions, each with its separate divisional code authority. In addition, subdivisions and subdivisional code authorities have been established in the divisions covering large geographical areas or producing large percentages of the national output. Division I, for example, embraces seven subdivisions—Ohio, western Pennsylvania, central Pennsylvania, northern West Virginia, the Southern high-volatile fields, the Southern low-volatile fields, and western Kentucky, Divi-

sion II has separate subdivisions for Illinois, Indiana, and Iowa. Division IV has two subdivisions—Kansas-Missouri-Oklahoma and Arkansas-Oklahoma. There are two subdivisions—northern Colorado and southern Colorado-New Mexico—in Division V.

The Presidential members of the divisional code authorities, four members designated by Division I, two by Division II, and one each by Divisions III, IV, and V and not to exceed three additional Presidential appointees, constitute the National Bituminous Coal Industrial Board. This board is subject to call from General Johnson and is empowered to consider and make recommendations to the divisional code authorities and to the President "as to any amendments to the code or other measures which may stabilize and improve the conditions of the industry and promote the public interest therein."

Specific recognition is given district selling agencies by empowering such agencies, when acting for producers "truly representative of at least two-thirds of the commercial tonnage of any coal district or group of districts," to initiate minimum prices for such district or districts. Where no such agencies exist, the duty of initiating minimum price schedules devolves upon the code authority for the division or subdivision. Subject to the approval of the Presidential member of the code authority and subsequent review by the National Recovery Administrator, prices so established must be observed as minima by the producers.

Controversies involving labor relations are handled first by local and district or divisional machinery and from there to divisional labor boards. Each divisional labor board consists of three members, one selected from

nominations made by employers, one from nominations made by labor, and one, as impartial member, from nominations made by the divisional code authority. Two such boards have been established in Division I, one each in the other four divisions. Members of these six divisional boards constitute the National Bituminous Coal Labor Board. Only impartial members have the power to vote on a controversy, the other members acting in an advisory capacity. This national board may be called into action when (a) a controversy involves employers and employees of more than one division; (b) the decision of a divisional labor board affects operating conditions in more than one division, either directly or because of its effect upon competitive marketing, and (c) in the opinion of the Administrator, the decision of a divisional labor board involves the application of a policy affecting the general public or the welfare of the industry as a whole.

For the purpose of establishing the minimum wage standards required by the law, the code divides the bituminous region of the country into seventeen districts. Two minimum rates were established for each of these districts—a minimum for inside skilled labor and a minimum for common outside labor. Where specific wage contracts were in existence at the time the code was promulgated, the minima set up in the code are the same as provided for in the wage agreements.

Base minimum rates of pay were established "with the understanding that other classifications of employment will maintain their customary differentials above or below said basic minimum rates and that payments for work performed on a tonnage or other piecework

PRODUCTION, VALUE, MEN EMPLOYED, DAYS OPERATED, AND OUTPUT PER MAN PER DAY
AT COAL MINES IN UNITED STATES IN 1932 *

[Exclusive of product of wagon mines producing less than 1,000 tons]

State	Production, net tons	Total (thousand dollars)	Average per ton	Number of em- ployees, total	Average number of days worked	Average tons per man per day ^b
Alabama	7,856,939	\$12,138	\$1.54	20,443	107	3.60
Alaska	102,700	514	5.00	120	189	4.53
Arizona	6,877	33	4.80	17	251	1.61
Arkansas	1,038,471	2,831	2.74	4,325	92	2.61
California, Idaho, and Oregon	16,819	60	3.68	141	69	1.69
Colorado	5,598,721	12,237	2.19	8,749	142	4.51
Georgia	27,208	48	1.76	64	208	2.04
Illinois	38,474,553	51,316	1.53	47,597	112	6.30
Indiana	13,323,573	17,267	1.30	10,639	145	8.65
Iowa	3,862,435	9,254	2.40	8,086	151	3.17
Kansas	1,952,885	3,420	1.75	3,591	130	4.19
Kentucky	35,299,582	34,892	.99	42,267	155	5.41
Maryland	1,428,937	1,827	1.28	3,105	150	3.07
Michigan	446,149	1,219	2.73	940	159	2.98
Missouri	4,069,598	6,654	1.64	5,677	151	4.45
Montana	2,125,225	3,527	1.66	1,525	145	9.64
New Mexico	1,263,386	3,321	2.63	2,602	127	3.82
North Carolina	1,900	6	3.16	26	55	1.33
North Dakota	1,739,658	2,200	1.26	1,311	186	7.12
Ohio	13,909,451	15,413	1.11	23,280	127	4.71
Oklahoma	1,255,466	2,646	2.11	3,063	120	3.40
Pennsylvania bituminous	74,775,862	100,361	1.34	104,532	154	4.66
South Dakota	49,074	87	1.77	84	126	4.65
Tennessee	3,537,882	4,670	1.32	7,525	148	3.18
Texas	686,590	904	1.42	699	152	6.00
Utah	2,852,127	5,685	1.99	2,842	176	5.69
Virginia	7,692,180	9,280	1.21	10,376	144	5.16
Washington	1,591,426	4,759	2.99	2,816	161	3.51
West Virginia	85,608,735	90,786	1.06	85,765	168	5.93
Wyoming	4,170,968	9,317	2.23	4,173	150	6.65
Total bituminous, 1932	309,709,872	406,677	1.31	406,880	146	5.22
Total bituminous, 1931	382,089,396	588,895	1.54	450,213	160	5.30
Anthracite, 1932	49,855,221	222,375	4.46	121,253	162	2.54
Anthracite, 1931	59,645,652	296,355	4.97	139,431	181	2.37
Grand total, 1932	359,565,093	629,052	1.75	527,628	150	4.55
Grand total, 1931	441,735,048	885,250	2.00	489,644	165	4.54

* The figures relate only to active mines of commercial size that produced bituminous coal in 1932. The number of such mines in the United States was 5,427 in 1932; 5,642 in 1931; 5,891 in 1930.

Size classes of commercial mines in 1932: There were 82 mines in Class 1A (500,000 tons and over) producing 17.9 per cent of the tonnage; 383 mines in Class 1B (200,000 to 500,000 tons) with 37.8 per cent; 477 mines in Class 2 (100,000 to 200,000 tons) with 21.8 per cent; 469 mines in Class 3 (50,000 to 100,000 tons) with 11 per cent; 1,111 mines in Class 4 (10,000 to 50,000 tons) with 8.8 per cent; 2,805 mines in Class 5 (less than 10,000 tons) producing 2.7 per cent.

Methods of mining in 1932: The tonnage by hand was 29,550,036, shot off the solid, 16,285,682; cut by machines, 243,954,770; mined by stripping, 19,641,128; not specified, 278,256.

^b Based upon (1) the "reported" number of man-shifts where the operator keeps a record thereof; otherwise upon (2) the "calculated" number of man-shifts obtained by multiplying the average number of men employed underground and on the surface at each mine by the number of days worked by each group respectively. Using a "calculated" method throughout, the average output per man per day for the country as a whole was 5.33 in the bituminous mines; 2.63 in the anthracite mines combined, in 1932. These figures are strictly comparable with 5.30 in 1931 and 5.06 in 1930 in the bituminous mines; 2.37 in 1931 and 2.21 in 1930 in the anthracite mines; 5.54 in 1931 and 4.84 in 1930 in bituminous and anthracite mines combined.

basis shall maintain their customary relationship to the payments on a time basis provided in said basic minimum rates." Except where otherwise provided by agreement, all coal mined on a tonnage basis must be paid for by the ton. Employees are authorized to employ check-weighmen and/or check-measures. Wages due must be paid semi-monthly in lawful money or par check.

Living in company houses, except in the case of maintenance, supervisory men and others necessary to protect the property, and trading at company stores may not be made a condition of employment. In the absence of state laws naming a higher minimum, no person under 17 may be employed underground or in hazardous work outside and no person under 16 may be employed in any capacity in or about a mine. The code also provides a maximum work week of 40 hours and a maximum work day of 8 hours, except for certain specified small groups.

ACCIDENT PREVENTION. According to preliminary reports compiled by the U. S. Bureau of Mines, the combined total of fatalities in bituminous and anthracite operations in the United States was 1013 during 1933. On the basis of the estimated output of 377,338,000 tons, this lowers the number of fatalities to 288 per hundred million tons. Though unreported fatalities are expected to raise the number slightly, the record is still the best ever reached. In 1932 the fatalities per hundred million tons were 336.

COCHIN-CHINA, kô'chîn chî'nâ. A French colony occupying the southern tip of French Indo-China (q.v.). The territory is ruled directly by a governor and a colonial council of 24 members; it is represented in the French Parliament by one deputy. Governor in 1933, J. F. Krautheimer.

COCOS or KEELING ISLANDS. See STRAITS SETTLEMENTS.

COELENTERATES. See ZOÖLOGY.

COFFEE. See BRAZIL; COLOMBIA; COSTA RICA.

COFFERDAM CONSTRUCTION. See FOUNDATIONS.

COFFIN, WILLIAM SLOANE. An American corporation official, died Dec. 16, 1933, in New York City where he was born Apr. 18, 1879. On his graduation from Yale University in 1900 he entered the furniture and real estate business, becoming president in the ensuing years of the Company of Master Craftsmen, Oneidacraft, Inc., Henry Williams Co., and the Creekfront Realty Co., and vice-president of W. & J. Sloane, the New York furniture firm. He embarked upon his civic activities in 1906 when he founded the Art-in-Trades Club, composed of those engaged in or interested in the industrial arts. Eighteen years later with Col. Michael Friedsam he established a fund to finance a four-year course in interior decorating at New York University. During the World War he was connected with the Y. M. C. A. and later made a survey of the devastated regions of France and Belgium in connection with appeals for the restoration of cathedrals there. For this service he received from the French government in 1919 the decoration of Chevalier of the Legion of Honor.

While president of the New York City Mission Society Mr. Coffin took a special interest in its social welfare work and sponsored the construction of its branch on West 118th Street for work among the city's Spanish-speaking population. He was also president of the Child Education Foundation and vice-president of the City Housing Corporation, offering in connection with the latter a plan for the construction of model tenements equipped with modern improvements and leased at low rentals. In 1931 he was appointed president of the board of trustees of the Metropolitan Museum of Art, his two-year administration being marked by efforts to make the museum

a centre of educational interest for people of all ages and classes. He had previously served as director, treasurer, and first vice-president, and for years was a member of the museum's appointive committee on American and European decorative arts.

COINS, VALUE OF FOREIGN. The legal estimates of the value of foreign coins on Jan. 1, 1934, as issued by the U. S. Secretary of the Treasury are given in the table on page 171.

COKE. The production of coke in 1933, according to the preliminary reports received by the Bureau of Mines, was 27,551,913 net tons, an increase of 26.4 per cent when compared with 1932. The chief cause of the increase in coke production was the greater activity of blast furnaces, the output of pig iron for 1933 increasing 52.1 per cent above the level of 1932. The figures for by-product coke are based on monthly reports received currently by the Bureau of Mines from each producer and are subject to very slight revision on the basis of final detailed reports for the year as a whole. The figures for beehive coke are estimates based on shipments reported by 12 of the principal railroads serving the beehive ovens.

PRODUCTION OF BY-PRODUCT AND BEEHIVE COKE IN THE UNITED STATES, 1929-1933

Year	Net tons produced		
	By-product	Beehive	Total
1929	53,411,826	6,472,019	59,883,845
1930	45,195,705	2,776,316	47,972,021
1931	32,355,549	1,128,337	33,483,886
1932	21,136,842	651,888	21,788,730
1933 *	26,722,413	829,500	27,551,913

* Preliminary figures.

Production, as shown in the accompanying table, increased during the year in all producing States except Tennessee, Utah, and Washington, the decline in Utah being almost 28 per cent. Ohio showed the greatest advance, 56.6 per cent over the previous year, with Pennsylvania and Colorado also showing advances of more than 50 per cent. In Indiana and Maryland production rose by 45.7 per cent and 40.6 per cent respectively over the previous year.

PRODUCTION OF BY-PRODUCT COKE, BY STATES, IN 1932 AND 1933

[Net tons]

State	1933 *	1932
Alabama	1,669,676	1,400,597
Colorado	139,722	92,384
Illinois	1,501,284	1,428,384
Indiana	2,090,799	1,435,405
Maryland	702,226	499,502
Massachusetts	1,128,229 ^b	987,106
Michigan	2,330,595	1,655,109
Minnesota	412,003	385,899
New Jersey	837,859	805,720
New York	3,842,424	3,130,078
Ohio	3,674,666	2,346,686
Pennsylvania	6,188,759	4,037,810
Tennessee	71,043	72,529
Utah	74,976	103,862
Washington	31,608	32,610
West Virginia	1,099,595	902,872
Connecticut, Kentucky, Missouri, Rhode Island, and Wisconsin	1,426,949	1,310,539
Total	26,722,413	21,136,842

* From monthly reports furnished by operators. ^b Includes an unknown amount of breeze.

In 1933, 42 plants connected with iron furnaces produced 16,147,837 net tons of coke, or 60 per cent of the total output. The remaining 43 by-product plants produced 10,574,576 net tons.

VALUES OF FOREIGN MONETIES—JAN. 1, 1934

Country	Legal standard	Monetary unit	U. S. money	Remarks
Argentine Republic . . .	Gold	Peso	\$0.9648	Currency convertible at 44% facevalue. 1 belga equals 5 Belgian paper francs. 18½ bolivianos equal 1 pound sterling. Currency: Government paper; ratio of 8 paper to 1 gold milreis for collection of taxes and duties decreed Nov. 22, 1933.
Austria	Gold	Schilling . . . . .	.1407
Belgium	Gold	Belga . . . . .	.1390
Bolivia	Gold	Boliviano . . . . .	.3650
Brazil	Gold	Milreis . . . . .	.5462
British Colonies in Australasia and Africa . . .	Gold	Pound Sterling	4.8665	The Yuan (sometimes known as Yuan dollar) of 100 fen (cents) is the monetary unit minted by the Central Government of the Republic.
British Honduras . . .	Gold	Dollar	1.0000	
Bulgaria	Gold	Lev . . . . .	.0072
Canada	Gold	Dollar	1.0000	
Chile	Gold	Peso . . . . .	.1217
China	Silver (Stated values are estimated market values, in gold, of silver content of units.)	Yuan, prior to March, 19333214	Old Mexican dollars only, issued prior to 1918. Currency: Government paper and silver. Law establishing conversion office fixes ratio 4 colons (nongold) = \$1.
		Yuan, established Mar. 8, 1933 . . . . .	.3159
		Dollar { Hong Kong . . . . .	.3262
		{ British . . . . .	.3286
Colombia	Gold	Peso9733	U. S. money chief circulating medium.
Costa Rica	Gold	Colon . . . . .	.4653
Cuba	Gold	Peso	1.0000	Obligation to sell gold at legal monetary par suspended, effective Sept. 21, 1931.
Czechoslovakia	Gold	Krone . . . . .	.0296
Denmark	Gold	Krone2680	Currency: National bank notes redeemable on demand in American dollars.
Dominican Republic	Gold	Dollar	1.0000	
Ecuador	Gold	Sucre2000	British money only is used.
Egypt	Gold	Pound (100 piasters) . . .	4.9431	
Estonia	Gold	Kroon2680	By law of July 25, 1931, gold has no legal tender status but it may be held as monetary reserve for use in foreign exchange operations.
Finland	Gold	Markka . . . . .	.0252
France	Gold	Franc0392	Depreciated Paraguayan paper currency is used.
Germany	Gold	Reichsmark . . . . .	.2382
Great Britain	Gold	Pound Sterling	4.8665	Rial currency effective Mar. 21, 1932, 1 rial equals 1 kran of old system.
Greece	Gold	Drachma . . . . .	.0130
Guatemala	Gold	Quetzal	1.0000	Valuation is for gold peseta; currency is notes of the Bank of Spain.
Haiti	Gold	Gourde . . . . .	.2000
Honduras	Gold	Lempira5000	(100 piasters equal to the Turkish L.)
Hungary	Gold	Pengó . . . . .	.1749
India (British)	Gold	Rupee3650	Currency: Inconvertible paper.
Indo-China	Gold	Piaster . . . . .	.3918
Italy	Gold	Lira0526	U. S. money chief circulating medium.
Japan	Gold	Yen . . . . .	.4985
Latvia	Gold	Lat1930	Depreciated Paraguayan paper currency is used.
Liberia	Gold	Dollar	1.0000	
Lithuania	Gold	Litas10000	Rial currency effective Mar. 21, 1932, 1 rial equals 1 kran of old system.
Mexico	Gold	Peso . . . . .	.4985
Netherlands and colonies	Gold	Guilder (florin)4020	Depreciated Paraguayan paper currency is used.
Newfoundland	Gold	Dollar	1.0000	
Nicaragua	Gold	Cordoba	1.0000	Rial currency effective Mar. 21, 1932, 1 rial equals 1 kran of old system.
Norway	Gold	Krone . . . . .	.2680
Panama	Gold	Balboa	1.0000	Valuation is for gold peseta; currency is notes of the Bank of Spain.
Paraguay	Gold	Peso (Argentine) . . . .	.9648
Persia	Gold	Rial0487	(100 piasters equal to the Turkish L.)
Peru	Gold	Sol . . . . .	.2800
Philippine Islands	Gold	Peso50000	Currency: Inconvertible paper.
Poland	Gold	Zloty . . . . .	.1122
Portugal	Gold	Escudo0442	U. S. money chief circulating medium.
Rumania	Gold	Leu . . . . .	.0060
Salvador	Gold	Colon5000	Depreciated Paraguayan paper currency is used.
Siam	Gold	Baht (Tical) . . . . .	.4424
Spain	Gold	Peseta1930	Rial currency effective Mar. 21, 1932, 1 rial equals 1 kran of old system.
Straits Settlements	Gold	Dollar . . . . .	.5678
Sweden	Gold	Krona2680	(100 piasters equal to the Turkish L.)
Switzerland	Gold	Franc . . . . .	.1930
Turkey	Gold	Piaster0440	Currency: Inconvertible paper.
U. S. S. R. (Russia)	Gold	Chervonetz	5.1457	
Uruguay	Gold	Peso	1.0342	U. S. money chief circulating medium.
Venezuela	Gold	Bolivar . . . . .	.1930
Yugoslavia	Gold	Dinar0176	Depreciated Paraguayan paper currency is used.

The following preliminary estimates on the recovery of byproducts from coke-oven operations in 1933 are obtained by assuming that the quantity of byproducts recovered during 1933 bore the same relation to the known production of coke in 1933 as in 1932. No basis for estimating the production of ammonia is available.

Tar	884,000,000 gallons
Gas	439,000,000 M cubic feet
Crude light oil	79,000,000 gallons

The indicated consumption of coke in the United States during 1933 was 27,736,514 net tons, of which about 47 per cent or 13,122,000 tons were used by blast furnaces in the production of pig iron. Imports for the year rose to 161,034 tons (117,275 tons in 1932), while exports showed a slight drop, 629,433 tons in 1933 against 630,151 tons in 1932. For the manufacture of byproduct coke, 38,682,900 tons of bituminous coal were consumed, to which must be added 1,298,100 tons for beehive coke, giving a total coal consumption of 39,981,000 tons for the year.

COLGATE UNIVERSITY. A nonsectarian institution for the higher education of men in Hamilton, N. Y., founded in 1819. In the autumn of 1933 there were 947 students enrolled. The faculty numbered 95 members. The productive funds amounted to approximately \$6,500,000, and the income for the year was approximately \$508,955. The library contained 110,000 volumes.

The Carnegie Corporation of New York in 1933 made a grant to Colgate University of \$30,000 a year for four years to put the Colgate Plan into full operation. This plan divides the curriculum into six schools: physical sciences, biological sciences, social sciences, philosophy and religion, fine arts, and languages. Freshmen are assigned to preceptors, who meet them individually one hour a week and try to stimulate their intellectual interest. At the end of the freshman year each student chooses a school and at the end of the sophomore year a subject of concentration. Thereafter his work is largely in that subject, under the direction of a tutor, in the seminar tutorial method. The course comes to a climax in a comprehensive examination at the end of the senior year. President, George Barton Cutten, Ph.D., D.D., LL.D.

COLLEGES. See UNIVERSITIES AND COLLEGES.

COLLIER TROPHY. See AERONAUTICS.

COLOMBIA. A South American republic, third in population and fifth in area among the states of that continent. Capital, Bogotá.

AREA AND POPULATION. Colombia has an area of 444,270 square miles, or larger than France, Germany, Austria, and Belgium together. The population was 7,851,000 at the census of 1928 and was estimated at 8,400,000 on Dec. 31, 1931. Racially the population was divided as follows: White, 35 per cent; Negro, 5 per cent; Indian, 2 per cent; mixed, 58 per cent. The chief cities, with their 1928 populations, are Bogotá, 235,421; Barranquilla, 139,974; Cali, 122,847; Medellín, 120,044; Cartagena, 92,494; Manizales, 81,091; Ibagué, 56,333; and Cúcuta, 49,279. Buenaventura (25,334 inhabitants), the chief Pacific port, was destroyed by fire in 1931, but was rebuilt. The population is 31 per cent urban and 69 per cent rural. The Colombians speak the purest Spanish in South America.

EDUCATION. In 1928, 52 per cent of the population over 10 years of age was literate, compared with 32 per cent in 1918. Elementary education

is free but not compulsory. Primary schools numbered 7495 in 1931, with 531,658 pupils. In 1930-31, there were 25 industrial schools, with 1392 pupils; 17 normal schools, with 1000 students, and other vocational institutions. The University of Bogotá and the School of Mines at Medellín are national universities; there are departmental universities at Medellín, Cartagena, Popayan, and Pasto.

PRODUCTION. Colombia ranks second to Brazil in the production of coffee, the normal crop being more than 3,000,000 bags (of 135 pounds) per year. In 1932 exports amounted to 3,184,328 bags, valued at \$42,910,412; the average price was 11.22 cents per pound for the year. Of the coffee exports, 88 per cent went to the United States. Other leading crops are bananas (exports of 7,021,000 stems valued at \$6,007,273 in 1932), tobacco, ivory nuts, cotton, sugar cane, corn, and many other products. Valuable forests, including rubber trees and dye and cedar woods, cover some 150,000,000 acres. Cattle raising is an important industry; there were some 7,500,000 head of cattle in 1932. There is a wide variety of rich mineral deposits. Petroleum output in 1932 was 16,414,000 barrels (18,237,000 in 1931); 1932 exports amounted to 15,320,000 barrels valued at \$16,437,783. Gold exports in 1932 were \$3,223,828; platinum, \$495,056. Besides being the first world producer of emeralds, the second producer of platinum, and the leading gold producer among the South American countries, Colombia also mines silver, copper, iron, tin, cinnabar, lead, nickel, asbestos, and other minerals. Manufacturing is relatively unimportant. Textiles sugar, matches, chocolate, tobacco products, cement, etc. are the chief products.

COMMERCE. Colombia's imports in 1932 were valued at 34,309,000 gold pesos and exports at 70,397,000 pesos, compared with imports of 41,056,000 pesos and exports of 98,009,000 pesos in 1931. (The gold peso equals \$0.9733 at par; it exchanged at \$0.9625 in 1931 and \$0.9528 in 1932.) The favorable balance of trade was 36,088,000 pesos in 1932 (56,953,000 in 1931). The United States in 1932 purchased Colombian exports to the value in United States currency of \$60,846,000 (\$75,482,000 in 1931) and supplied Colombia with imports valued at \$10,670,000 (\$16,052,000 in 1931). The chief exports, in order of value, were coffee, petroleum, bananas, gold, and platinum. The main import items were textiles, metal products, drugs, and chemicals, food-stuffs, machinery, paper and paper products, crockery and glassware, leather and leather goods, etc. Provisional 1933 figures placed the value of exports at 72,700,000 pesos and imports at 50,400,000 pesos.

FINANCE. The national financial accounts for the fiscal calendar years 1929-33, including both ordinary and extraordinary accounts, are shown in the accompanying table from the *Statistical Year-Book* of the League of Nations.

COLOMBIA: REVENUE AND EXPENDITURE

[In gold pesos worth \$0.973 at par]

Year	Receipts (million pesos)	Expenditures (million pesos)	Surplus (+) or deficit (-)
1929	75.2	82.2	- 7.0
1930	49.4	60.1	- 10.7
1931	43.7	47.6	- 3.9
1932 *	84.8	34.8	....
1933 *	40.4	86.2	+ 4.2

* Estimates. * Ordinary budget only.

Actual receipts in 1932 were 44,570,000 pesos (ordinary receipts, 35,523,000 pesos) and actual expenditures were 43,529,000 pesos (ordinary, 34,806,000 pesos). In 1933 preliminary returns showed receipts of 39,200,000 pesos in the ordinary budget and expenditures of 33,000,000 pesos. Extra budgetary transactions increased the surplus to 7,400,000 pesos. The increase in budget expenditures in 1933 was due partly to military expenditures in anticipation of war with Peru (see PERU under *History*). In the budget for 1934, as passed by Congress, estimates for ordinary revenues and expenditures balanced at 36,428,000 pesos and extraordinary revenues and expenditures balanced at 1,110,000 pesos. In the ordinary budget 8,751,000 pesos was set aside for the service of the public debt and 6,000,000 pesos for defense.

The total external public debt on Dec. 31, 1932, was equivalent to 193,742,205 pesos, of which 63,948,258 pesos represented the national foreign debt, the remainder being obligations of the departments, municipalities, and banks. The internal debt outstanding Dec. 31, 1932 was 35,362,416 pesos. Currency in circulation on Apr. 30, 1933, totaled 58,804,000 pesos. On Mar. 29, 1933, the Colombia government authorized the total or partial suspension of service on the external funded debt.

COMMUNICATIONS. Colombia in 1933 had 2075 miles of railway line in operation, divided among 15 systems (11 national and 3 British). Most of the lines serve as feeders to the Magdalena River, the main traffic artery of the country, which is navigable by 500-ton steamers for 514 miles from Barranquilla on the Caribbean to La Dorada. Automobile highways in 1933 extended 4550 miles; other roads, 35,450 miles. Air lines connect the principal cities and link Colombia with most of the other American republics. There is a modern telephone system in every important city. In 1933, there were 197,520 miles of telephone line, 22,807 miles of telegraph line, 21 commercial radio stations, and radio telephone connections with the rest of the world. Modernization of the port of Cartagena was completed in 1933 at a cost of \$3,000,000.

GOVERNMENT. Executive power is vested in a president elected for four years by direct popular vote, and ineligible for reelection until four years after the expiration of his term. Legislative power rests with a Congress of two houses, the Senate and House of Representatives. The 56 Senators are elected for four years by Departmental Assemblies; the 118 Deputies for two years by direct suffrage. President in 1933, Dr. Enrique Olaya Herrera (Liberal), elected for the term expiring Aug. 7, 1934.

HISTORY

LETICIA CONTROVERSY SETTLED. During the first quarter of 1933, the attention of the Colombian government and people was concentrated upon the effort to regain control of Leticia and the surrounding "corridor" on the Amazon. This had been seized by Peruvian citizens on Sept. 1, 1932. Colombian troops and naval forces dispatched to the scene via the Amazon and overland came into contact with Peruvian forces near Leticia early in 1933 and several clashes ensued. The struggle had not yet assumed serious proportion, however, when on May 25, the League of Nations, supported by the United States and the other neutral American republics, induced both governments to turn the Leticia corridor over to

a League Commission pending a final agreement on the issue. Negotiations for a settlement opened in Rio de Janeiro October 25 and were still under way at the end of the year. Meanwhile, Colombia and Peru withdrew their military forces. For details of the Leticia affair in 1933, see PERU under *History*.

In anticipation of war, Colombia had floated a national defense loan of 10,000,000 pesos, inaugurated higher income taxes, and conscripted all males between 20 and 45. Some 10,000 men were concentrated in the vicinity of Leticia, despite its inaccessibility.

FINANCIAL DEFAULTS. The world economic depression had already placed a severe strain upon Colombia's financial structure. When the prospect of war between Colombia and Peru became imminent the government in March, 1933, decided to declare a temporary moratorium on the external funded debt. A decree to this effect, issued March 29, authorized the government to arrange with its creditors for a reduction of the foreign debt service. It also gave the government power to eliminate subsidies and payments to the departments and municipalities provided for in the 1933 budget. After defaults on May 1 and 15 on dollar bonds of the Agricultural Mortgage Bank of Colombia, guaranteed by the government, and a sterling loan, the government offered to pay one-fourth of the service charges on the bonded debt in cash and the remainder in 3 per cent scrip, redeemable within five years. This plan, revised several times during the year, aroused many protests among bondholders' committees in the United States.

The merging of two large private mortgage companies with the government-controlled Agricultural Mortgage Bank and the Central Mortgage Bank of Colombia also led to protests of the bondholders. They charged that the action of the government impaired the rights of American bondholders of the two private institutions—the Mortgage Bank of Colombia and the Mortgage Bank of Bogotá.

EXCHANGE CONTROL MODIFIED. The rigid system of exchange control inaugurated in 1932 was radically modified Sept. 25, 1933 and a partially free exchange system established. Nevertheless, it was reported from Bogotá October 31 that there was a shortage of dollar exchange to meet pending and accruing requirements of importers. A commercial treaty with the United States, which was expected to improve the exchange situation by permitting increased sales to the United States, was signed in Washington Dec. 15, 1933.

DOMESTIC POLITICS. The Liberals during 1933 further entrenched themselves in power, which previous to the election of President Olaya Herrera in 1930 had been exercised for nearly half a century by the Conservatives. The biennial Congressional elections of May 14, 1933, increased the Liberal representation in the Chamber of Deputies from 52 to 72, giving the party its first safe majority in the Chamber in decades.

Municipal elections held throughout the country on October 1 gave the Liberals majorities in the city councils of all state capitals and about 80 per cent of the seats in all councils. In many cities, the Conservatives boycotted the elections.

With the Presidential election scheduled for the second Sunday in 1934, the political campaign got under way toward the end of 1933. A convention of Liberal leaders on November 5

bestowed the party nomination upon Dr. Alfonso Lopez, former Minister to London, who was responsible for the conclusion of the agreement with President Benavides of Peru on the Leticia issue. On November 14, it was reported that the national committee of the Conservative party had decided to boycott the presidential election. The struggle between the parties was fought out in part in Congress, where Conservative obstruction retarded essential legislation. One important law passed authorized the government to improve the mouth of the Magdalena River so as to permit larger steamers to enter Barranquilla. The Liberals in Congress renewed their attack upon the relations existing between the state and the Roman Catholic Church. Some demanded a revision of the Concordat with the Vatican. Effective in 1934, the number of Cabinet ministers was increased to nine, under a decree issued by President Olaya Herrera on Nov. 3, 1933.

COLON ISLANDS. See ECUADOR.

COLORADO. POPULATION. The population of the State on Apr. 1, 1930, was 1,035,791 (Fifteenth Census); in 1920 it was 938,629; in 1933 (Federal estimate), 1,052,000. Denver, the capital, had (1930), 287,861 inhabitants.

AGRICULTURE. The following table shows the acreage, production, and value of the principal crops for 1933 and 1932:

Crop	Year	Acreage	Prod. Bu.	Value
Hay (tame)	1933	1,334,000	1,993,000*	\$10,563,000
	1932	1,274,000	1,830,000*	11,895,000
Sugar beets.	1933	211,000	2,624,000*	.....
	1932	156,000	1,777,000*	8,209,000
Corn	1933	2,004,000	22,044,000	7,495,000
	1932	1,909,000	14,318,000	3,150,000
Wheat	1933	548,000	5,912,000	3,455,000
	1932	680,000	7,135,000	2,191,000
Potatoes ...	1933	87,000	13,050,000	6,264,000
	1932	100,000	11,000,000	2,640,000
Barley	1933	430,000	6,880,000	1,926,000
	1932	439,000	7,244,000	1,449,000
Dry beans .	1933	345,000	1,138,000*	8,016,000
	1932	221,000	438,000*	657,000
Oats	1933	162,000	4,131,000	1,157,000
	1932	141,000	3,736,000	785,000

* Tons. * 100-lb. bags.

MINERAL PRODUCTION. There were produced, in 1932, some 5,564,000 net tons of coal, which was nearly 16 per cent less than the 6,604,369 tons of 1931 and 44 per cent less than the total for 1929. The production of coke used over one-eighth of the year's product of coal and attained 92,384 tons of coke.

The production of gold (1932) attained the value of \$6,493,377; of silver, \$480,353; copper, \$451,395; lead, \$123,504; zinc, \$6540; total of all five, \$7,555,169 (1932).

The production of 1933 (partly estimated) totaled 242,008 oz. of gold, 2,242,646 oz. of silver, 4,510,000 lb. of lead, 9,948,000 lb. of copper, and 2,491,000 lb. of zinc. The value of the totals was: Gold, at \$20.67 an oz., \$5,002,749; silver, \$773.713; lead, \$166,870; copper, \$636,672; zinc, \$107.113; all five, \$6,087,117.

The production of petroleum in 1932 totaled 1,177,000 barrels, which was 24 per cent below the total for 1931.

FINANCE. State expenditures in the year ended June 30, 1932, as reported by the U. S. Department of Commerce, were: for maintaining and operating governmental departments, \$13,750,239 (of which \$672,510 was for local education); for interest on debt, \$340,245; for permanent improvements, \$7,355,416; total, \$21,445,900 (of

which \$10,992,200 was for highways, \$4,266,118 being for maintenance and \$6,726,082 for construction). Revenues were \$21,880,061. Of these, property and special taxes furnished 27.3 per cent; departmental earnings and compensation to the State for officers' services, 8.9; sale of licenses, 38.1 (in which was included a gasoline sale tax that produced \$5,956,043). Funded debt outstanding on June 30, 1932, totaled \$7,355,014, of which \$5,193,000 was for highways. Net of sinking-fund assets, the debt was \$5,940,236. On an assessed valuation of \$1,438,448,065 the State levied in the year ad-valorem taxes of \$5,043,593.

EDUCATION. A minimum-salary law applying to teachers in the public schools was credited with rendering it possible to keep the schools open generally, in the face of the deficiency in their ordinary sources of revenue. Under this law a country-wide tax was supplemented with contributions from the State's public-school income fund.

For the academic year 1931-32, the latest for which figures were furnished, the number of persons of school age in the State was reckoned as 315,369. There were enrolled in the public schools 257,940 pupils. Of these, 177,385 were in common schools or elementary grades; in high schools, 69,689. The year's expenditures for public-school education totaled \$24,441,542. Salaries of teachers averaged \$1423 for the year 1931-32; they were subsequently much reduced.

LEGISLATION. The Legislature convened in regular session on January 4. It made the Governor a grant, in the banking emergency that became acute during the session, of sweeping powers to deal with the affairs of institutions in the State banking system. Provision was made for closer supervision of insurance companies through the commissioner of insurance. A measure was passed to provide for a special election to choose delegates to a State convention which should act for the State with regard to ratifying the Federal proposal for repealing the Eighteenth Amendment; but Governor Johnson vetoed the measure, declaring the expense of a special election not justifiable.

A special session in August created a State convention, to be elected by popular vote and to act for the State in the matter of the proposal repeal of the Federal Eighteenth Amendment. Another special session, convened in December, dealt with the matter of providing public assistance to the destitute, out of the State's funds. An act of 1933 substituted death by lethal gas, in place of hanging, as the State's mode of capital punishment. An existing old-age-pension law, which had been declared unconstitutional, was superseded by a new law.

POLITICAL AND OTHER EVENTS. At a popular election on September 12 delegates in favor of repealing the Federal Eighteenth Amendment were elected by a light vote in the proportion of somewhat more than 2 to 1. These delegates met in State convention on September 26 and adopted, for the State, the superseding amendment proposed by Congress. A suspension bridge over the Royal Gorge of the Arkansas River, at a height of 1053 feet above the bottom of the canyon, was finished and opened for traffic in April.

OFFICERS. The chief officers of the State, serving in 1933, were: Governor, Ed. C. Johnson, Lieutenant-Governor, Ray H. Talbot; Secretary

of State, Charles M. Armstrong; Auditor, Benjamin F. Stapleton; Treasurer, Homer F. Bedford; Attorney General, Paul P. Prosser; Superintendent of Public Instruction, Inez Johnson Lewis.

Judiciary. Supreme Court: Chief Justice, John T. Adams; Associate Justices, Francis E. Bouck, Benjamin C. Hilliard, Haslett P. Burke, Julian H. Moore, Charles C. Butler, and John Campbell.

COLORADO, UNIVERSITY OF. A coeducational, State institution of higher learning in Boulder, Colo., founded in 1876. The number of students enrolled for the autumn of 1933 was 2787; the summer session enrollment was 1727. There were 328 faculty members, exclusive of assistants. The total income for general maintenance from State tax, fees, tuition, etc., was estimated at \$1,100,000, while \$500,000 was received for the operation of hospitals, including fees. The library contained 280,065 volumes, 17,000 pamphlets, and 3300 maps. President, George Norlin, Ph.D., LL.D.

COLORADO RIVER AQUEDUCT. See TUNNELS.

COLORÉD METHODISTS. See METHODIST EPISCOPAL CHURCH, SOUTH.

COLOR PHOTOGRAPHY. See PHOTOGRAPHY.

COLUMBIA RIVER. See DAMS.

COLUMBIA UNIVERSITY. A nonsectarian institution for the higher education of men and women in New York City, founded as King's College in 1754. At Morningside Heights, Broadway and 116th Street, are located: Columbia College (for undergraduate men); Barnard College (for undergraduate women); Teachers College, including the departments of education and practical arts and New College; the professional schools of law, engineering, architecture, journalism, business, library service, and optometry; and the non-professional graduate faculties of political science, philosophy, and pure science. The college of physicians and surgeons and the school of dental and oral surgery are at the Medical Centre on West 168th Street, the college of pharmacy on West Sixty-eighth Street, Seth Low Junior College in Brooklyn, N. Y., St. Stephen's College at Annadale-on-Hudson, N. Y., and the New York Post-Graduate Medical School on East Twentieth Street. In addition, through university extension classes and the summer session, courses are offered for resident students at Morningside Heights; and other courses are offered at Camp Columbia, a well as of several extramural centres.

On the basis of the enrollment on Nov. 1, 1933, the total number of resident students for the year was estimated at 27,107, distributed as follows: Undergraduates, 3141, of whom 1662 were in Columbia College, 1003 in Barnard College, 217 in Seth Low Junior College, 105 in St. Stephen's College, and 154 in other schools; and graduate students, 2821. The distribution of professional students was as follows: Law, 653; medicine, 449; engineering, 263; architecture, 92; journalism, 63; business, 442; dental and oral surgery, 247; pharmacy, 419; optometry, 71; library service, 315; and Teachers College, 5996; 4847 students were enrolled in university classes and 260 were unclassified. Of the 3135 non-resident students, 1200 were registered in home-study courses and 1935 in special extra-mural courses. There were 9200 students registered

for the summer session of 1933. The grand total of resident students is exclusive of 2171 duplicate registrations.

The faculty and officers of administration in 1933 numbered 3050, of whom all but 55 were in active service. This number was distributed as follows: Professors, 378; associate professors, 190; assistant professors, 299; associates, 220; instructors, 519; lecturers, 79; assistants, 315; curators, 4; associates, instructors, lecturers, and assistants in Teachers College, 169; instructors and lecturers in the college of pharmacy, 14; instructors in extension and home study, not included above, 425; instructors in summer session, not included above, 309; officers of administration, 74.

The following professorial and administrative appointees were made for the year 1933-34: Herbert Barber Howe, director of men's residence halls; Bernard Sachs, clinical neurology; Harry Aranow, obstetrics; Herbert Brucker, journalism; Walter Gellhorn, law; Enrique Koppisch, pathology; Edwin Bernard Matzke, botany; Rudolf Schoenheimer, biological chemistry; Herbert Wechsler, law, John Notkin, neurology; Felix Bernstein, formerly professor of mathematics at the University of Göttingen and director of the Institute of Mathematical Statistics; Paul Tillich, formerly professor of philosophy at the University of Frankfurt.

Among the important events of the year was the celebration of the centenary of Sir Walter Scott's death, the exhibit of books and manuscripts relating to his life and work, and the lecture on his personality and literary achievement by Prof. Herbert J. C. Grierson of the University of Edinburgh, visiting professor of English literature. The school of journalism held also an exhibit of original seventeenth, eighteenth, and nineteenth century English and continental newspapers, belonging to the Press Club of London and including the royal proclamations from 1661 to 1840 which deal with the control of the printing press and the public responsibilities of newspapers. At the Medical Centre there was opened the Institute of Ophthalmology, adding thereby to the equipment of the college of physicians and surgeons for health service and research.

During 1932-33 the university received gifts in money representing a total of \$1,755,866. The principal gifts were \$1,200,000 from Edward S. Harkness toward the construction and equipment of South Hall; \$160,722 from the Rockefeller Foundation, for various forms of research work; \$75,000 from the estate of William Fitts Randolph for the capital funds of the university; \$31,649 from the Commonwealth Fund for various forms of research work; \$29,900 from Edward S. Harkness toward the support of the department of diseases of children; \$25,000 from the Carnegie Corporation, toward the support of the school of library service; \$17,189 from the General Education Board for the work of the department of practice of medicine and of the sub-department of tropical diseases; \$13,400 from the Josiah Macy, Jr., Foundation for various forms of research work; \$11,100 from the Hartley Corporation for the Marcellus Hartley Laboratory and for work in psychiatry; \$10,800 from the estate of Charlotte Dibblee for the maintenance of scholarships; \$10,000 from the Italian government to establish the Giuseppe Garibaldi Memorial Fund; \$10,000 from an anonymous donor for the work of the Institute of Cancer

Research; \$10,000 from the W. K. Kellogg Foundation for the study of rheumatic fever. Gifts to income totaled \$418,638.

The capital endowment of the university in 1933, excluding value of plant (including Barnard College, Teachers College, college of pharmacy, St. Stephen's College, and the New York Post-Graduate Medical School), was \$87,247,821. The estimated total resources as of June 30, 1933, were \$153,624,117. The annual budget for 1933-34 was \$14,802,570. The library contained 1,405,518 volumes. President, Nicholas Murray Butler, Ph.D., Hon.D., LL.D., Litt.D.

COMETS. See **ASTRONOMY.**

COMMODITY PRICES. See **BUSINESS REVIEW.**

COMMONWEALTH FUND. See **UNIVERSITIES AND COLLEGES.**

COMMUNISM. The fiftieth anniversary of the death of Karl Marx on Mar. 14, 1933, found communism in process of extinction in its most promising stronghold outside of the Soviet Union. Utilizing the Reichstag fire of February 28 to work up a great Communist "scare," Hitler's National Socialists won control of the German Reichstag in the March 5 elections and proceeded with ruthless efficiency to stamp out the powerful German Communist party, with its voting strength of more than 5,000,000. One of Hitler's first acts after the March 5 election was to outlaw the Communists and oust their 81 deputies from the Reichstag. The party organization was completely shattered, its headquarters and property confiscated, and its members imprisoned or driven out of the country.

This crushing defeat of communism by fascism in Germany symbolized a world-wide trend in the struggle between two bitterly antagonistic doctrines. In every country where democratic government was absent or breaking down, except in the Soviet Union itself, fascism appeared to be winning the struggle with communism for control of the state. Outside of Germany, communism had shown its most rapid growth in isolated sections of the interior provinces of China. In southeastern Kiangsi and western Fukien it had maintained a Soviet administration for several years, had spread over large adjacent areas, and withstood repeated attacks by large Nanking armies. Early in 1933 Communist armies seized control of the northeastern part of Szechwan Province and won sweeping successes in Hunan, Hupeh, and Anhwei. Toward the end of the year they formed an alliance against Nanking with the insurrectionary government established in Fukien province. Severe fighting followed, but the Communist and Fukien forces were meeting successive defeats at the hands of Gen. Chiang Kai-shek's Nationalist armies when the year closed.

Communist efforts to swing the Socialist-Republican government of Spain further to the Left and eventually to capture control likewise received a severe setback in 1933. A strong reaction against radicalism was manifested in various Spanish elections. Repeated Communist and Anarchist uprisings were crushed by the government. In January Communists attempted to establish a Soviet government in the province of Valencia and staged violent general strikes in Barcelona, Valencia, Cuenca, and Cadiz. Fifty workers and soldiers were killed in the fighting.

The growth of communism during 1933 was marked in several Balkan countries, due to the agricultural depression and great suffering among

the peasantry. The Bulgarian government, alarmed by the aggressive tactics of the Communists, ousted the 30 Communist deputies from parliament and excluded the Independent Labor (Communist) party members from public offices and public employment. A growing number of strikes and riots in Greece were attributed to Communists, but the electoral returns showed a further swing toward reaction, represented by the Royalist party. Communist activities in Rumania became widespread due to discontent with economic conditions. Martial law was proclaimed in February, 1933, after large-scale strikes and riots, and remained in force for about six months. Disturbed conditions in Cuba during the year offered a field for Communist agitation. The Grau San Martin government was forced to take strong measures in self-defence. Troops broke up a great Communist demonstration in Havana September 29, killing nine demonstrators. Thereafter vigorous efforts were made to repress the movement, but with only partial success.

Meanwhile the Communist party in the Soviet Union was strengthening its control. It had won increased prestige through the successful completion of the first Five-Year plan and the collectivization of agriculture. For the first time, Stalin in 1933 faced little or no opposition to his policies within the ranks of the party. In accordance with his policies, the Soviet government accepted the temporary failure of the anticipated "world revolution," and concentrated its efforts upon building and strengthening the Communist state in Russia. The Communist (Third) International at Moscow was restrained from carrying on propaganda or agitation abroad where such activities promised to have adverse repercussions upon the Soviet Union's peaceful relations and trade with other countries. An example of this policy was the agreement reached between President Roosevelt and Maxim Litvinov, previous to American recognition of the Soviet Union. The Soviet government promised unconditionally not to permit the Third International to carry on Communist propaganda or agitation within the United States.

See **GERMANY, CHINA, UNION OF SOVIET SOCIALIST REPUBLICS, BULGARIA, SPAIN, CUBA, SIAM, and FINLAND** under *History*; **FASCISM.**

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COMMUNITY CHESTS. See **WELFARE WORK.**

COMORO ISLANDS. See **MAYOTTE AND COMORO ISLANDS.**

CONCORDATS. See **ROMAN CATHOLIC CHURCH.**

CONGO, BELGIAN. A colony of Belgium in Central Africa, formerly the Congo Independent State, which was annexed in 1908. Area, estimated at 918,000 square miles; native population (Bantu origin), 9,584,936 in 1930. The white population on Jan. 1, 1932 was 22,482, including 15,034 Belgians, 1493 Portuguese, 1473 Italians, 935 British, 658 Greeks, 575 Americans, and 554 French. Leopoldville, the capital, had a population of 43,000 (3000 white) in 1930; Elizabethville, 32,600 (4000 white). Other important towns are Boma, Stanleyville, and Coquilhatville. Chil-

dren receiving elementary education numbered 287,779 on Jan. 1, 1932.

The chief agricultural products are palm nuts, palm oil, white copal (resin), rubber, coffee, cotton, and cacao. Ivory is plentiful. Cattle do well only in the districts free from the tsetse fly, such as the highlands of Katanga, Ituri, and Kiva. The Katanga district is one of the world's important sources of copper, the production for 1931 being 120,000 metric tons. Gold, radium, cobalt, coal, and tin also are mined and iron, platinum, palladium, vanadium, zinc, and beuxite are known to exist. For 1932, imports were valued at 464,631,939 francs (961,891,851 francs in 1931); exports, 667,922,436 francs (1,104,045,231 francs in 1931). The Belgian franc equaled \$0.02784 at par. Government ordinary revenue and expenditure for 1933 was estimated at 357,736,580 francs and 725,757,940 francs respectively. The public debt on Jan. 1, 1933 was 4,959,253,033 francs.

In 1932 highways extended 26,117 miles; telephone lines, 4000 miles; telegraph lines, 4209 miles; railways, on July 1, 1932, 2566 miles. Steamships provide means of transport along the navigable stretches of the Congo River and its branches. During 1931, 493 steamships aggregating 1,903,573 tons entered and 488 aggregating 1,878,224 tons cleared the ports of Boma, Banana, and Matadi. The chief administrative centres are connected by air lines.

A governor-general and several vice governor-generals administered the colony on behalf of the Belgian King and the budget is voted by the Belgian parliament. The colony is divided into four provinces which are in turn divided into 16 administrative districts. There is a military force of 13,212 natives officered by 289 Europeans, and a territorial police force of 5550 men. Governor-General in 1933, Lieut.-Gen. A. Tilkens.

RUANDA-URUNDI. Two districts formerly in German East Africa which were turned over to Belgium as mandatory of the League of Nations and in 1925 were united administratively with the Belgian Congo. The chief exports are livestock and hides. Total area about 20,550 square miles; estimated population 3,500,000. The capital is Usumbura.

CONGO, FRENCH. See FRENCH EQUATORIAL AFRICA.

CONGO INDEPENDENT STATE. See CONGO, BELGIAN.

CONGREGATIONAL AND CHRISTIAN CHURCHES. THE GENERAL COUNCIL OF THE. The General Council of the Congregational and Christian Churches was instituted at Seattle, Wash., June 26, 1931, when the National Council of the Congregational Churches in the United States and the General Convention of the Christian Church merged their activities in this new organization. The formal existence of the former organizations, however, was continued for the time being against possible legal necessities. The general council was to carry on the administrative affairs of the united churches but with no ecclesiastical authority, as the plan of union provides for local autonomy in the individual church and in groups of churches associated together. Its next meeting was to be held in Oberlin, Ohio, June 21-27, 1934. For the early history of these churches consult THE NEW INTERNATIONAL ENCYCLOPEDIA, VOL. V, pp. 285 and 737 ff. and THE NEW INTERNATIONAL YEAR BOOK FOR 1932.

Statistics for the Congregational and Christian

churches as of Jan. 1, 1933, showed 6379 churches, 6435 ministers, and a church membership of 1,040,119. There were 3452 young people's societies, with a membership of 181,943. The Sunday school enrollment was 774,475. The total raised for all benevolences was \$2,792,315, and the home expenses of the churches were \$16,623,466.

The American Board of Commissioners for Foreign Missions is the oldest foreign missionary society in the United States, having been organized June 29, 1810. On Jan. 1, 1933, there were 16 missions under 11 different flags; the stations connected with these missions numbered 97 and the outstations 2190. The missionaries holding life appointments numbered 602 and included 137 ordained men, 68 unordained men, 205 wives, and 192 single women. There were also 63 associates serving for shorter periods, bringing the total number of missionaries up to 665, while native workers numbered 5398. Religious services were conducted in 2690 places. The organized churches numbered 745, with 103,310 communicants. The total church constituency numbered 314,802; Sunday schools, 1540; theological seminaries and training schools, 30, with an attendance of 2013 students; colleges, 10, with 3232 students; secondary schools, 67, and primary and elementary schools, 1168, with a total enrollment of 74,620. There were 31 hospitals and 52 dispensaries, with a staff of 43 physicians and 29 foreign nurses. Total expenditures of the board for the year ending Aug. 31, 1933, were \$1,762,507.

Another tested agency is the American Missionary Association, which began its major work following the Civil War in the field of education among Negroes, opening such schools as Hampton Institute, Atlanta, and Fisk Universities, and Talladega, Straight, Tougaloo, and Tillotson Colleges, some of which have since become independent. In similar ways, through school and church, it has served the mountaineers of the South, the Indians of the West and Southwest, and the Puerto Ricans. In 1932 the association reported direct connections with 23 schools and colleges, enrolling 4600 students, and 161 churches with 10,379 members. Expenditures for the same year were \$1,095,216. The association holds properties and trust funds amounting to \$14,000,000.

A wide range of home missionary activities is carried on by the Congregational Church Extension Boards, including the Congregational Home Missionary Society, the Congregational Church Building Society, and the Congregational Sunday School Extension Society. They organize churches, establish church schools, aid needy congregations in the support of their ministers, give specialized service to foreign-speaking groups and to Negroes in the North, and assist in church and parsonage building. The more strictly home missionary service covers two-thirds of the territory of the United States, containing one-third of its population. In the remainder of the country similar work is done by independent State conferences. In 1932 these societies helped to maintain 637 churches and preaching stations, having a total membership of 32,564, and received 2630 persons into church membership. There were enrolled 457 workers, including students employed for short-term summer service. Expenditures for church and parsonage aid amounted to \$440,721; total expenditures, in-

cluding payments from revolving funds, amounting to \$795,993.

Comprising the Congregational pension boards are three societies: the Congregational Board of Ministerial Relief; the Annuity Fund for Congregational Ministers; and the Retirement Fund for Lay Workers. The Congregational Board of Ministerial Relief, which makes free grants to needy aged and disabled Congregational ministers, disburses annually approximately \$250,000. The Annuity Fund for Congregational Ministers, endowed by the Pilgrim Memorial Fund of \$5,000,000, disburses to its 2665 members approximately \$300,000 in annuities. The Retirement Fund for Lay Workers is a plan under which lay workers in Congregational organizations may provide retirement annuities for themselves with the aid of their employing agencies.

Among the theological seminaries with which the Congregational and Christian denominations are affiliated are the Chicago Theological Seminary, Divinity School of Yale University, Hartford Seminary, Oberlin Graduate School of Theology, Atlanta Theological Seminary Foundation (Nashville, Tenn.), Union Theological College (Chicago), and the Pacific School of Religion. In addition there are 41 colleges which have had some historical relation to Congregationalism, although a number of them are now undenominational. The Christian denomination has affiliation with Elon and Defiance Colleges.

The accompanying table, reprinted from the *Year Book* of the Congregational and Christian Churches, 1932, gives statistics of international Congregationalism:

INTERNATIONAL CONGREGATIONALISM

Countries	Churches, Chapels, and Stations	Members of Churches	Members of Sunday Schools
Africa *	1,423	37,099	24,166
Argentina ^b	27	2,200	.....
Australia and New Zealand	534	21,031	35,071
Brazil	185	4,097	4,230
British Guiana	47	3,450	2,682
Bulgaria *	36	1,104	1,658
Canada *	7,327	678,445	651,889
China *	863	28,695	10,016
Czechoslovakia *	160	3,908	1,875
England and Wales *	4,496	441,476	539,398
India and Ceylon *	1,518	45,758	53,189
Ireland	45	2,292	4,261
Jamaica	54	2,926	2,857
Japan *	280	30,497	26,723
Madagascar *	953	42,860	39,698
Mexico *	29	688	911
Micronesia *	77	3,434	5,514
Newfoundland ^b	3	400	341
Papua *	48	4,115	7,991
Philippines *	60	4,934	3,407
Scotland	162	39,249	20,536
South Seas *	292	20,981	18,086
Spain *	10	809	300
Turkey, Greece, and Syria *	66	4,159	7,360
United States	5,320	935,687	695,018
Total	24,015	2,361,894	2,157,128

* Includes reports of London Missionary Society and American Board.

^b Repeated from last *Year Book*.

^c United Church. Comprises the former Presbyterian, Methodist and Congregational churches.

^d Includes United Church of Canada as noted above.

The headquarters of the General Council of the Congregational and Christian Churches are at 287 Fourth Avenue, New York City, with a regional office in the Christian Publishing Association Building in Dayton, Ohio. The Congregational Publishing Society maintains branches at

14 Beacon Street, Boston, and at 418 South Market Street, Chicago. The officers of the general council during 1933 were: moderators, the Rev. Carl S. Patton, Los Angeles, Calif., and the Rev. Frank G. Coffin, Columbus, Ohio; secretary, the Rev. Charles E. Burton, New York City; associate secretary, the Rev. Frederick L. Fagley, New York City; assistant secretary, the Rev. Warren H. Denison, Dayton, Ohio; treasurer, William T. Boulton, New York City.

CONNECTICUT. POPULATION. The population of the State on Apr. 1, 1930, was 1,606,903 (Fifteenth Census); in 1920 it was 1,380,631; in 1933 (Federal estimate), 1,646,000. Hartford, the capital, had (1930) 164,072 inhabitants.

AGRICULTURE. The following table shows the acreage, production, and value of the principal crops for 1933 and 1932:

Crop	Year	Acreage	Prod. Bu.	Value
Hay (tame)	1933	252,000	328,000	\$5,117,000
	1932	249,000	309,000	5,129,000
Tobacco	1933	11,600	15,688,000	4,037,000
	1932	15,400	22,099,000	4,143,000
Corn	1933	53,000	2,067,000	1,488,000
	1932	54,000	2,268,000	1,225,000
Potatoes	1933	13,000	2,080,000	2,080,000
	1932	12,000	1,980,000	990,000
Apples	1933	.....	1,184,000	1,006,000
	1932	.....	1,420,000	994,000

* Tons. ^b Pounds.

FINANCE. State expenditures in the year ended June 30, 1932, as reported by the U. S. Department of Commerce, were: for maintaining and operating governmental departments \$22,703,454 (of which \$1,657,261 was for local education); for interest on debt, \$604,840; for permanent improvements, \$18,080,037; total, \$41,400,545 (of which \$13,331,945 was for highways, \$2,938,917 being for maintenance and \$10,393,028 for construction). Revenues were \$37,470,591. Of these, property and special taxes furnished 20.6 per cent; departmental earnings and compensation to the State for officers' services, 6.7; sale of licenses, 53.0 (in which was included a gasoline sale tax that produced \$4,795,448). Funded debt outstanding on June 30, 1932, totaled \$13,351,100, which was less than the sinking-fund assets. On an assessed valuation of \$3,161,283,930 the State levied in the year ad-valorem taxes of \$1,775,355.

EDUCATION. Classes for adults who could not speak English were required in all towns in which such adults were numerous enough to justify establishing these classes. Evening classes of a general character were required to be held in cities and the most populous towns.

For the academic year 1932-33 the number of persons of school age in the State was reckoned as 367,581. There were enrolled in the public schools 325,859 pupils. Of these, 236,475 were in common schools or elementary grades; those in junior high schools numbered 17,476; in other high schools, 71,908. The year's expenditures for public-school education totaled \$30,564,989. Teachers' salaries, for the year, averaged \$1507 in the elementary schools, \$1828 in the junior high schools, and \$2046 in the other high schools.

CHARITIES AND CORRECTIONS. Under the system in force in 1933 the institutions maintained by the State for the care and custody of persons were managed by appointed boards and were supervised by the Department of Public Welfare. This department was composed of a board of five members, appointed for terms of four years, and

of two executive heads. Of the latter, one was secretary of the department (William W. T. Squire), and the other had charge of a bureau of child welfare. There were nine major State institutions concerned with welfare. The State contained also 10 private hospitals for mental cases, 10 county jails, 53 almshouses, 33 State-aided hospitals, and 42 homes for the aged. State institutions, with their populations of June 30, 1933, were: Connecticut State Prison, Wethersfield, and prison farm, 670 and 123 respectively; State Farm for Women (prisoners), Niantic, 308; Connecticut School for boys, Meriden 336; Connecticut School for Girls, Middletown, 248; Connecticut Reformatory, Cheshire, 384; Connecticut State Hospital, Middletown, 3117; Norwich State Hospital, Norwich, 2832; Fairfield State Hospital, Newtown, 99; Mansfield State Training School and Hospital (epileptics and feeble-minded), 1119; Mystic Oral School (for the deaf), Mystic, 120.

LEGISLATION. The legislature met in regular session on January 4. It created a convention to act for the people of the State with regard to the proposed repeal of the Eighteenth Amendment. The members of this convention were to number 50, of whom 35 were to be chosen by Senatorial districts and 15 at large, all at a special election to be called by the Governor. After a contest between the supporters of Governor Cross, who wanted a system of State control over alcoholic drinks, and municipal interests wishing local control, the sale of beer having not over 3.2 per cent of alcohol was made lawful, subject to control by a State commission of three men. During the banking panic of early March emergency powers were given the Governor to declare banking holidays when he found these needful to preserve the banks from runs; to permit banks to require three months' notice for withdrawals of saving accounts; and to give the banking commissioner power to limit ordinary withdrawals of deposits.

The use of mechanical directing signs was required on all motor vehicles so constructed as not to permit the driver to signal with the hand to a following vehicle.

POLITICAL AND OTHER EVENTS. In the country-wide closing of banks, those of Connecticut remained open until March 4, when they were closed by proclamation of a legal holiday. There were elected by popular vote, on June 20, 50 delegates to a State convention on repeal of the Federal Eighteenth Amendment; all 50 were favorable to repeal. The convention met on July 11 and adopted repeal, as proposed by Congress in the superseding amendment. Members of the public-utilities commission refused in August to give the Hartford Electric Light Company assurance of higher rates in case it should comply with the requirements of the National Recovery Administration as to hours and pay of employees.

By ruling of the Deputy Attorney General on October 25 it was declared unlawful for a mutual savings bank of the State to assume the obligation to participate in the system of Federal insurance of bank deposits, required of banks entering the Federal Reserve system. In the elections of November 7 Jasper McLevy, Socialist, was elected mayor of Bridgeport, by a vote of 22,546 to 16,584, with other members of a Socialist municipal ticket.

OFFICERS. The chief officers of the State, serving in 1933, were: Governor, Wilbur L. Cross;

Lieutenant-Governor, Roy C. Wilcox; Secretary of State, John A. Danaher; Treasurer, J. William Hope; Comptroller, Anson F. Keeler; Attorney General, Warren B. Burrows.

Judiciary. Supreme Court of Errors: Chief Justice, W. M. Maltbie; Associate Judges, F. D. Haines, G. E. Hinman, John W. Banks, Christopher L. Avery.

CONNECTICUT COLLEGE. A liberal college of arts and sciences for the higher education of women in New London, Conn., chartered in 1911 by the State of Connecticut. The enrollment for the autumn of 1933 was 613. The faculty numbered 65 members. The productive funds amounted to \$1,486,817, and the budget for the year, not including building operations, was more than \$680,905. There were 55,128 volumes in the library. In 1932 the college received approximately \$30,000 in miscellaneous gifts. A new dormitory, Windham House, housing 71 students, was opened in September, 1933. An outdoor theatre, the gift of Frances Buck, 1932, and her mother of Evanston, Ill., was opened in 1933. President, Katharine Blunt, Ph.D.

CONNETT, ALBERT NEUMANN. An American civil engineer, died in New York City, Jan. 1, 1933. He was born at Bethal, Conn., July 12, 1859, and was graduated from the Rensselaer Polytechnic Institute in 1880. Early achieving a reputation as a transportation engineer with the Washington and Georgetown Railway, the Baltimore Traction Co., and the Baltimore City Passenger Railway Co., he became in 1894 chief engineer of the Metropolitan Street Railway Co. of Washington, installing in that city the first successful underground electric conduit for street railways in the United States. In 1896 he was employed by the Thomson-Houston Co., the French affiliate of the General Electric Co., to install the same system in Paris, adapting it to local conditions by utilizing the side slot type of conduit. In 1900 he became chief engineer and managing director of the London branch of J. G. White and Co., designing and installing for that company not only such tractions projects as the 24-mile centre slot conduit system in London but water-power and electric light and power plants in most parts of the British Empire.

Mr. Connett remained in London until his retirement from active practice in 1921. During the early months of the World War he organized, as a member of the Belgian Relief Commission, the distribution in the devastated parts of Belgium and France of food supplies received from the United States. The Belgian government made him an officer of the Order of Leopold in recognition of this service.

CONSERVATOR. See **BANKS AND BANKING.**

CONSTRUCTION. See **BUILDING; AERONAUTICS; AUTOMOBILES; RAILWAYS.**

CONSUMERS' SOCIETIES. See **COÖPERATION.**

CONTRACT BRIDGE. The game of Contract Bridge increased in popularity in 1933, thousands becoming converted by the incessant conversation of those who had previously taken up the game. In increasing popularity the year was on a par with 1932, but several changes were noticed. For one thing, there was much less talk about systems and the ensuing arguments and attendant publicity for the protagonists of this or that system. The year was an extremely lean one for the publishers and writers who had discovered bridge as a money maker in 1931 and 1932,

but daily columns of instruction were still carried in almost every newspaper in the United States.

The year marked the rise of several hitherto "unknowns" to the rank of experts, and the eclipse of some of those who had been regarded unbeatable in other years. The falling of crowned heads started with the first major event of the year, when Frederick C. Bailey and Mrs. Grace E. Perpall, of the Cavendish Club, regarded as excellent players but hardly of championship calibre, won the Julian Goldman Trophy for pairs. Ely Culbertson, easily the most highly publicized expert, played in only one United States tournament but staged several matches abroad and added to his fame. In a match of plafond, the French equivalent of contract, played at Paris, the game broke up in disagreement before the final boards were played.

In the International contest for the Charles M. Schwab Trophy, the American team of Mr. and Mrs. Culbertson, Michael T. Gottlieb, and Theodore Lightner won from the British four by 10,900 points in a match played in a London department store. More than 27,000 spectators watched the play through the week. The English customs authorities refused to admit the Schwab Cup into England without payment of 30 per cent duty, and the trophy remained in the United States.

David Burnstine excelled in the American Bridge League summer tournament at Asbury Park, N. J., winning the Shepard Barclay Trophy for mixed team of four with Edwin Wetzlar, Mrs. Marguerite Stengel, and Mrs. Elinor Murdoch as his partners, and taking the masters match for the Waldemar Von Zedtwitz trophy with Howard Schenken. He was also on the team-of-four championship team with Schenken, Oswald Jacoby, and Richard L. Frey. A month later Burnstine captured the individual masters championship in New York, topping Miss Murdoch by five and a half match points.

The Harold S. Vanderbilt team of four competition went to Frank Rendon, Benjamin Feuer, Phil Abramsohn, and Sidney Rusinow. Charles Q. Hall and R. M. Wildberg of Cincinnati won the open pair championship in the American Bridge League winter session at Cincinnati and another Cincinnati team of Hall, Wildberg, Albert Steiner, and Phil Steiner defeated quartets led by Jacoby and P. Hal Sims for the team of four championship.

CONTRACTS. See *LAW*, under *Private Law*.

CONWAY, ROBERT SEYMOUR. A British classical philologist, died in London, Sept. 28, 1933. Born at Stoke Newington in 1864, he attended Caius College, Cambridge, where he was fellow during 1888-93. He then became professor of Latin at University College, Cardiff, Wales, and in 1903 accepted the Hulme chair of Latin at Victoria University, Manchester, where he remained until his retirement in 1929. During his later years he held several lectureships, delivering a series on the Vergilian age at Harvard University in 1927 and serving as Wilding lecturer at Christchurch College, New Zealand (1928), Charles Eliot Norton lecturer to the American Institute of Archaeology (1930), classical lecturer to the University of California (1932), and Hibbert lecturer (1932). He served also as governor of the British Institute of Florence, and in 1918 was elected fellow of the British Academy and in 1927 president of the Classical Association.

Dr. Conway approached philology as a means to the comprehension of the entire culture of the

Hellenic and Italic peoples, setting forth the results of his research in such works as *New Studies of a Great Inheritance* (1921); *Poetry and Government* (1928); *Great Writers of Rome* (1930); *Makers of Europe* (1931); and *Etruscan Influence on Roman Religion* (1932). Noteworthy among his books dealing with the structure of the classical languages were *Verner's Law in Italy* (1887); *The Restored Pronunciation of Greek and Latin* (1896); *The Italian Dialects* (1897); *Dialectorum Italicorum Exempla* (1898); *The Messianic Eclogue of Vergil* (1907); *The Making of Latin* (1923); and *The Pre-Italic Dialects* (1933). He collaborated also in the translation of Brugmann's *Grundriss der vergleichenden Grammatik der indogermanischen Sprachen* (1888-95) and with Prof. C. F. Walters wrote *Limen, a First Latin Book* (1908) and *Deigma, a First Greek Book* (1916).

COOLIDGE, CALVIN. An American statesman and the thirtieth president of the United States, died at Northampton, Mass., Jan. 5, 1933. Born at Plymouth, Vt., July 4, 1872, he attended the Black River and St. Johnsbury Academies and was graduated in 1895 from Amherst College. He studied law with the firm of Hammond and Field in Northampton, and on his admission to the Massachusetts Bar in 1897 practiced during the next 20 years in that city. His office-holding career began in 1899 when he was elected a councilman of Northampton. He was thereafter city solicitor (1900), clerk of the courts (1904), member of the House of Representatives of the General Court of Massachusetts (1907-08), and mayor of Northampton (1910-11). Elected to the State Senate in 1912, he served until 1915, being president of that body during his last two terms. In 1916, 1917, and 1918 he was elected Lieutenant-Governor of Massachusetts, and in 1919 and 1920 Governor.

As Governor, Coolidge proved to be an expert administrator, influencing in particular the passage of various laws by which there was effected a reorganization of the executive and administrative functions of the State government. He became nationally known through his intervention in the Boston police strike of September, 1919, considered the first open move in a nation-wide programme to organize, under the American Federation of Labor, the police of all cities. As a result of his decisive action in calling out the State militia, and thereby preventing serious rioting and ending the strike, he was hailed throughout the nation as a strong champion of law and order. His declaration that "there was no right to strike against the public safety by anybody, anywhere, any time" won for him the nomination for the Vice-Presidency at the Republican National Convention in Chicago in 1920. After his inauguration President Harding established a new precedent by inviting the Vice-President to become an *ex-officio* member of the Cabinet. This not only enabled Coolidge to act as liaison officer between the President and the Senate but gave him a familiarity with the duties of the President and his Cabinet that no other Vice-President possessed.

On the death of Warren G. Harding on Aug. 2, 1923, Calvin Coolidge became the thirtieth President of the United States, the oath of office being administered to him at Plymouth, where he was spending his vacation, by his father, Col. John C. Coolidge, a justice of the peace, at 2.47 o'clock in the morning of August 3. He announced

that he would follow in general the policies of his predecessor. During the winter of 1923-24 the Senate was engaged with its startling investigations into the circumstances under which naval oil reserve lands had been leased to private interests, the conduct of the Veterans' Bureau, and the administration of the Department of Justice and the Office of the Alien Property Custodian. Despite the forced resignation of Albert B. Fall, Secretary of the Interior, and the friendly resignations of Edwin Denby, Secretary of the Navy, and Harry M. Daugherty, Attorney-General, the Coolidge administration was not entirely saved from embarrassment. Congress proved more and more independent of the President's leadership, passing over his veto the Soldier Bonus Bill, which granted insurance policies and cash payments, amounting ultimately to \$2,250,000,000, to more than 3,000,000 veterans of the World War, and refusing to accede to his request in regard to postponing the operation of the Japanese exclusion provision of the Immigration Bill, regardless of the "gentlemen's agreement" between the Japanese and American governments under which the former had prevented for many years the emigration of laborers to the United States.

At the Republican National Convention in Cleveland in 1924 Coolidge was nominated as candidate for the Presidency to succeed himself and was elected on November 4, obtaining 382 electoral votes from 35 States. His second administration marked the great era of American prosperity. He was especially in sympathy with the policies of Herbert Hoover, then Secretary of Commerce, for developing greater efficiency in production, and for stimulating foreign trade through the coöperation of business and government, and with those of Andrew W. Mellon, Secretary of the Treasury, for the reduction of taxes on higher incomes so as to release additional capital for investment in industry. Through a reduction in Federal expenditures from \$3,697,478,000 in 1923 to \$3,493,584,000 in 1927 the national tax burden was alleviated four times during his administration, its most important form being that of a reduced income tax. The public debt was also reduced from \$22,500,000,000 to \$17,600,000,000 by applying surplus revenues to debt retirement and by using sinking fund accumulations. As a revenue-producing measure Coolidge upheld the traditional Republican policies regarding the tariff and opposed any projected plans for its revision. In 1927 he vetoed the McNary-Haugen Farm Relief Bill, because he regarded its price-fixing stipulations, the so-called equalization fee for paying the expenses of farm crop marketing, as economically unsound.

Coolidge's foreign policy was marked by opposition to the cancellation of war debts owed to the United States government, and during his administration debt-funding agreements were reached with Italy, Belgium, Yugoslavia, and other European borrowers. Also, he exerted a profound influence upon Latin-American affairs. From 1925 to 1928 he was engaged with the attempted settlement of the long-standing boundary dispute between Peru and Chile over the possession of Tacna-Arica, the arbitration of which had been inherited from the Harding administration. In March, 1925, he decided that the sovereignty of the territory should be determined by a plebiscite and appointed Gen. John J. Pershing as

head of a commission to conduct the vote and fix the boundary. Three years later he brought about the resumption of diplomatic relations between the two governments after 17 years of non-recognition. In 1927 his appointment of Dwight W. Morrow as Ambassador to Mexico resulted in greatly improved relations between that country and the United States.

In his message to Congress in December, 1925, President Coolidge made a strong plea for American adhesion to the protocol creating the Permanent Court of International Justice. The Senate sanctioned this adhesion on Jan. 27, 1926, on condition that the United States should not be bound by advisory opinions rendered without its consent, but in November of that year a deadlock was reached when the President refused to submit to it a counter-reservation proposed by the conference of participating members of the Court. Coolidge lent his support to the Kellogg-Briand Peace Pact, which originated with Aristide Briand, the French Minister of Foreign Affairs, as a treaty renouncing war as an instrument of national policy between France and the United States and was extended by Frank B. Kellogg, the American Secretary of State, as a multilateral treaty of similar intent, accepted by most of the nations of the world. After this support he was criticized because in an Armistice Day speech on Nov. 11, 1928, he advocated the adoption by Congress of a cruiser-construction programme. In fact, the tenor of most of his speeches after the failure of the Geneva Disarmament Conference was nationalistic.

Coolidge might have received the Republican party's nomination for the Presidency in 1928, but on Aug. 2, 1927, while on a vacation in the Black Hills, he announced that he did not "choose to run for President in 1928," thus observing the third-term tradition. At the conclusion of his term in 1929 he returned to Northampton, where he devoted himself to writing magazine and newspaper syndicate articles on his life and various aspects of the Presidency. Also, he served as a director of the New York Life Insurance Co. and was chairman of the National Transportation Committee, engaged in making a survey of the railroads of the United States with a view to their rehabilitation and the protection of their stockholders. In addition to the *Autobiography of Calvin Coolidge* (1929) he published two collections of speeches, *Have Faith in Massachusetts* (1919), and *The Price of Freedom* (1924). These reflected the Yankee qualities that endeared him to the American people—conservatism, frugality, and common sense.

COÖPERATION. COÖPERATION DURING THE DEPRESSION. As these columns have previously pointed out, the coöperative movement has shown amazing vitality throughout the world despite large-scale unemployment, decline in purchasing power, and the inability of so many agricultural coöperatives to sell their wares at fair prices. The attached table taken from the *Review of International Cooperation*, published in London, gives the per cent of rise or fall in the sales of coöperative wholesale societies as compared with the index numbers of wholesale prices in 1930 and 1931.

It will be noted that a number of societies have recorded increases in turnover despite the falling price level; that in others turnovers were falling less rapidly than wholesale prices; while in a few, turnovers were falling more rapidly than

Country and organization	Per cent change in—			
	Sales of coöperative wholesale societies		Wholesale prices	
	1930	1931	1930	1931
Austria: G&C	- 3.6	- 2.4	-10.0	- 6.8
Belgium: F. S. O. . .	- 4.0	-14.3	-12.1	-17.4
Bulgaria: "Napred" .	+14.8	- 2.9	-19.1	-15.8
Czechoslovakia:				
V. D. P.	-18.9	- 2.5	-13.3	- 8.4
G. E. O.	+ 7.1	- 1.6	-13.3	- 8.4
Denmark: F. D. B. . .	+ 1.3	- 8.4	-13.3	-12.3
Estonia: E. T. K. . .	+15.7	-14.0	-12.8	- 8.8
Finland:				
O. T. K.	-14.4	-14.0	- 8.1	- 6.6
S. O. K.	- 4.3	-15.8	- 8.1	- 6.6
France: M. d. G. . . .	+ 6.2	+ 5.5	-12.9	-11.0
Germany: G. E. G. . .	- 1.2	-13.5	- 8.8	-11.2
Great Britain:				
C. W. S.	- 4.5	- 4.4	-12.2	-13.3
S. C. W. S.	- 3.8	- 6.2	-12.2	-13.3
Holland:				
"Handelskamer" . .	- .5	- 3.5	-17.6	- 8.5
Hungary: "Hangya" . .	- 7.0	- 8.5	-20.7	- 1.0
Norway: N. K. L. . . .	+ 4.4	- 1.6	- 5.3	-10.9
Poland: Z. S. S. . . .	+ 2.0	-10.5	-13.3	-14.1
Sweden: K. F.	+ 1.7	+ 3.6	-12.9	- 9.0
Switzerland: V. S. K. .	+ 3.7	+ 2.0	- 9.9	-13.4
United States:				
Farmers' Union				
State Exchange,				
Omaha, Nebr. . .	+ 5.0	-28.8	- 9.5	-15.3
Central Coöperative				
Wholesale,				
Superior, Wis. . .	+ .7	-12.9	- 9.5	-15.3

the price level. In fact in about two-thirds of the societies, progress continued to be made in spite of the depression. The Belgium F. S. C. during the first six months of 1932 did a business of 87,569,255 francs which was a decrease of 6,380,804 francs over the first half of 1931; the Finland O. T. K. did a business of 263,000,372 marks which was an increase of 5,143,397 over the first half of 1931; the German G. E. G. did a business of 384,141,930 marks which was a decrease of 7,024,658 over the first half of 1931; the France M. d. G. did a business of 394,291,372 francs which was an increase of 9,284,281 over the first half of 1931; the Germany G. E. G. did a business of 165,000,000 marks which was a decrease of 41,000,000 over the first half of 1931; the Great Britain C. W. S. did a business of £39,953,630 which was a decrease of 182 over the first half of 1931; the Great Britain S. C. W. S. did a business of £8,161,811 which was a decrease of £85,127 over the first half of 1931; the Holland "Handelskamer" did a business of 8,393,055 florins which was an increase of 40,590 over the first half of 1931; the Norway N. K. L. did a business of 14,415,883 kroner which was an increase of 600,690 over the first half of 1931; the Sweden K. F. did a business of 72,500,000 kronor which was an increase of 3,300,000 over the first half of 1931; and the United States Farmers' Union State Exchange (Omaha, Nebraska) did a business of \$680,115 which was a decrease of \$283,610 over the first half of 1931.

UNITED STATES. A study made by the Bureau of Labor Statistics of some 90 societies in the United States indicated the following: in 50 retail distributive societies, sales during 1932 totaled \$6,000,000 and in 36 of these there was a net surplus for the year's trading operations of \$80,000 as against an aggregate loss of \$43,000 for 11 others. The 35 cooperative oil associations included realized a net gain of \$168,255 and not one showed a loss. Sales in excess of \$4,000,000 were made by the three wholesale societies reporting to the Bureau, all showing gains in the year's business. The Bureau of Labor Statistics

declared that it had been advised by the Coöperative League that while many of the consumers' coöperative societies in the United States were hard pressed, there had been "almost no failures among consumers' coöperative societies due to the depression."

The Bureau of Labor Statistics in the October issue of the *Monthly Labor Review* presented the results of an inquiry regarding the 1932 operations of 1472 out of the 1612 coöperative credit societies working in 42 States. These had a combined membership of 301,119, share capital totaling \$21,708,328, and a guaranty fund to cover bad debts amounting to \$2,110,815. The combined assets of the societies in the 23 States for which information was secured came to \$31,416,072. The 1345 societies for which returns were made as to the number of borrowers had served 161,941 persons, while those reporting loans granted during the year had disbursed \$16,375,952. This was an average of \$16,475 per society and an average loan of \$156. Nearly \$25,000,000 in loans was outstanding at the end of the year. Massachusetts led the States in the amount of share capital and total resources. In this State there were 285 credit unions with a membership of 102,423 persons, a share capital of \$7,161,347, a guaranty fund of \$856,840, and total resources of \$12,521,153. New York, which came second, had a total of 113 credit unions with a membership of 50,719, total share capital of \$5,655,309, a guaranty fund of \$789,005, and total resources of \$7,563,528. Illinois, which came third, had a total of 108 credit unions, a membership of 22,802, share capital of \$1,215,822, a guaranty fund of \$73,936, and total resources of \$1,363,975. Missouri, which had not a single credit society in 1929, had by the end of 1932, 122 societies with a total membership of 13,467, and a share capital of \$837,154. The largest number of loans made was in Massachusetts where more than 50,000 persons were aided in this way during the year. More than \$500,000 was returned to members in dividends by the 990 societies of which reports were received. In addition members who were borrowers also benefited by the low rate of interest charged which was usually 1 per cent per month computed on the unpaid balance only. The following table shows the comparative development of credit unions in 1929 and 1932:

Item	1929	1932
Total number of societies . .	974	1,612
Number reported for	838	1,472
Membership:		
Total	264,908	301,119
Average per society	320	216
Share capital:		
Amount	\$24,065,407	\$21,708,328
Average per member	\$92	\$70
Guaranty fund	\$2,079,450	\$2,110,815
Loans during year:		
Total	\$24,548,353	\$16,375,952
Average per society	\$58,310	\$16,475
Average per loan	\$350	\$156
Loans outstanding at end of year	\$30,811,582	\$24,826,291

While the number of societies in operation nearly doubled over the period and the aggregate membership rose about 14 per cent, there was a decline of over \$8,000,000 in the amount of loans granted.

The number of postal credit unions among postal employees increased from 275 to 298 during 1932, the membership rose from 49,037 to

57,636, and the total assets from \$5,078,874 to \$6,167,546. The guaranty funds reported a total of \$251,066, and the undivided earnings totaled \$300,460. The total number of cumulative loans at the end of 1932 was 248,125 and the amount loaned in all was \$29,030,732, of which bad loans during the whole history of these organizations had been but \$4271.

FARMERS' COÖPERATIVES IN 1929. The census figures recently published show the history of co-operative agriculture in 1929 as compared with 1924 and 1919. In 1929, 13.1 per cent of all the farm operators in the United States reported dealings with co-operative organizations. Half of these sold their crops through marketing organizations, while the number who confined their co-operative dealings to the purchase of farm supplies formed only 2.1 per cent of the total. The figures in the following table represent only the patrons and not necessarily the membership of co-operative associations, such societies also doing business with and for non-members.

In 1929 the proportion of farmers making co-operative sales dropped below the 1924 level

dairy products societies which had a membership of 68,111. Altogether there were in Canada 1125 co-operative associations with a total membership of 524,965. Central organizations include the following: one consumers' society with 42 affiliated organizations belonging to it; one live marketing society with 324 affiliated organizations; and one wool marketing society with 17 affiliated organizations.

COÖPERATIVE PRODUCTIVE FEDERATION OF GREAT BRITAIN. Workers' productive societies have made considerable headway in Great Britain, Italy, and Russia. While the co-operative workshop owned and operated by the workers themselves is not nearly as important in Great Britain as the great consumers' co-operative societies, nevertheless this type of activity has been successful in furnishing employment to an increasing number of persons. Productive co-operation, too, has held its ground during the depression, the work of the Cooperative Productive Federation established in 1882 being as much responsible as any single agency. The federation acts as a clearing house for information for its member societies and also

Item	1919		1924		1929	
	Number or amount	Per cent of all farms	Number or amount	Per cent of all farms	Number or amount	Per cent of all farms
All farms in United States	6,448,343	100 0	6,371,640	100.0	6,288,648	100.0
Farms reporting cooperative—						
Sales only	295,078	4 6	624,631	9 8	413,623	6.6
Purchases only	113,144	1 8	103,169	1 6	132,642	2.1
Sales and purchases	216,305	3.4	259,576	4.1	278,272	4.4
Total	624,527	9.7	987,376	15.5	824,537	13.1
Value of all farm products					\$2,138,048,366	100.0
Value of products sold cooperatively	\$721,983,639	....	\$858,284,887	....	\$892,481,491	41.7
Value of goods bought cooperatively	\$84,615,669	....	\$75,971,169	....	\$125,048,597	....

though it was still greater than that of 1919; those making purchases only declined from 1919 to 1924 but rose even above the 1919 level in 1929. The money value of the farm products sold through co-operative organizations showed a continuous increase. More than two-fifths of the farm products of the entire United States were marketed co-operatively in 1929. The value of goods bought through farm co-operative stores increased 64.6 per cent in 1929 as compared with 1924. Part of these purchases were for consumers' goods (food, clothing, fuel, etc.) and part were for commodities used in the business of the farm (fertilizer, seed, feed, twine, machinery, etc.). In 1929 the average value per farm of products marketed co-operatively was \$1290; the average value of supplies bought was \$304. Minnesota during the three census years held first place among the States in the percentage of farms reporting co-operative sales, the percentages being 43.9 in 1919, 42.4 in 1924, and 51.6 in 1929. As regards co-operative purchasing, Nebraska led in 1919 with 22 per cent of all farm operators buying supplies co-operatively, Iowa led in 1924 with 15.9 per cent, and Minnesota led in 1929 with 21.4 per cent.

CANADA. In 1931 there were 466 consumers' societies in Canada with a total membership of 49,110; 13 credit and savings societies with a membership of 48,254; and 92 community halls with a membership of 5749. There were also 477 co-operative marketing associations whose membership totaled 374,516. The seed and grain societies among the latter had a membership of 192,809 and next in order numerically were the

supplies educational, joint invoicing, accountancy, and technical services and issues a number of publications. The problem of marketing in Great Britain, is comparatively simple for the workers' productive societies have as their chief outlet the great wholesale consumers' co-operative organizations. Over the period 1923-31 the following has been the statistical record of the societies belonging to the Cooperative Productive Federation of Great Britain: number of societies, decreased from 44 to 43; number of members, increased from 14,313 to 15,187; share and loan capital, increased from £843,391 to £1,076,596; amount of sales, increased from £2,051,987 to £2,635,871; net gain, increased from £77,869 to £127,172.

WORKERS' PRODUCTIVE ASSOCIATIONS OF THE SOVIET UNION. During 1932 the workers' productive associations which were known commonly as "artels," had by the middle of December, 1932, produced goods worth 4,271,000,000 rubles, which was in excess of the quota set for the whole year. During the years 1928-32 the production of these labor artels grew fourfold and their membership increased from 1,004,000 to 2,353,000. Cottage industries were particularly active among this group. Under the second five-year plan, the Soviet government decreed that the entire field of cottage industries was to be organized into labor artels in which the producers as artel members were to work in shops and fields. Their total output was to be increased 28.7 per cent and 71.4 per cent of the goods was to be articles for mass consumption. The membership goal of the labor artels in these indus-

tries was set at 3,833,000. Particular attention was to be given to the organization of such industries in rural districts in collaboration with the giant collective farms. It was also declared, this being a departure from previous practice, that the profits of the artels were to be divided according to the productivity of the various members so that the more efficient workers could receive a larger share.

COÖPERATIVE PRODUCTIVE FEDERATION. See COÖPERATION.

COPPER. Preliminary statistics for 1933 indicated some improvement in the copper industry, according to the United States Bureau of Mines. Domestic requirements continued to be small although withdrawals on domestic account increased about 28 per cent over those in 1932. Refined primary output from domestic and foreign sources was about 11 per cent higher than in 1932. Imports of unmanufactured copper were sharply lower in 1933, decreasing about 30 per cent. Largely due to the tariff on copper, imports of refined copper were less than 7 per cent of those in the preceding year. Exports of metallic copper were relatively the same in 1933 as in 1932. The gains and losses noted were responsible for a decrease of 15 per cent in stocks of refined copper at domestic refineries. A decrease of 4 per cent was also reported in stocks of blister and unrefined copper at smelters, in transit to refineries and at refineries.

The average weekly quoted price of copper (electrolytic, f.o.b. refinery) was 4.775 cents a pound, the lowest quotation on record, from the third week of December, 1932, through the week of Mar. 4, 1933. Then an upward trend took place which, despite minor fluctuations, carried the price to 8.775 cents a pound, the highest quotation of the year, for the first week in August. The price remained at approximately this level for over two months; then it dropped to 7.327 cents a pound during the week of October 21. The price trend was generally upward during the last weeks of the year and the average weekly quotation was 8.025 cents a pound during the last two weeks of December.

The smelter production of copper from domestic ores in 1933 as determined by the Bureau of Mines from reports of the smelters showing actual production for 11 months and estimated production for December, was 477,000,000 lbs., compared with 544,009,948 lbs. in 1932, and was the smallest production recorded since 1896. The estimated smelter production from domestic ores for December, as reported by the smelters, was nearly 40,000,000 lbs. which is approximately the average reported for the 11 months preceding.

The production of new refined copper from domestic sources, determined in the same manner as smelter production, was about 480,600,000 lbs., compared with 445,077,874 lbs. in 1932. The output of new refined copper from domestic and foreign sources in 1933 amounted to about 756,200,000 lbs., compared with 680,867,734 lbs. in 1932—an increase of 75,300,000 lbs. or 11 per cent. The production of secondary copper by primary refineries increased from 120,454,527 lbs. in 1932 to about 150,100,000 lbs. in 1933. Thus the total primary and secondary output of copper by the refineries in 1933 was 13 per cent higher than in the preceding year—a production of about 906,300,000 lbs. being reported for 1933 as compared with 801,322,261 lbs. in 1932.

The imports of unmanufactured copper during

the first 11 months of 1933, according to the Bureau of Foreign and Domestic Commerce, amounted to 250,853,565 lbs. or at a monthly rate of nearly 23,000,000 lbs. This compares with total imports of 391,991,342 lbs. for the entire year 1932, or at a monthly rate of 32,700,000 lbs. Imports in November, 1933, totaled 30,676,575 lbs. The total imports for 1933 showed a decrease of approximately 116,000,000 lbs. for the year, or a drop of about 30 per cent.

The exports of metallic copper during the first 11 months of 1933 amounted to 273,817,517 lbs. as compared with 295,356,719 lbs. exported during the entire year 1932; with an estimated total for the entire year 1933 little different from that for 1932. In the first 11 months of 1933, 220,141,601 lbs. of refined copper in ingots, bars, and other forms, and 15,295,295 lbs. of rods were exported. Of the total quantity France received 65,335,069 lbs., the largest amount. Germany was next with 28,676,819 lbs.; Italy was third with 26,699,630 lbs.; and the United Kingdom fourth with 24,532,385 lbs. In the entire year 1932 the United Kingdom received the largest quantity, 68,344,096 lbs.; France was next with 65,306,278 lbs.; Germany was third with 30,806,376 lbs.; and Italy fourth with 23,344,238 lbs.

Refineries reported that at the end of 1933 approximately 851,000,000 lbs. of refined copper would be in stock, a 15 per cent decrease from the reserve of 1,004,000,000 lbs. at the end of 1932. It is estimated that stocks of blister copper at the smelters, in transit to refineries, and at refineries, and materials in process of refining, would be about 362,000,000 lbs. on December 31, compared with 378,000,000 lbs. at the end of 1932, a decrease of 16,000,000 lbs. or 4 per cent. Total smelter and refinery stocks at the end of 1933 were 1,213,000,000 lbs., representing a decrease of 169,000,000 lbs., or 12 per cent, from the record stocks at the end of 1932.

Stocks of refined copper on Nov. 30, 1933 were reported as 856,000,000 lbs., and stocks of blister copper at smelters, in transit, and at refineries were reported as 357,000,000 lbs.

The quantity of new refined copper withdrawn on domestic account during the year was about 665,100,000 lbs., compared with 519,200,000 lbs. in 1932, an increase of 145,900,000 lbs. or 28 per cent. The method of calculating domestic withdrawals is shown as follows:

NEW REFINED COPPER WITHDRAWN FROM TOTAL YEAR'S SUPPLY ON DOMESTIC ACCOUNT, 1932-1933, IN POUNDS [U. S. Bureau of Mines estimates]

	1932	1933
Refinery production of new copper from domestic sources	445,100,000	480,600,000
Refinery production of new copper from foreign sources	235,800,000	275,600,000
Imports of refined copper (December, 1933, estimated)	167,800,000	10,900,000
Stocks of new refined copper on January 1	924,600,000	1,004,000,000
Total	1,778,300,000	1,771,100,000
Exports of refined copper (ingots, bars, rods, or other forms) (December, 1933, estimated) ..	250,100,000	255,000,000
Stocks December 31	1,004,000,000	851,000,000
Total	1,254,100,000	1,106,000,000
Total withdrawn on domestic account .	519,200,000	665,100,000

According to an estimate issued by Brandeis, Goldschmidt & Co., London, the world production of copper in 1933 showed an increase of about 4 per cent over that of the preceding year, rising from 870,000 long tons in 1932 to 902,000 tons in 1933. Consumption increased about 16½ per cent in the same period, rising from 985,000 long tons in 1932 to 1,125,000 tons in 1933. Consumption in the United States rose 45,000 tons more than the 300,000 tons consumed in 1932, while in the rest of the world the rise was from 865,000 tons to 870,000 tons. African production in 1933 was estimated at 165,000 tons (127,000 tons in 1932); Canadian output rose from 112,000 tons to 125,000 tons in 1933, and South American production dropped from 126,000 tons in 1932 to 120,000 tons in 1933.

COPYRIGHT. Registrations for the fiscal year, 1932-33, according to the report of the United States Register of Copyrights, numbered 137,424, as compared with 151,735 for the preceding year. Of these, 49,984 were classed as books, but included pamphlets, leaflets, and contributions to periodicals, those printed in the United States numbering 44,400, those printed abroad in a foreign language, 4232, while the remainder, 1362, were English books registered for *ad interim copyright*. The chief classes of the remaining registrations, the largest in numerical importance, were: Periodicals, 35,464 numbers; musical compositions, 26,846; prints and pictorial illustrations, 3143; photographs, 1882; dramatic or dramatico-musical compositions, 6359; works of art, including models or designs, 2667; maps, 1178; drawings or plastic works of a scientific or technical character, 1495; motion-picture photoplays, 800; and motion pictures not photoplays, 743. The renewals numbered 6411, as compared with 5888 in the preceding year. The fees applied during the year amounted to \$250,995. The total number of articles deposited during the fiscal year ended June 30, 1932, was 216,339.

The gross receipts of the Register's office for the fiscal year were \$280,964; the total expenditure for salaries, \$219,216, and for supplies, \$1018. The year's business was not quite so large as that of the previous year, due no doubt to the general depression affecting all lines of business.

CORBETT, JAMES J. An American boxer, died at Bayside, Long Island, N. Y., Feb. 18, 1933. He was born in San Francisco, Calif., Sept. 1, 1866, and was educated at Sacred Heart College. At the age of 18 he took up boxing, but his first major contest was with Joe Choynski on June 5, 1889, on a barge in San Francisco Bay. The bout lasted 28 rounds, resulting in a knockout by Corbett. After several minor victories, he fought the Negro heavyweight, Peter Jackson, at San Francisco on May 21, 1891. The fight lasted 61 rounds, and though declared a draw by the referee was regarded as a victory for the young boxer. A year later, on Sept. 7, 1892, he met the world's champion, John L. Sullivan, at New Orleans, and in a superb exhibition of boxing that lasted into the twenty-first round achieved a knockout that gave him the championship. He held the title against all challengers until Mar. 17, 1897, when he met Bob Fitzsimmons at Carson City, Nev., and was knocked out in the fourteenth round.

After James J. Jeffries had defeated Fitzsimmons in 1899, Corbett made two attempts to wrest the title from the new champion; but at

each attempt—in 23 rounds at Coney Island, N. Y., on May 11, 1900, and in 10 rounds at San Francisco on Aug. 14, 1903—he was defeated, and withdrew from the ring after the last encounter. Thereafter he appeared on the stage, in vaudeville, in motion pictures, on the lecture platform, and before the radio. His sobriquet, "Gentleman Jim," came from his natty appearance and gentlemanly behavior at a time when boxing was a ruffianly profession.

CORN. The estimated yields of corn in 1933 of 18 countries reporting to the International Institute of Agriculture amounted to 2,970,298,000 bushels as compared with 3,701,677,000 bushels in 1932, and 3,133,211,000 bushels, the average annual production for the five years 1927-1931. The yield of these countries in 1933 was about 80 per cent of the preceding year's crop and approximately 95 per cent of the average annual production of the five-year period. For the countries reporting, the area in corn in 1933 estimated at 134,777,000 acres was over 3 per cent below the area in 1932, and approximately 3 per cent above the average annual area of the five years mentioned. The production in 1933 of the leading corn producing countries of this group not including the United States was reported as follows: Rumania 185,032,000 bushels, Yugoslavia 143,916,000 bushels, Italy 92,858,000 bushels, Egypt 77,854,000 bushels, and Hungary 69,104,000 bushels. The estimate of the Italian yield does not include the quickly maturing crop known as "cinquantino" of which 8,159,000 bushels were produced in 1932. The average annual yield of the Soviet Republics for the five years 1927-31 was estimated at 140,000,000 bushels and the area at 8,300,000 acres. The area planted in 1933 was reported as 9,000,000 acres or about 15 per cent above the five-year average. The production of Argentina in the crop year 1932-33 was reported as 250,000,000 bushels. The Canadian crop in 1933 was estimated at 4,658,000 bushels as compared with a yield of 5,057,000 bushels in 1932. While the world's corn production in 1933 was much lower than the yield in 1932 the residual stocks of the 1932-33 crop in Argentina and the surplus available in Rumania, Bulgaria, Yugoslavia, and Hungary were considered adequate to meet international requirements.

The estimated production of corn in the United States in 1933 as reported by the Department of Agriculture was 2,330,237,000 bushels while in 1932 the crop was 2,906,873,000 bushels, or greater by 586,456,000 bushels. The average annual yield for the five-year period 1926-30 was 2,512,000,000 bushels. The area devoted to the crop in 1933 was 102,239,000 acres, in 1932, 108,668,000 acres and the annual average for the five years 99,328,000 acres. The 1933 average yield per acre, 22.8 bushels, was 4 bushels less than that of the preceding year and 12.6 per cent below the average of 26.1 bushels for the 10 years 1921-1930. The estimates of productions included the entire acreage regardless of what use was made of the crop, the yield being expressed in equivalent bushels of ear corn.

The yields of the leading corn producing States including all methods of harvesting such as cutting for silage or fodder, pasturing with hogs, etc. were reported as follows: Iowa 439,951,000 bushels, Nebraska 234,698,000 bushels, Illinois 224,748,000 bushels, Minnesota 142,957,000 bushels, Missouri 141,446,000 bushels, Indiana 125,-

906,000 bushels, and Ohio 112,694,000 bushels. These States produced 61 per cent of the total production reported for the 48 States. The average yield per acre of the States mentioned ranged from 25.8 in Nebraska to 39 bushels in Iowa and in the remainder of the States from 7 bushels in Oklahoma and South Dakota to 44 bushels in Rhode Island.

During the fiscal year ended June 30, 1933 the United States exported 8,193,000 bushels of corn, 146,000 barrels of cornmeal, 1,299,000 pounds of corn breakfast foods, 12,280,000 pounds of hominy and corn grits, and 901,000 pounds of corn oil. The imports for the year amounted to 195,000 bushels, or less than half the quantity imported in 1932. The crop of 1933 was little if any larger than required for domestic needs. Corn products used in the manufacture of fermented liquors before prohibition went into effect were equivalent to about 15,000,000 bushels of corn.

A study made by the Department of Agriculture showed that the average cost of producing an acre of corn in the United States in 1932 was \$13.08 including rent and \$9.49 not including rent. The average cost of producing a bushel was 49 cents. Of the total gross cost per acre labor and power took up about 47 per cent; fertilizer and seed, 11 per cent; land rent, 26 per cent, and other items 16 per cent. The net cost per bushel, including rent, varied from 34 cents in Illinois and Iowa to 94 cents in the southeastern States, the difference being due largely to the difference in the average yield per acre. In general the land rent amounted to 10 to 15 cents per bushel of corn. The tenth annual National Corn Husking Contest was held in November near West Point, Nebraska. The winner of the national championship, Sherman Henriksen of Nebraska, husked 27,024 bushels, after deducting for gleanings and husks, in the allotted period of 80 minutes. Harry Brown, also of Nebraska, ranked second with 25,275 bushels. A crowd exceeding 55,000 was reported to have witnessed the contest.

CORN BORER. See ENTOMOLOGY, ECONOMIC.

CORNELL UNIVERSITY. A nonsectarian institution for the higher education of men and women at Ithaca, N. Y., founded in 1865. There were 5671 students enrolled in the autumn session of 1933, distributed as follows: Graduate school, 648; law school, 185; medical college, the main division of which is in New York City, 270; arts and sciences, 1840; architecture, landscape architecture, and fine arts, 152; engineering, 847; veterinary medicine, 165; agriculture, 1010; and home economics, 614, including 157 in hotel administration. Of these students 1341 were women. The registration for the 1933 summer session was 1465.

The faculty, composed of 1204 members, had 312 professors, 210 assistant professors, 18 lecturers and associates, 372 instructors, and 292 assistants. Dr. Kurt Lewin of Berlin was added to the staff as acting professor of education. The faculty lost by death John Bentley, Jr., professor of forest engineering; Isaac J. Furman, professor of clinical psychiatry; Adam C. Gill, professor of mineralogy and petrography; Othon G. Guerlac, professor of the Romance languages and literatures; Eugene E. Haskell, professor of experimental hydraulics, emeritus; and John L. Stone, professor of farm practice, emeritus. The visiting lecturer in chemistry on the George Fisher Baker foundation was Prof. Otto Hahn, director of the Kaiser Wilhelm Institute of Chem-

istry at Berlin-Dahlem, Germany. The Messenger lectures on the evolution of civilization were given by Prof. B. Malinowski of the University of London.

Buildings completed and occupied during the year were Martha Van Rensselaer Hall, housing the New York State College of Home Economics, and a building for the use of the department of agricultural economics and farm management of the State College of Agriculture.

The productive funds on June 30, 1933, were \$28,490,812. The income applicable to current expenses was approximately \$8,000,000, including \$2,833,697 of State and \$453,631 of Federal appropriations. Gifts amounting to \$3,155,133 were received during the fiscal year. The land and buildings were valued at \$13,582,893, and the equipment at \$5,971,745. The library contained 870,000 volumes. President, Livingston Farrand, M.D., L.H.D., LL.D.

CORONA. See METEOROLOGY.

CORRENS, KARL. A German biologist, died in Berlin, Feb. 15, 1933. He was born in Munich, Sept. 19, 1864, and attended the Universities of Munich, Prague, Tübingen, and Berlin, receiving the Ph.D. degree from the latter. In 1902 he was appointed professor of botany at the University of Leipzig, and in 1909 joined the scientific faculty at the University of Münster, Westphalia. He remained at Münster until 1914 when he was appointed director of experimental biology at the Kaiser Wilhelm Institute in Dahlem. From 1920 to 1924 he was a member of the philosophy faculty of the University of Berlin.

In 1900 Correns, simultaneously with DeVries of Holland and Tschermak of Austria, brought to light, through his experiments on plant genetics, the law of heredity, which had been announced by Gregor Mendel in 1865 in a paper on inheritance in peas, published in the Proceedings of the Natural History Society of Brünn, and which had remained practically unnoticed for 35 years. In 1932 the Royal Society of Great Britain conferred upon him the Darwin medal for his researches in the field of organic inheritance. His most noted book was *Die neuen Vererbungsgesetze* (1912). He also edited *Biologisches Zentralblatt*.

CORSICA. An island in the Mediterranean, situated approximately 100 miles southeast of the French coast at Nice, constituting a department of France. Area, 3367 square miles; population (1931), 297,235. Chief city Ajaccio, 23,917 inhabitants in 1931.

COSACH. See CHILE.

COSMIC PHYSICS. See PHYSICS.

COSMIC RAY. See CHEMISTRY.

COSTA RICA, kōs'tā rē'kā. A Central American republic. Capital, San José.

AREA AND POPULATION. Costa Rica has an area of 23,000 square miles; the population was estimated at 539,654 on Dec. 31, 1932 (471,524 at the 1927 census). Living births during 1932 numbered 23,661; deaths, 11,843. The estimated population of the chief cities in 1932 was: San José, 57,047; Alajuela, 7571; Heredia, 8256; Limón, 7887; Cartago, 7498. Primary school enrollment (1932) was 50,188 in 513 schools; secondary, 1066; normal, 700.

PRODUCTION. Agriculture is the chief industry and coffee, bananas, and cacao are the main crops, accounting for 98 per cent of the total value of exports in 1932. The quantity and value of the exports of these crops in 1932 was: Coffee,

40,783,000 pounds, \$5,935,000; bananas, 4,313,000 bunches, \$2,451,000; cacao, 7300 metric tons, \$501,000. Corn, sugar cane, rice, potatoes, and tobacco are other crops. Livestock in 1929 included 339,000 cattle, 83,000 swine, and 93,000 horses and mules. Small quantities of gold and silver are mined. Manufacturing is confined to the preparation of a few articles for domestic consumption.

COMMERCE. Imports in 1932 were valued at 23,995,000 colones (\$5,468,000), compared with 34,723,000 colones (\$8,681,000) in 1931. Exports amounted to 37,537,000 colones (\$8,555,000), against 57,117,000 (\$14,279,000) in 1931. (Colones converted at four to the dollar.) Machinery and tools, iron and steel, cotton fabrics, and chemicals were the leading imports. Exports to the United States in 1932 were valued at \$3,362,000 (39.3 per cent of the total), against \$3,281,000 (23 per cent) in 1931; to the United Kingdom, \$4,027,000 (47.1 per cent), against \$8,601,000 (60.3 per cent) in 1931; to Germany, \$633,000 (7.4 per cent), against \$1,572,000 (11.0 per cent) in 1931. Of the 1932 imports, the United States supplied \$2,882,000 (52.7 per cent), against \$4,501,000 (51.8 per cent) in 1931; Germany, \$644,000 (11.8 per cent), compared with \$904,000 (10.4 per cent) in 1931; the United Kingdom, \$297,000 (5.4 per cent), against \$969,000 (11.2 per cent) in 1931.

FINANCE. According to official returns, budget operations for 1931 resulted in a deficit of 2,821,000 colones on expenditures of 27,571,000 colones. In 1932, a deficit of 1,929,000 colones on expenditures of 25,025,000 colones was reported. However credit operations were apparently not included in these totals, the accuracy of which have been questioned (see U. S. *Commerce Yearbook*, 1933, vol. ii, p. 1933). The 1933 budget authorized expenditures of 23,727,000 colones and estimated receipts at 23,766,000 colones. The external public debt on Dec. 31, 1932, included £1,487,734, \$11,098,023, and 5,811,000 francs. The internal funded debt was \$334,000 and 7,216,831 colones; floating debt, 22,405,331 colones. Costa Rica suspended service on the dollar loan of 1926 in 1932 and defaulted on the sterling loan and the dollar loan of 1927 in 1933. Unit of currency, the colon (par. \$0.25; average exchange value in 1932, \$0.23).

COMMUNICATIONS. Costa Rica in 1932 had 430 miles of railway, of which 81 miles (the Pacific Railroad) were government owned. Motor highways extended 161 miles. The Pan-American Airways system touched Costa Rica at Puntarenas. A total of 514 ships of 1,290,853 tons entered the ports in 1931.

GOVERNMENT. Executive power rests in a president elected for four years; legislative power, in a chamber of representatives called the Constitutional Congress. The Congress contains 43 deputies elected for four years, one-half retiring every two years. Voting for President, deputies, and municipal officers is secret and direct. President in 1933, Ricardo Jiménez Oreamuno (Republican National), who assumed office May 8, 1932.

HISTORY. Costa Rica was primarily concerned during 1933 with measures to alleviate the effects of the economic depression. A law of June 2, 1933, prohibited foreclosure suits against debtors, provided they maintained interest payments on their obligations. Interest rates were limited to 6 per cent on secured and 8 per cent on unsecured loans. The law was to be effective until Dec. 31, 1933, during which time salaries of public or

private employees could not be attached if interest payments on obligations were paid. On Dec. 6, 1933, all the provisions of the moratorium law were extended to June 3, 1935.

Another decree of Nov. 22, 1933, fixed a minimum wage for adult laborers of 1 colon (25 cents) per day. It established a council of employers' and employees' representatives to regulate minimum wages in accordance with data on the cost of living, etc., collected by the Secretary of Labor. Agriculture received aid through the laws of July 7 and July 24, 1933. The first of these authorized the issuance of 8,000,000 colones (about \$1,800,000) of 3-per cent mortgage bonds, the proceeds to be loaned to farmers, stock raisers, and the government. The sum of 4,000,000 colones was allotted for long-term agricultural loans secured by first mortgages on real property. Up to 2,000,000 colones was made available for loans to small coffee producers and cleaners; up to 1,000,000 colones to the cattle industry; and up to 1,000,000 colones to the government for urgent public works and highway construction. The bonds were to be retired by means of a cumulative sinking fund.

The law of July 24, 1933, established the Institute for the Defense of Costa Rican Coffee, with authority to control all phases of the coffee business from cultivation of the berry to its final sale. The Institute was to be managed by a board of directors, composed of the Secretary of Agriculture (*ex officio* chairman) and four other members and three alternates appointed by the President. The board was authorized to appoint a technical council of three agricultural experts to develop the scientific phases of the Institute's programme.

The depreciation of the United States dollar following abandonment of the gold standard by the Roosevelt Administration in April, 1933, caused great confusion among the exporters and importers of Costa Rica, whose currency had been stabilized at a ratio of four colones (later changed to four and one-half) to one dollar. The dollar's depreciation benefited Costa Rican exporters, as the chief export (coffee) was marketed mainly in Great Britain and the high exchange value of the pound sterling in terms of colones induced the British to increase their purchases. The importers and merchants, however, were adversely affected by the rising prices of American goods due to dollar depreciation. They demanded a lower exchange rate for dollars, and reinforced their demand with a mutual agreement not to pay any foreign exchange drafts. President Jiménez called Congress in special session on Oct. 2, 1933, to deal with the exchange problem. However, he vetoed a bill submitted to him providing for free exchange within certain limits. A marked upturn in business activity was reported in December.

COST OF LIVING. See STATISTICS.

COTTON. The Crop Reporting Board of the United States Department of Agriculture estimated on Dec. 8, 1933 that the cotton crop for the United States for 1933 would amount to 13,177,000 bales of 500 pounds, compared with 13,002,000 in 1932, and 17,095,000 in 1931. The acre yield of lint was estimated to average 209.4 pounds as compared with 173.3 pounds in 1932 and 167.4 pounds, the average for the period 1922-1931. Of 40,929,000 acres in cultivation July 1, 26.4 per cent were removed from production under Agricultural Adjustment Adminis-

tration contracts and subsequently abandoned on the acreage remaining and 30,144,000 acres were left for harvest.

Estimates were that the world carry-over of American cotton on Aug. 1, 1933, amounted to 11,597,000 running bales compared with 12,961,000 bales in 1932 and 8,868,000 in 1931. The carry-over in the United States was approximately 8,183,000 bales. There were 2,972,000 bales of Indian cotton, 659,000 of Egyptian, and 1,216,000 bales of sundries, totaling 16,444,000 compared with 17,086,000 in 1932. The New York Cotton Exchange estimated the carry-over of all cotton at 16,247,000 bales and production in 1933 at 24,755,000 bales. The world supply of American cotton for 1933-34 was estimated by the United States Department of Agriculture at 24,500,000 bales, about 1,500,000 bales less than the extremely large supplies of about 26,000,000 bales for each of the two previous seasons, but still about 6,000,000 bales larger than the average supply of 18,500,000 bales for the period 1921-22 to 1930-31. The apparent supply of American cotton remaining in the United States on Dec. 1, 1933 was estimated at 15,900,000 bales versus 17,250,000 in 1932.

The areas planted to cotton in 1933 in important cotton growing countries amounted to 68,124,000 acres versus 74,700,000 acres in 1932. Production in 1933 in the countries (reporting) was officially estimated to be, for the United States 13,177,000; India, 4,000,000; U.S.S.R. (Russia) 1,890,000; China, 2,500,000; Egypt, 1,819,000; Brazil, 472,000; Mexico, 223,000; and Chosen (Korea), 147,000 bales. The total world production was estimated at the close of 1933 at 25,500,000 bales versus 23,600,000 in 1932.

The world's production of commercial cotton in 1932 was estimated by the U. S. Bureau of the Census to be 23,634,000 bales, of which the United States produced 12,710,000 (running) bales; India, 4,440,000; U.S.S.R. (Russia), 1,178,000; Egypt, 1,005,000; China, 1,880,000; Brazil, 347,000; Peru, 210,000; Mexico, 95,000; and all other countries, 1,169,000 bales. The International Institute of Agriculture reported the 1932 crops of important cotton growing countries to be, for the United States, 13,002,000; India, 3,779,000; Egypt, 1,027,000; U.S.S.R. (Russia), 1,778,000; Mexico, 95,000; Chosen, 127,000; and Uganda, 243,000. Estimates were that Anglo-Egyptian Sudan produced 120,000 bales from 324,000 acres.

The United States cotton crop for 1932, as reported by the Bureau of the Census, the estimated crop for 1933, and the quantity reported ginned to Dec. 13, 1933, are shown in the accompanying table.

The table includes for 1933, under the ginning report, 568,090 round bales counted as half bales and also 5151 bales of American-Egyptian cotton, practically all grown in Arizona. The 1933 crop of Arizona was estimated to include 12,000 bales of American-Egyptian cotton. The crop of Lower California, usually marketed through California, was estimated at 19,000 bales, not included in the totals.

After the Agricultural Adjustment Act was approved (May 12, 1933), the Adjustment Administration conferred with extension directors in the Cotton States, and growers, manufacturers, and handlers of cotton, who recommended action under the law to eliminate at least 30 per cent of the planted cotton acreage. The programme of co-operation between the Government and growers,

UNITED STATES COTTON CROP, 1932-33

States	Crop, 1933 500-lb. bales	Estimated crop, 1933 500-lb. bales	Reported ginned Dec. 13, 1933 Running bales
United States ...	18,001,508	18,177,000	12,356,769
Alabama	948,854	980,000	947,537
Arizona	69,193	82,000	66,542
Arkansas	1,326,556	1,065,000	994,624
California	129,371	216,000	175,419
Florida	15,151	27,000	28,449
Georgia	854,357	1,110,000	1,084,740
Louisiana	610,509	486,000	467,768
Mississippi	1,179,781	1,180,000	1,126,707
Missouri	308,835	245,000	222,511
New Mexico	69,868	86,000	79,681
North Carolina	663,359	690,000	674,524
Oklahoma	1,083,713	1,285,000	1,196,295
South Carolina	716,225	742,000	718,418
Tennessee	480,353	460,000	417,322
Texas	4,501,800	4,475,000	4,115,989
Virginia	31,165	38,000	32,932
All others	14,418	10,000	12,121

announced June 19, provided for (1) a cash payment per acre, varying with prospective yields, to the individual farmer for an agreement to reduce his cotton acreage, and (2) a cash payment per acre plus an option to buy, at 6 cents per pound, a quantity of government-owned cotton equal to the farmer's reduction in output. Estimates were that 1,031,000 producers contracted to withdraw 10,396,000 acres with potential production exceeding 4,300,000 bales. To defray the costs of acreage reduction, the Adjustment Administration announced a cotton processing tax of 4.2 cents per pound, effective August 1, the difference between the farm price June 15 and the fair-exchange value of cotton on that date, to apply to spinning, manufacturing or other processing except ginning. An equivalent tax was also placed on cotton articles in stock August 1 and later compensating taxes were placed on jute, paper, and other fibres competing with cotton. A programme for cotton producers to limit cotton acreage in 1934 to approximately 25,000,000 acres, or a 40 per cent reduction of the 5-year acre average, and to receive about \$125,000,000 in benefit and rental payments, was under way at the close of 1933.

Tangible benefits of the cotton-acreage-reduction programme were evident in the farmers' income from the 1933-34 crop. Besides the \$617,716,000 received (December 1 prices) for the 1933 crop versus \$317,861,000 in 1932, rental payments totaling \$111,528,000 were distributed and farmers who participated in the emergency programme of last summer received some \$48,000,000 in option profits. The income from cottonseed in 1933 was estimated at \$79,532,000 compared with \$53,627,000 in 1932, making the gross income from the 1933 cotton crop \$856,776,000 compared with \$425,488,000 in 1932.

The oil mills in the United States, during the cotton year ended July 31, 1933, crushed 4,620,558 tons of cottonseed. The products of the seed included 741,401 bales of lint, 1,312,435 tons of hulls, 2,093,168 tons of cake and meal, and 1,445,681,407 pounds of oil.

Exports of cotton and lint, for the year ended July 31, 1933, amounted to 8,419,399 running bales of cotton and 183,810 bales of lint, or a total of 8,603,209. The principal exports of cotton were to Germany, 1,848,864; United Kingdom, 1,491,853; France, 863,832; Italy, 803,857; Spain, 312,073; Belgium, 182,612; other European countries, 574,472; Japan, 1,743,302; China,

300,511; and Canada, 176,374. The United States during the same period, imported from Egypt, 67,800 bales; Peru, 6053; China, 50,788; British India, 4895; and from other countries, 893 bales.

The consumption of all cottons in the United States increased nearly 1,270,000 bales in 1932-33 or to 6,135,525 bales compared with 4,866,016 bales in 1931-32. The cotton used by American mills was consumed largely in the cotton-growing States, 5,086,383 bales versus 882,759 in New England and 166,383 in other States. Of 30,938,340 spindles in place Dec. 31, 1933, 24,840,870 were active during December, of which 17,338,794 were located in Cotton States, 6,815,136 in New England, and 686,940 in other States. The number of active spindle hours averaged in Cotton States 198, in New England 110, and elsewhere 111.

The world's consumption of cotton (exclusive of linters in the United States) for the year ended July 31, 1933, according to the United States Bureau of the Census, was about 24,986,000 bales. Reports of the International Federation of Master Cotton Spinners' and Manufacturers' Associations indicated it to be 24,332,000 bales compared with 22,319,000 in the previous year. The estimate of the New York Cotton Exchange Service was about 24,725,000 bales versus 23,007,000 in 1931-32. The world consumption of all growths in 1932-33 was an increase of 2,013,000 bales over 1931-32. The increase in consumption of American cotton, which amounted to 1,851,000 bales, accounted for practically all of the increase in the total consumption of all growths. While consumption of sundries cotton in 1932-33 increased 794,000 over the previous season, the gain was largely offset by the decline of 588,000 bales in the consumption of Indian and 44,000 bales of Egyptian. The consumption of the different growths included American cotton, 14,167,000, Indian cotton, 4,200,000, Egyptian cotton, 936,000 bales, and sundries cotton, 5,029,000 bales. The total consumption of all cotton in Europe in 1932-33 was reported at 8,900,000 bales versus 8,700,000 in the previous year; in Japan, 2,900,000; and in China, 2,600,000.

The average price of middling $\frac{3}{8}$ -inch cotton at the 10 spot markets averaged 7.15 cents per pound during the year ended July 31, 1933 compared with 5.89 in 1931-32, 9.61 in 1930-31, and 15.79 cents in 1929-30. The lowest point reached was 5.45 cents on December and the highest 11.51 on July 18. Prices averaged 6.01 cents in January, 1933, 5.85 in February, and 6.19 in March. During the banking holidays in March, 1933, prices advanced more than 1 cent per pound, but reacted later in the month. They advanced markedly in April (6.84), May (8.49), June (9.28), and July (10.52 cents average) to the 11.51 cent peak. The price advance was attributed to lower exchange value of the dollar, the agricultural adjustment programme, increased domestic and foreign mill activity, and improved business sentiment. Advances in terms of gold were considerably less than in terms of currency. A considerable fluctuation with decline in prices occurred after late July and was attributed to fluctuation in the exchange value of the dollar. Prices in August averaged 9.24, September 9.19, October 9.16, November 9.65 and closed on December 29 at an average of 10.08 cents in the 10 spot markets and 10.3 New York. The average prices received by producers at local farm markets on Dec. 15,

1933, were estimated at 9.6 cents per pound for lint and \$15.35 per ton for cottonseed compared with 5.4 cents and \$8.87, respectively, on Dec. 15, 1932.

The condition of the cotton crop in the United States on August 1 approximated 74.2 per cent of normal compared with 65.6 in 1932. Growing conditions were particularly favorable in Atlantic Seaboard States, where the crop was early, well fruited and boll weevil were less active than usual, while in the central part of the Cotton Belt, Texas and Oklahoma, conditions were not so favorable but still were above average. Dry, hot weather in June greatly reduced potential damage from boll weevil. During August, prospects declined in the eastern part of the belt due to weevil activity and unfavorable weather, but losses there were more than offset by increases in the western part of the belt, especially in Texas, Oklahoma, and Arkansas due to favorable weather. Conditions in September were unusually good for maturing late bolls, the crop maturing in most of the belt and similar conditions generally prevailed during October, and picking and ginning made good progress with minimum field losses.

The boll weevil threatened heavy damage in the spring of 1933 on the basis of heavy hibernation in the fall of 1932 and spring survival in 1933, but excessive heat and drought in June and July over much the cotton area greatly checked weevil development and serious infestation was spotted and limited to areas of localized rains. The weevil had about reached the northern limits of cotton culture. Eradication of the pink bollworm from the Salt River Valley of Arizona appeared to be successful and the area was released from quarantine restrictions, although three counties in southeastern Arizona remained under control. Additions to the regulated areas, effective Dec. 23, 1933, included two counties in New Mexico, part or all of seven in Texas, one in Florida, and part of three counties in Georgia. An area in southeastern Arizona was also under *Thurberia* weevil quarantine. Research and quarantine agencies of the Cotton States and the United States Department of Agriculture continued to study control measures for these pests, cotton fleahopper, bollworm, and other insects attacking cotton. See ENTOMOLOGY, *Economic*.

Cotton of the 1933 crop ginned up to Dec. 1, 1933, was lower in grade and longer in staple than that ginned up to Dec. 1, 1932, according to a report based on the 12,103,400 bales of American upland cotton reported by the Census Bureau as ginned prior to that date. Estimates were that 34.7 per cent was white strict middling or better, 24.1 per cent middling, about 11 per cent white strict low middling and below, and about 30 per cent spotted, stained, and yellow tinged cotton, over twice as much as in 1932. There were larger proportions of $\frac{15}{16}$, 1, and $\frac{13}{16}$ inch, with smaller proportions of cotton shorter than $\frac{7}{8}$, $\frac{11}{16}$, and $\frac{11}{8}$ inch. About 94.5 per cent of the cotton ginned up to December 1 was tenderable.

The Universal Cotton Standards Conference held its fifth biennial session in Washington in March, 1933, and approved copies of the universal standards for American cotton for use during the next two years by the United States Department of Agriculture and by arbitration appeal committees of the principal cotton associations.

The International Cotton Congress, held in

Praha and Carlsbad, June 7-10, 1933, considered the causes of depression in the world cotton industry and remedial measures and future trading and its effects on the marketing of cotton and cotton goods. The next congress was planned to convene in 1935 in Milan.

The cotton crops in the principal producing countries in the British Empire, excluding India, in 1931-32 were estimated to be for Anglo-Egyptian Sudan, 205,991 bales; Uganda, 168,000; Nigeria, 5144; Tanganyika, 8970; Union of South Africa, 2342; Australia, 4975; West Indies, 2524; Southern Rhodesia, 1046; Kenya, 1452; Nyasaland, 5087; and Cyprus, 1194. In India, 3,779,000 bales were reported for 1932-33, and 3,368,000 for 1931-32. The crop expected from the acreage planted and conditions in December, 1933, was forecasted at 4,000,000 bales. Estimated production for 1931-32 in other political divisions of the world, besides the major cotton countries, was for Spain 4000; Algeria, 1349; Eritrea, 1706; Italian Somaliland, 5435; Syria and Lebanon, 17,000; Turkey, 91,000; Greece, 14,000; and Bulgaria, 5000.

Egypt produced in 1932-33 a crop estimated at 1,028,000 bales, compared with 1,317,000 in 1931-32. The 1933-34 crop was estimated at 1,819,000 bales from 1,873,000 acres, an area 65 per cent larger than in 1932-33. The high indicated acre yield, 464 pounds, appeared due to good production conditions, a higher proportion of productive varieties, and crop rotation. Only 21.7 per cent of the total acreage was planted to Sakellarides. The revision in the acreage-restriction law, low returns from other crops, and advance in cotton prices seemed to explain the large increase in the 1933 acreage.

The U.S.S.R. (Russia), according to estimates at the end of 1933, produced 1,890,000 bales in 1933 as compared with 1,790,000 in 1932. The area was indicated to be at most 4,800,000 acres compared with 5,139,000 in 1932, a decrease of 339,000 acres. The 1933 procuring plan was set at 1,346,200 tons of unginned cotton, i.e. from 1,925,000 to 2,050,000 bales of 478 pounds of ginned cotton. Total procurings for the Union as a whole were reported to have equaled 84.1 per cent of the cotton plan on Nov. 20, 1933, compared with 68.5 per cent on Nov. 25, 1932.

In China, the crop was expected to approximate 2,500,000 bales, about 10.6 per cent more than the 2,260,000 bales of 1932, and compared with a 3-year average production of about 2,096,000 bales. The crop in 1933 was grown on an estimated area of 6,000,000 acres compared with 5,630,000 in 1932.

Consult also *Cotton Literature* (vol. 3, 1933); *World Cotton Prospects; Agricultural Outlook for 1934; Grade, Staple Length and Tenderability of Cotton in the United States 1928-29 to 1931-32* (1933) (all United States Department of Agriculture); *Cotton Production in the United States Crop of 1932, and Cotton Production and Distribution, Season of 1932-33* (both United States Department of Commerce); *Report on Cottonseed Industry* (United States Federal Trade Commission, 1933); *New York Cotton Exchange—Cotton Yearbook 1933*; W. Gee and E. A. Terry, *The Cotton Cooperatives in the Southeast* (New York, 1933); B. F. Lemert, *The Cotton Textile Industry of the Southern Appalachian Piedmont* (Chapel Hill, N. C., 1933); Chinese Cotton Statistics Association, *Cotton Production in China, 1932* (Shanghai, 1933); P. E.

A. Janssens, *Le Coton en Afrique Tropicale* (Bruxelles, 1932); J. L. Stewart, *The Progress of Colonial Cotton in Africa* (*Foreign Crops and Markets* 27 (4): 78-89, 1933); P. Koenig and A. Zelle, *Die Weltwirtschaft der Baumwolle*. (Berlin, 1933); J. Mariz de Lyra, *Economical Aspects of Brazilian Cotton Cultivation* (Rio de Janeiro, 1933); *Cotton Yearbook, 1933* (Marsden and Co., Ltd., Manchester, 1933); *Skinner's Cotton Trade Directory of the World, 1933-34* (London, 1933); *The 1933-34 International Cottonseed Products Directory* (Dallas, Tex., 1933); Empire Cotton Growing Corporation, *Report of Administrative Council* (London, 1933); *Official Report of the XVI International Cotton Congress Held in Prague and Carlsbad* (International Cotton Bulletin ix. no. 44, 1933, pp. 431-611, 651-657, 661-684, 719-739); *Empire Cotton Growing Review* (London); *Coton et Culture Cotonnière* (Paris). The Bureau of Agricultural Economics, United States Department of Agriculture, also issued multigraphed publications on a graphic summary of American cotton production, consumption and prices; the stability of color in raw cotton; jute versus cotton baggings for American cotton bales; American cotton-tare practices and problems; uses for cotton; and recent developments in the domestic cotton textile industry.

COTTON, HENRY ANDREWS. An American psychiatrist, died in Trenton, N. J., May 8, 1933. Born in Norfolk, Va., May 19, 1869, he was graduated from the Baltimore Polytechnic Institute in 1894 and took his medical degree at the University of Maryland in 1899. After serving his internship at the City Asylum in Baltimore and acting as assistant physician at the State Hospitals for the Insane in Worcester and Danvers, Mass., he studied during 1905-06 at the Royal Psychiatric Clinic in Munich, Germany. There under Prof. Alois Alzheimer he became especially interested in the relation of physical factors to the causation of mental disorders and, on his appointment as medical director of the New Jersey State Insane Asylum in Trenton in 1907, proceeded to apply this theory to the rehabilitation of the mentally sick. He became widely known for the relief of certain forms of insanity which he achieved through the elimination of infected foci, such as teeth, tonsils, and nasal sinuses, and the removal of diseased parts of the stomach, intestines, and genito-urinary tract.

Dr. Cotton also attributed the cause of delinquency in many instances to a diseased physical condition, when serving as director of the Psychiatric Clinic for Correctional Institutions of New Jersey, and in 1921 delivered at Princeton the Vanuxem lectures, which were subsequently published as *The Defective, Delinquent, and Insane*. He retired as director-emeritus of the New Jersey State Asylum in 1930.

COURT GAMES. RACQUETS. The story of racquets in 1933 was again the tale of the prowess of Clarence C. Pell, veteran from Tuxedo, N. Y. For the fourteenth time since 1915 this angular expert won the national championship, proving himself as nearly invincible as ever and drawing attention to the fact that he is the greatest master in the history of the amateur ranks. Pell, 48 years old in the summer, breezed through a fine field in February to win the title on the magnificent courts of the Racquet and Tennis Club in New York. He eliminated Herbert N.

Rawlins, Jr., 1932 finalist, in straight games in the semi-final and conquered Huntingdon D. Sheldon of New York in a four-game final, thus successfully defending the crown.

A few weeks previous Pell had, for the thirteenth time, won the famed Tuxedo Gold Cup tournament with his blasting service, downing E. M. Edwardes of Philadelphia in decisive straight games in the final.

Stanley W. Pearson and William C. Wright of Philadelphia, defending champions, worked their way to the doubles final, but there were beaten in a hard fought five-game match by Rawlins, former three-time national squash racquets champion, and W. Palmer Dixon.

COURT TENNIS. James H. Van Alen, who had played lawn tennis for several years, was the surprise of the court tennis campaign of 1933, winning the national championship in this most intricate of all games by beating the 1931 and 1932 titleholder, William C. Wright of Philadelphia in the final. The sudden rise of the Newport player came as a surprise but after his defeat of Wright, the experts were willing to admit that young Van Alen was a worthy successor to the crown. A few weeks before the national, Van Alen had fallen before Ogden Phipps in the final of the Tuxedo Gold Cup. Wright paired with George B. Fearing of Boston to take the national doubles honors. Pierre Etchebaster, Basque who holds all the professional laurels in the game, was not called upon to defend his honors, no professional tournaments being played, but in exhibitions he conquered all the leading professionals in the United States and abroad.

SQUASH RACQUETS. Beekman Pool, youthful representative of the Harvard Club of New York successfully defended his national squash racquets' crown at Detroit in February and at the end of the year seemed to stand alone in a field becoming more and more crowded each day. Pool had succeeded his brother, J. Lawrence Pool, as champion in 1932 and in 1933 outdistanced his brother and all other experts. The game became increasingly popular, with men taking it up first as an exercise and then in earnest in tournaments in all classes.

Beekman Pool defeated Neil J. Sullivan, of Philadelphia, in the final round at Detroit and also won the Metropolitan singles honors when he downed young William C. Coyle, Jr., of the Montclair Athletic Club in the final. Sullivan paired with Roy R. Coffin to take the first national amateur doubles tournament held, defeating Lathrop S. Haskins and R. A. Goodwin of New York in the final. The Metropolitan doubles went to George D. Debevoise and Perry R. Pease of the Racquet and Tennis Club, and Edwin H. Bigelow of Heights Casino, won the Metropolitan veteran's singles tourney, beating J. C. Rochester in the final.

Agne Martin of Hamilton, Ont., succeeded Sir John Child as Canadian champion, but Child won the doubles with George D. Hudson. William Foulke of Princeton won the intercollegiate title and John Skillman of Princeton was crowned national professional titleholder. The National team championship went to Philadelphia as did the Lockett Trophy. The Lockett Trophy invitation doubles fell to Donald Strachan and B. D. Walsh of Philadelphia, and the Lapham Trophy was retrieved after a lapse of a year by Canada.

An invasion of the United States by a team of women from England resulted disastrously for

the visitors. The visitors took the team matches and then Miss Susan Noel of England walked through easily to the national championship. The national doubles went to Mrs. C. C. Madeira and Miss Anne Page of Philadelphia, but England added the New York State singles to the bag when Miss Cecily Fenwick, national finalist, won. Mrs. H. Stuart Green of Sleepy Hollow captured the Metropolitan singles.

SQUASH TENNIS. Harry F. Wolf, former Williams College lawn tennis player, was again superb in squash tennis in 1933, winning the national amateur championship for the fourth successive year, topping Rowland B. Haines of the Columbia Club of New York in the final. The New York Athletic Club player appeared to have even greater speed and force in his shots in 1933 and was unbeaten through the entire season of tournaments and team play. Frank Ward of the City Athletic Club was also invincible and continued his reign as open champion by downing Thomas Iannicelli of the Essex Club in the final round.

Fillmore Van. S. Hyde, former four-time amateur champion, succeeded Frank A. Sieverman, Jr., of the New York A.C. as veteran's champion. Sefton Tranter of the New York A.C. won national class B honors and class C laurels went to Edward Kemble of the Bayside Tennis Club.

Squash tennis's popularity again waned before the onslaught of squash racquets. The former game seemed too hardy for most of the players, who preferred the finesse of the latter game to the terrific speed of squash tennis.

CRAIG, SIR JAMES. An Irish physician, died in Dublin July 12, 1933. He was born at Castlecatt, Bushmills, Co. Antrim, Oct. 16, 1861. On his graduation from Dublin University in 1885, he was attached to the Meath Hospital, Dublin, first as assistant physician (1886-92) and then as visiting physician (1892-1910). He served also from 1886 to 1896 as assistant physician to the National Children's Hospital and was consulting physician to Sir Patrick Dun's Hospital, the Crookslane Sanatorium for Consumption, and the Cottage Hospital, Drogheda. At the Institute of the Royal College of Surgeons he was demonstrator of anatomy; at Carmichael College, Dublin, extra lecturer on medicine; and in the school of physio of Trinity College, Dublin, King's professor of medicine. He acted as external examiner in medicine to Queen's University, Dublin, from 1916 to 1920. From 1897 to 1910 he was registrar for the Royal College of Physicians in Ireland and from 1904 to 1910 general secretary and editor of the *Transactions* of the Royal Academy of Medicine in Ireland.

Sir James was active in the British Medical Association, being a member of the Central Council and vice-president of the medical and neurological sections. He was also a Fellow and past president of the Royal College of Physicians in Ireland, a member from 1913 to 1916 of the council of Trinity College, Dublin, and a frequent contributor to the *Dublin Journal of Medical Science* and the *British Medical Journal*. As representative for Dublin University in the Dail Eireann after 1921, he introduced a bill legalizing the Irish Sweepstakes, from which the Irish hospitals benefit. He was knighted in 1921.

CREDIT. See BANKS and BANKING.

CREDIT-ANSTALT. See AUSTRIA under History.

CRETE, krēt. An island administrative division of the Greek Republic lying about 150 miles southeast of the mainland. Area, 3195 square miles; population (1928 census), 386,427. Khania (Canea), the capital, had 26,604 inhabitants in 1928; Irakleion (Candia), the largest city, 33,404. The chief products are currants, grapes, wine, olives, citrus fruits, some cereals, and garden products. The island is an intermediate station on the London-India air-mail line. See GREECE.

CRICKET. For the first time, cricket attracted great interest in the United States in 1933. When Australia and England met at Sydney for the Ashes, emblematic of the international cricket championship, the recriminations and verbal attacks echoed over the world. In a hard fought test series, England regained the Ashes. Larwood, the English bowler, was accused by the Australians of body-line bowling or bowling at the batters' heads (throwing a bean ball in baseball jargon), and this brought on heated arguments and even recourse to Marylebone, the ruling cricket body. In the end the English left with the honors and Larwood was the hero of England, being offered tremendous sums for his story for newspapers and magazines.

The cricket season in the United States was greatly enlivened by the visit of Sir Julien Cahn's picked team, including four British internationals. In their tour through Canada, the United States, and Bermuda, the visitors won sixteen and drew four games. The Brooklyn Cricket Club and the Crescent Athletic Club tied for laurels at the end of the regularly scheduled Metropolitan and New Jersey Cricket Association season, and in the playoff, post-season to decide the championship, Brooklyn won.

CRIM, JOHN WILLIAM HENRY. An American lawyer, died at Somerville, N. J., July 3, 1933. Born in Loudoun Co., Va., Mar. 31, 1879, he attended William and Mary College and in 1906 was graduated from the New York Law School. On his admittance to the bar in 1907 he served successively as special assistant, assistant United States attorney, and special assistant United States attorney general in New York in the conduct of cases brought against railroads and other corporations under the anti-trust act and the act to regulate commerce. He engaged in private practice after 1913 but in 1921 was again chosen special assistant United States attorney in the investigation of income tax frauds, collecting thereby for the government more than \$1,000,000.

As assistant United States attorney general during 1921-23, Mr. Crim had general supervision of the prosecution of criminal cases, with the exception of those pertaining to prohibition. He conducted investigations with regard to fraud in the offices of the Alien Property Custodian, Internal Revenue, and United States Penitentiaries, securing the indictment of Thomas P. Miller, Alien Property Custodian. He directed also a staff engaged in the prosecution of several hundred mail-fraud defendants, including Dr. Frederick A. Cook who in 1909 had claimed discovery of the North Pole, and personally conducted the investigations leading to the conviction of Congressman John W. Langley, Gaston B. Means, and others.

Mr. Crim next prosecuted Charles R. Forbes, director of the United States Veterans' Bureau, on the charge of inefficiency and wasteful extravagance, the jury finding him guilty in June,

1925, of conspiracy to loot the funds of the bureau. After acting as special assistant in the investigation leading to the resignation of George W. English, United States District Judge, in 1926, he resumed his practice in New York City.

CRIME. It became apparent during the year that the Federal government itself was going to make every effort within its power to cope with a crime situation which obviously had got beyond the control of local authorities. Particularly pressing were the questions raised by the termination of the prohibition experiment and the appearance of large groups of unemployed persons. During the prohibition era it was plain that the various activities associated with the manufacture, transportation, and sale of illicit liquor were engaging a sizable army of persons, some of whom were actual criminals and some of whom had entered the business because other opportunities were closed to them. To put it realistically, these people were being thrown once more on the criminal labor market and of necessity were being compelled to cast about for new occupations into which to direct their energies. One of the most sinister of such criminal activities that racketeers, gangsters, and bootleggers were resorting to was kidnaping or, as it was known in the parlance of the underworld, the "snatch racket." Criminals, who had always engaged in, from the social point of view, the particularly heinous crime of kidnaping, had always conducted their nefarious trade, but more or less covertly. The reason was that up to quite recently their victims were invariably persons who, like the kidnapers themselves, belonged to the criminal element, that is to say, they were gamblers, bootleggers, counterfeiters, and the like. These persons, when seized and held for ransom, usually met the demands of their captors without making any effort to enlist the services of the police authorities, seeking to pay off the scores in their own way. However, when criminals began to kidnap—as was happening increasingly during the years 1932 and 1933—respectable members of the community and hold them for ransom, then this type of illegal activity began to take on particularly reprehensible forms. The demand of public opinion was responsible for the passage by Congress in 1933 of an act making kidnaping a Federal offense and punishable by long terms of imprisonment. The result was that the Federal agencies, who were unhampered by the local political ties which bound municipal police authorities, began to move with an expedition and dispatch that threw terror into the hearts of the persons engaged in the "snatch racket." So successful were federal operators in tracking down desperate gangs and summarily bringing their members to the bars of justice, that Americans began to breathe easier. It came to be felt that the entrance of the Federal authorities on the scene was a device that had long been necessary and now that it was finally being used, was going to have an important success in coping with the crime problem.

The American Bar Association was also becoming increasingly active. A committee of the organization in December launched an inquiry, utilizing State and county lawyer associations throughout the country, for the purpose of conducting coordinated local investigations of criminal law and its administration. It was declared that it was to be the function of this committee to study the administration of local police departments, district attorneys' offices, and the local

courts, and to see to it that these agencies were strengthened in method and organization and vigorously and effectively employed for the protection of society. The inquiry was to cover the following nine problems: 1. Relation between politics and crime. 2. Efficiency of prosecuting officials and agencies. 3. Police activity in prevention of crime and detection and arrest of criminals. 4. Operations of unethical criminal lawyers and the extent to which unethical practice interferes with enforcement. 5. Interference of the racketeer in legitimate business. 6. Prevalence of kidnaping and kidnaping threats and the punishment of kidnapers. 7. Codes of criminal procedure and their conformity with the model code of the American Law Institute. 8. The relative efficiency of the local and Federal courts in disposing of criminal cases. 9. The awakening of local bar associations to their responsibility for improving the administration of criminal justice. According to the plans made, answers from the local associations to these nine problems raised were to be sent out not later than Jan. 15, 1934.

The *American Observer*, in its issue of Dec. 20, 1933, in a comprehensive and fair review of the crime situation in the United States, admitted that the crime record of the country was "one of the things of which we can least be proud." It also indicated its belief that the nation's crime bill amounted to more than \$13,000,000,000 annually. However, it called attention to the fact that it was impossible to get an accurate and reliable picture of the extent of crime in the United States, in the first place, because statistics were highly inadequate and, in the second, because there was no common basis for reporting from the various local jurisdictions. It also pointed out that it was impossible to tell whether or not the country was going through periodic crime waves, largely because newspapers were in the habit of giving particular attention to sensational deeds of violence when they did occur. On this point it cited the statement of President Hoover's Committee on Social Trends which said:

No support is found for the belief that an immense crime wave has engulfed the United States. The number of arrests and of court cases per 100,000 population increased moderately from 1900 to 1930, with a tendency to rise more rapidly after 1920 than before. A large part, however, of the increase in the last decade is explained by traffic cases, which increased at approximately the same rate as automobile registrations. Arrests and prosecutions for major crimes increased even less rapidly than the rates for minor crimes and in many of the series reached a level about 1925. Prosecutions in federal courts were fairly constant from 1900 to 1917, after which an enormous increase occurred, but this was due principally to the large number of liquor cases. Federal cases, also, reached a level about 1923 and have not changed significantly since that date. The record of crimes known to the police, which is potentially the best index of the number of serious crimes, shows a slightly lower rate in 1931 than in 1930. These figures do not indicate that crime has swept over the country like a tidal wave. Rather the movement of these indexes resembles the gradual rise of the level of a body of water. The rate of increase is more rapid than in such geological processes but the general effect is analogous. This gradual and continuous rise is what would be expected on theoretical grounds, if the number of social factors cited in the introduction of this chapter were functioning together over a period of time.

In seeking to analyze the causes for the continuance of crime in the country, the *American Observer* pointed out that they were three-fold and of a social, political, and racial nature. One of the primary causes of crime in the United States was to be found at the very heart of the national life. Due to the fact that the United States had always had a "changing society" in

which the frontier influence with its characteristic habits of freedom and individual action played such large rôles Americans had grown accustomed to feeling themselves independent of authority and law; therefore respect for legal restraints was difficult to assume and lightly brushed aside. In the second place the existence of classes in the country, the widespread nature of poverty and on the other hand the great extremes of wealth, slum dwelling, inadequate recreational opportunities, small opportunities for the educating of the young in skilled activities also played their part. Heywood Brown, writing in the *New York World-Telegram*, stressed particularly the factor of poverty in the crime situation. He said:

The one great cause of crime is poverty. Look into the case history of all criminals and in a large majority of the cases you will find that you are dealing with a human being who was undernourished, undereducated, warped, and ruined by his inability to cope with a fiercely competitive world for which he was wholly unfitted. . . .

I can take anybody to certain blocks in large American cities and point to crowded sidewalks and dark doorways swarming with boys and girls just learning to walk. And I can say with complete truthfulness:—"Here is your kindergarten for San Quentin. Meet some members of the freshman class of 1930 at Sing Sing. Here is abject, grinding poverty, and here, as sure as poppies grow in Flanders, are the seeds of crime."

In the next place, another reason for the high crime record in the United States was the matter of race. Crimes of violence were particularly common among the Negro groups, largely due to the fact that the Negroes were more emotional than other elements in the population. Finally, it was generally admitted that the administration of justice in the country was extremely faulty and responsible for a great deal of crime. The Committee on Recent Social Trends made the following remarks on the subject of the enforcement of the law by the legal machinery:

The people of the United States are politically decentralized, both in form and in spirit, and are still moved by the ideas of the rural society of the nineteenth century. In most States, judges, prosecutors, and clerks are elected. Each court, each police department, each jail, is an independent entity. The spoils system is a part of the political creed and practice. More fundamental still are the fears of executive despotism, expressed in the Jeffersonian saying, "the least government is the best government." The American people are only gradually accepting the principle of the administration of government by experts and as long as the citizen does not consciously lose money as a result of the inefficiency of officeholders he is characteristically content. Hence, only the rudiments of that professional pride within the civil service which one finds in Great Britain or Prussia are found here. Moreover, many Americans think of government in terms of what they, as persons, not as citizens, can get out of it—the "fixing" of parking tickets, a contract "thrown," a tariff rate raised. On those rare occasions when they become discontented they change personnel, principles of administration, and laws in a desperate effort to secure improvement. Inefficiency of administration is one of the many causes of crime and in turn a large volume of crime adds to administrative confusion and inefficiency.

HOMICIDE RECORD. In 1932, according to the careful investigation made by Dr. Frederick L. Hoffman, whose surveys on the subject have been previously commented upon in these columns, the United States led the civilized nations of the world in the number of homicides. According to Dr. Hoffman the homicide rate, as a result of police reports obtained from 180 cities, was 10.8 per 100,000 population, which was the same rate for 1931. Homicidal deaths for the five years beginning in 1927 and ending with 1931 totaled 51,206. Dr. Hoffman, in commenting on the alarming character of these figures, declared: "Murder more than ever is becoming an ingenious art, if

not a trade, in this country." The homicide rate for 1931 in England and Wales was 0.5 per 100,000 population. The accompanying table shows the number of homicides in the more important American cities in 1931 and 1932.

Cities	1931		1932	
	Deaths	Death rate per 100,000	Deaths	Death rate per 100,000
Atlanta, Ga.	144	49.5	122	39.7
Augusta, Ga.	16	26.1	23	37.1
Baltimore, Md.	88	10.8	82	10.0
Birmingham, Ala.	148	54.9	118	40.8
Boston, Mass.	28	3.6	20	2.5
Buffalo, N. Y.	20	3.4	20	3.4
Camden, N. J.	22	18.5	21	17.6
Chicago, Ill.	489	14.1	452	12.8
Cincinnati, Ohio	74	16.2	75	16.2
Cleveland, Ohio	121	13.3	125	13.5
Dallas, Texas	66	24.2	81	29.7
Denver, Col.	18	6.2	30	10.2
Detroit, Mich.	177	10.8	162	9.6
East St. Louis, Ill.	15	19.9	21	27.6
El Paso, Texas	20	19.0	16	14.8
Fort Worth, Texas	42	24.7	47	26.7
Galveston, Texas	16	29.6	10	18.4
Gary, Ind.	82	30.2	25	22.7
Hoboken, N. J.	3	5.0	5	6.5
Houston, Texas	82	26.4	86	26.4
Jacksonville, Fla.	65	48.5	72	52.2
Kansas City, Kan.	14	11.3	25	19.8
Kansas City, Mo.	96	23.5	85	20.4
Lawrence, Mass.	2	2.3	1	1.1
Lexington, Ky.	17	36.8	25	53.6
Little Rock, Ark.	37	40.4	38	44.3
Los Angeles, Cal.	92	7.0	116	8.4
Memphis, Tenn.	138	52.2	148	54.2
Milwaukee, Wis.	21	3.5	18	3.0
Minneapolis, Minn.	23	5.9	21	4.4
Mobile, Ala.	24	31.7	25	35.8
Montgomery, Ala.	29	42.8	30	48.6
Newark, N. J.	47	10.5	39	8.7
New Orleans, La.	123	26.3	100	21.1
New York City, N. Y.	586	8.3	580	8.0
Philadelphia, Pa.	141	7.2	154	7.8
Pittsburgh, Pa.	58	8.5	73	10.6
Richmond, Va.	28	15.2	36	19.4
St. Louis, Mo.	131	15.8	119	14.3
St. Paul, Minn.	8	2.9	10	3.6
Salt Lake City, Utah	15	10.5	7	4.8
Savannah, Ga.	26	30.5	36	42.2
Springfield, Ill.	12	16.4	8	10.7
Washington, D. C.	77	15.6	110	22.1
Youngstown, Ohio	23	13.2	20	11.2

SUICIDES. Again according to Dr. Hoffman, the world suicide record for 1932 plainly reflected the effects of the depression, many countries recording new high marks. In the United States in 1932, approximately 23,000 persons took their own lives as against 20,088 in 1931. The rate for 100 American cities rose from 20.5 per 100,000 in 1931 to 21.3 in 1932, the highest figure ever reached with the exception of 1908, when the rate was 21.5. As a result of an intensive study of the marital status of suicides in New York City for the period 1921-31, Dr. Hoffman came to the conclusion that the rate for divorced persons was considerably higher than for the married, widowed, or single. Over the period in question the rate for New York City per 100,000 was 24.3. For married persons it was 24.6; for the widowed it was 44.3; for single persons it was 18.9; and for divorced persons it was 81.2. Another interesting conclusion reached by Dr. Hoffman was that just as there was a concentration of homicide deaths in the south there was a definite concentration of suicide deaths on the Pacific coast. The following were the rates of the 10 American cities with the highest records in 1932: Davenport, Iowa, 50.3; Sacramento, Calif., 43.1; Seattle, Wash., 42.0; Cedar Rapids, Iowa, 41.5; San Francisco, Calif., 39.9; San Diego, Calif., 38.4; Omaha, Neb., 36.5; Denver, Colo., 36.3;

Portland, Ore., 35.4; Tacoma, Wash., 32.1. At the other end of the picture was Troy, New York, which had a suicide rate of 1.3 per 100,000 population. The rates of the five largest cities in the United States for 1932 were as follows: Chicago, Ill., with 597 suicide deaths, 16.9; Detroit, Mich., with 311 suicide deaths, 18.4; Los Angeles, Calif., with 398 suicide deaths, 28.8; New York, N. Y., with 1595 suicide deaths, 22.1; Philadelphia, Pa., with 353 suicide deaths, 17.8. All these cities, with the exception of Chicago, showed increases in the death rate over that of 1931. In many cities the jump in the suicide rate was extraordinary. In Montgomery, Ala., the rate increased from 8.9 in 1931 to 24.7 in 1932; in Lansing, Mich., from 16.1 to 30.1; in Lancaster, Pa., from 19.7 to 29.3. According to Dr. Hoffman the position of the United States among the nations of the world as regards suicide deaths was about average, the range in suicidal frequency ranging from 3.3 per 100,000 population in the Irish Free State to 34.5 in Austria.

NEW YORK CITY. The annual report of the police department of New York City for 1932 showed a total number of arrests made of 516,128, of which 449 were for murder and manslaughter. The total number of homicides reported for the year was 478. During the year also convictions for murder and manslaughter totaled 98 and in 21 cases, murderers were sentenced to death. Homicides, by investigators in 38 cases, were attributed to disputes and feuds among gangsters; killings with "marital troubles or passion" as their motives totaled 112. Of the total of 516,128 arrests made in the city for all manners of offenses, upward of 350,000 were connected with motor vehicles in one way or another. Of traffic summonses and arrests there were 322,578 which resulted in 296,963 convictions. Principally the increase in traffic violation arrests was attributable to better vigilance on the part of the police in view of the fact that the number of registered cars in operation in the city had declined over the year. This was best demonstrated in the case of taxicabs, 27,082 taxicab licenses having been issued in 1931 against 18,367 in 1932. Arrests for stealing automobiles in 1932 totaled 2448 compared with 1618 in 1931. Accidents in the streets showed a considerable decline. Motor vehicle fatalities totaled 1032 of whom 262 were children. This was the lowest number of fatalities suffered by children in the streets in the last 11 years. Accidents involving motor and other vehicles injured 12,706 children and 37,284 adults during the year—a total of 49,998 as compared with 53,886 injured in 1931. Assault and robbery cases were slightly fewer than in 1931 and burglary cases were almost 10 per cent less. Grand larceny cases, of which the greater number involved the theft of automobiles, dropped more than 25 per cent when 1932 was compared with 1931. Fifty-one per cent of those arrested for stealing automobiles were youths between 16 and 20 years. Forty per cent of the arrests for burglaries were boys under 21. In violent crimes, however, arrests between the ages of 16 and 20 years were lower than in 1931. According to the Commissioner of the Police Department, the peak of crime ages, as indicated by arrests, seems to lie between 26 and 30 years. A total of 6264 juvenile delinquents, that is, children under 16, were arrested, more than 1 out of 3, being picked up for "general criminality." Five hundred of these children were charged with in-

corrigibility, 400 were destitute, 764 were accused of burglary, and 1549 with minor thefts. Only 55 were charged with offenses against chastity and 116 with offenses against the person. In commenting on this situation the Commissioner declared

In the last four years 26,836 children under 16 years of age have been arrested in New York City for juvenile delinquency. Each of these presented an opportunity to deal with a potential criminal. While the problem is a complex one and the attack on it must be from many angles, it is obvious that one of the most direct and specific lines of attack is through the prevention of juvenile delinquency. The Crime Prevention Bureau is developing a sound programme toward this end. It is no longer a question of theory, for the department is already well launched upon a practical demonstration of what the police can do to prevent juvenile delinquency.

The following table is a tabulation of arrests by type of offense and age groups in 1932. The cost of policing a great city like New York may be ascertained from the fact that New York City's police department in 1932 spent \$65,253,948.

TOTAL NUMBER OF ARRESTS BY AGES, BY GROUP, FOR THE ENTIRE YEAR OF 1932

<i>Criminal group</i>	<i>16-20 years</i>	<i>21-25 years</i>	<i>26-30 years</i>	<i>31-35 years</i>	<i>36-40 years</i>	<i>41-50 years</i>	<i>51-60 years</i>	<i>Over 60 years</i>	<i>Total arrests</i>
Offenses against—									
Person	735	1,563	1,941	1,668	1,292	1,271	365	113	8,952
Chastity	528	1,337	1,031	552	336	241	81	34	4,140
Family and child	131	531	1,014	1,155	985	1,376	367	84	5,643
Public health, etc.	28,105	87,242	100,888	82,222	60,183	53,408	13,513	1,848	426,909
Admin. of gov't	60	204	289	251	159	141	30	7	1,141
Against prop. rights—									
Miscellaneous	52	85	156	130	130	109	35	6	703
Unauthorized use of prop- erty	67	42	29	22	12	7	1	1	181
Destruction of property ..	183	184	157	119	111	131	42	6	933
Frauds, swindles, and breaches of trust	357	568	772	744	783	750	243	80	4,297
Extortion	17	30	49	52	25	19	8	1	201
Robbery	869	816	478	259	110	60	11	1	2,604
Larceny from the person by stealth	163	178	168	148	118	105	29	8	917
Larceny from highway, ve- hicles, etc.	1,611	877	702	502	341	328	95	29	4,485
Burglary	1,003	559	409	257	135	97	20	4	2,484
Sneaks from buildings ...	361	418	406	278	228	246	76	19	2,032
General criminality	4,921	6,667	9,137	8,271	5,648	5,928	2,560	938	44,070
Witnesses, lunatics, etc.	23	27	36	24	22	28	10	2	172
Total	39,186	101,328	117,162	96,654	70,618	64,245	17,486	3,181	516,128

The report also lists 6268 arrests of children under 16 years of age for juvenile delinquencies, that number being included in the above general total of 516,128 persons of all ages.

CRITICISM. See LITERATURE, ENGLISH AND AMERICAN; FRENCH LITERATURE; GERMAN LITERATURE; ITALIAN LITERATURE, ETC.

CROATIA (krô-â'shî-â) **AND SLAVONIA.** A former crownland of the Austro-Hungarian Empire now incorporated in Yugoslavia.

CROATS. See YUGOSLAVIA under *History*.

CROP REPORTING BOARD. See COTTON.

CROPS. See AGRICULTURE, and articles on various crops such as CORN, TOBACCO, WHEAT, ETC., also paragraphs on *Agriculture* under various States and on *Production* under countries.

CROSS-COUNTRY RUNNING. Runners from the mid-West captured the two important cross-country titles of the 1933 season, the national senior A.A.U. crown and the individual intercollegiate championship. Ray Sears of Butler University annexed the former title and the intercollegiate, run at Van Cortlandt Park, in New York City in November, fell to Tom Ottey of Michigan State. A year ago the Eastern section of the country held a virtual monopoly on the titles, team, and individual, but all this was changed in 1933.

Besides watching the national and the inter-

collegiate go West, Manhattan College's strongly favored team lost out in the intercollegiates to a well-balanced Michigan State squad. The national senior team title did remain in the hands of the Millrose A.A. runners, who also repeated in the Metropolitan junior and senior fixtures.

Joe Mundy of Philadelphia won the national A.A.U. junior test and team honors in that meet went to the Meadowbrook Club of Philadelphia. Louis Gregory of the Millrose A.A., and a member of the United States 1932 Olympic squad took the Metropolitan senior event and Tom Russell of Manhattan College ran off with the Metropolitan intercollegiates, captured by the Manhattan College team with a perfect score of fifteen points as well as sixth place to boot.

By far the most sensational runner of the season was young Steven Szumachowski, of the Mont Pleasant High School of Schenectady, N. Y., who increased his string of victories over two seasons to seventeen straight when he retained his national scholastic title at Newark, N. J., Thanksgiving Day. Szumachowski had

easily beaten all scholastic opposition in the East and had, on several occasions bettered college times for the course. Nott Terrace High School of Schenectady gained the team title in the scholastic championships.

CRUPPI, kru'pé', JEAN. A French statesman, died at Fontainebleau, Oct. 17, 1933. He was born at Toulouse, May 22, 1855, and received his education there. After acting as substitute attorney in the Tribunal of the Seine, he became general advocate in the Court of Paris and from 1893 to 1898 was advocate in the Court of Cassation. Entering Parliament in 1898 as deputy for Haute-Garonne, he served as vice-president of the Chamber and in 1907 became president of its radical Left wing. His ministerial career included the portfolios of commerce in Clémenceau's cabinet of 1908-09, of foreign affairs in Monis's cabinet of 1911, and of justice in Caillaux's cabinet of 1911-12. Previous to his death he was advocate in the Court of Appeals of Paris, president of the General Council, and Senator.

Cruppi was made a chevalier of the Legion of Honor. His publications included: *Un avocat journaliste au XVIII^e siècle—Linguet*, which was

crowned by the Academy in 1895; *Pour l'expansion économique de la France* (1910); and *Femmes écrivains d'aujourd'hui* (1912).

CUBA. A large island in the West Indies under Spanish sovereignty until Dec. 10, 1898, and established as a republic on Feb. 21, 1901. Capital, Havana (Habana).

AREA AND POPULATION. Cuba has an area of 44,164 square miles, including the Isle of Pines (1180 square miles) and other small islands (1350 square miles). The population at the 1931 census was 3,962,344, as against 2,889,004 at the census of 1919. The 1931 population, amounting to 90 persons per square mile, was divided among the six provinces as follows (1919 figures in parentheses): Pinar del Rio, 343,480 (261,198); Habana, 985,500 (697,583); Matanzas, 337,119 (312,704); Santa Clara, 815,412 (657,697); Camagüey, 408,076 (228,913); Oriente, 1,072,757 (730,909). The population of the chief cities in 1931 was: Havana, 542,552; Santiago de Cuba, 103,525. In 1930, estimates for the other cities were: Camagüey, 48,773; Matanzas, 46,717; Cienfuegos, 39,946; Marianao, 32,285; and Cardenas, 29,304. More than 70 per cent of the population belong to the white race, the remainder being chiefly Negroes and mulattoes. In 1932, about one-tenth of the inhabitants were aliens.

EDUCATION. Elementary education is free and compulsory. For the year ended June 30, 1932, there were 3816 public schools, with 434,279 pupils, and 364 private schools, with 26,622 pupils. There was a special Institute in each province for advanced education, in addition to the University of Havana. The university had 4795 students before it was closed as a result of political agitation in 1931. It was reopened in 1933, following the overthrow of the Machado régime. See *History*.

PRODUCTION. Sugar is the major factor in the island's economy, comprising about 70 per cent of the total exports. During the period 1928 to 1933, the sugar industry was in acute distress, due to overproduction, price declines, the raising of the American tariff on Cuban sugar, and the closing of other markets. Cuban sugar production declined from 5,156,000 long tons in 1928-29 to 1,994,528 long tons in 1932-33. The average price per pound (Cuban raw, c and f New York excluding duty) fell from 5.24 cents in 1923 to 0.925 cents in 1932 and the total value of the Cuban crop slumped from an annual average of \$308,424,000 for the years 1921-26 to \$76,197,000 for the 1930-31 season and to about \$41,981,000 in 1931-32. The stagnation of the sugar industry spread economic suffering and political unrest throughout Cuba and contributed to the political developments of 1933. Presidential decree of Dec. 29, 1933, fixed the maximum 1934 sugar crop at 2,315,459 long tons.

Other leading crops are tobacco (34,693,000 pounds in 1932), coffee, cacao, cereals, fruits, and potatoes. The forests supply cabinet and dye-woods, fibres, gums and resins. The island's large iron-ore and manganese deposits are worked by American interests. Copper, gold, and salt are other minerals produced. Livestock in 1930 included 4,338,819 cattle, 629,112 horses, 89,389 mules, 101,727 sheep, and 590,912 swine. After 1925, there was a growth of secondary manufacturing industries behind a protective tariff, chiefly in the canning, clothing, footwear, furniture, textile, paint, paper, glass, and cement in-

dustries. The output of smelter copper in 1932 was 20,743 metric tons (13,291 in 1931); iron ore (exports), 62,476 tons (116,126 in 1931).

COMMERCE. Cuban exports and imports declined from an aggregate of \$488,655,000 in 1929 to \$131,686,000 in 1932, as is shown in the accompanying table.

IMPORTS AND EXPORTS OF CUBA
[In thousands of dollars]

Year	General imports	Exports of Cuban products	Favorable trade balance
1929	\$216,215	\$272,440	\$56,225
1930	162,452	167,411	4,959
1931	80,112	118,866	38,754
1932	51,024	80,672	29,648

Trade between the United States and Cuba showed a similar decline. Cuban exports to the United States, mostly sugar, declined from a yearly average of \$235,864,000 during the years 1925 to 1929 to \$58,330,270 in 1932 and \$58,436,789 in 1933. Cuba's imports from the United States averaged \$150,078,000 during 1925-29, but fell to \$28,754,509 in 1932 and \$25,092,862 in 1933.

The leading 1932 imports (1931 figures in parentheses) were: Cotton manufacture, \$6,177,000 (\$8,094,000); rice, \$5,354,000 (\$7,538,000); wheat flour, \$3,085,000 (\$3,843,000); iron and steel, \$2,451,000 (\$3,533,000); crude mineral oils, \$2,084,000 (\$2,304,000). Exports in 1932 and 1931 were: Raw sugar, \$39,682,000 (\$64,918,000); refined sugar, \$14,290,000 (\$13,655,000); unmanufactured tobacco, \$4,605,000 (\$16,635,000); molasses, \$3,457,000 (\$4,860,000); cigars, \$2,365,000 (\$6,036,000); fresh fruit, \$2,835,000 (\$2,991,000). The United States in 1932 supplied 54.2 per cent of Cuba's total imports (57.4 in 1931); United Kingdom, 5.9 (5.0); Spain, 5.8 (5.2); France, 3.3 (3.6). Of Cuba's exports, the United States took 71.3 per cent in 1932 (74.9 per cent in 1931); United Kingdom, 15.4 (13.9); France, 2.5 (1.7); Spain, 1.8 (1.5).

FINANCE. Cuban government finances were in a chaotic condition at the end of 1933, due to revolutionary disturbances and the failure of the Machado government to publish actual budgetary results after the fiscal year 1928-29. Estimated actual revenues, including loans and other special funds, declined from \$124,017,000 in 1928-29 to \$83,475,000 in 1930-31. Regular budgetary revenues were \$89,908,000 in 1928-29 and \$59,581,000 in 1930-31. Total expenditures declined from \$131,463,000 in 1928-29 (of which \$86,765,000 were regular budgetary expenses) to \$97,748,000 in 1930-31 (\$67,887,000 regular). Expenditure estimates in the regular budget for the fiscal year ended June 30, 1932, were \$60,381,494 and actual returns were: Receipts, \$68,741,000; expenditures, \$84,279,000. For 1932-33, estimated expenditures were \$51,475,214 and another actual deficit was indicated. For the fiscal year 1933-34, the probable income was estimated at not more than \$43,000,000, of which \$11,550,000 was earmarked for service on the external debt and \$8,000,000 for the army, leaving \$25,000,000 for all other expenses. Actual figures for 1932-33 or 1933-34 were not available, however.

According to a statement issued by the Cuban Consulate General in New York, Nov. 21, 1933, the funded public debt on Sept. 30, 1933, totaled \$162,706,000, compared with \$182,463,000 on June 30, 1932. The 1933 total was made up as



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DR. RAMON GRAU SAN MARTIN

Provisional President of Cuba, Inaugurated
Sept. 10, 1933



Keystone

COL. FULGENCIO BATISTA

Named Chief of Staff of Cuban Army after leading
successful revolt of Sept. 5, 1933



Acme

MOB SACKS PRESIDENTIAL PALACE

Wreckage of the Presidential Palace in Havana following its sacking by infuriated mob after the flight of
President Machado

CUBA



Wide World

GEN OSCAR R BENAVIDES

President of Peru, Elected Apr 30, 1933



Keystone

DR GABRIEL TERRA

President of Uruguay, Established Dictatorship,
Mar 31, 1933



Acme

THE PAN AMERICAN CONFERENCE

Foreign Minister Alberto Mañé of Uruguay addressing the delegates to the Conference held at Montevideo,
Uruguay, Dec. 3-26, 1933

LATIN AMERICA

follows: External debt, \$53,272,000; public works debt, \$80,879,000; internal debt, \$7,816,000; and the sugar stabilization loan of 1930, \$20,738,000. In addition there was a floating debt of between \$42,000,000 and \$50,000,000.

FOREIGN INVESTMENTS. The U. S. Department of Commerce in 1933 estimated the long-term investments by Americans in Cuba at \$1,040,000,000, a sum which placed the island second to Canada as a foreign field for American financial enterprise. The investments were distributed as follows: Cuban government bonds, \$103,000,000; Cuban non-government bonds, \$3,000,000; sugar plantations and centrals, \$544,000,000; fruit and agriculture, \$35,000,000; petroleum distribution, \$10,000,000; manufacturing enterprises, \$45,000,000; railroads, including sugar lines, \$120,000,000; public utilities, \$100,000,000; miscellaneous, \$80,000,000. British investments in Cuba were estimated at about £36,556,000, including about £29,269,000 in railways.

COMMUNICATIONS. Railways operating as public carriers had 3040 miles of line in 1930-31. All lines were privately owned, most of them by British capital. In addition there were some 3000 miles of line belonging to sugar companies. In 1930-31, the public lines carried 11,890,000 passengers and 18,256,000 long tons of freight. The opening on Feb. 24, 1931, of the Central Highway, traversing the island for 706 miles from Santiago to Pinar del Rio, paralleled the lines of the two largest railway systems and greatly reduced their earnings. Total earnings of the four principal railways dropped from \$32,447,451 in the year 1929-30 to \$14,258,660 in 1931-32. Government highways in 1930 aggregated 1990 miles. Air mail and passenger lines connect Cuba with North and South America, Mexico, and neighboring Caribbean islands. In 1930, 5543 vessels, of 13,605,000 net registered tons, entered Cuban ports and 5509 vessels, of 13,481,000 tons, cleared.

GOVERNMENT. The Constitution, as amended May 11, 1928, vested executive power in a president, elected for six years and ineligible for reelection. Legislative power rested in a national congress of two houses, the Senate of 37 members elected for six years (nine years after 1933) and the Chamber of Representatives of 128 members, elected for six years by male and female suffrage. President at the beginning of 1933, Gen. Gerardo Machado y Morales (Liberal), who was inaugurated May 20, 1929, for a second term expiring May 20, 1935. During the latter part of Machado's administration, all three parties represented in Congress—the Liberal, Conservative, and Popular parties—were under his control. The country was divided into six provinces and 119 municipalities. Each province was administered by a governor, elected indirectly, and a council; each municipality by an *alcalde* (mayor) and an elected municipal council. Havana was made a Federal District in 1931, with an *alcalde* and council appointed by the President. For developments during 1933, see *History*.

HISTORY

THE STRUGGLE AGAINST MACHADO. The opening of the year 1933 found the Cuban people suffering from acute economic privations and seething with political unrest under the ruthless dictatorship of President Machado. Supported by the great majority of the population, students and other Opposition groups were engaged in a savage

underground warfare of terrorism and assassination against the government. The island was under martial law, constitutional guarantees were suspended, the press was rigidly censored, all criticism of the government was forbidden. Exercising absolute control over the army, the police, the National Congress, and ignoring the adverse decisions of the Supreme Court, the President caused his opponents to be assassinated, exiled, or imprisoned without trial. Since the crushing of the anti-Machado revolt of August, 1931, the Opposition had resorted increasingly to terrorism and sabotage, while Machado tightened his repressive measures. The President's secret police and *Porra*, or strong-arm squads, continually hunted down Oppositionists, broke up their secret meetings, invaded homes and offices, held suspects incommunicado in military prisons while submitting them to torture to secure information concerning their associates. It was conservatively estimated that since the 1931 revolt, between 150 and 200 Machado opponents had been assassinated under the cloak of the *ley de fuga* (law of flight), permitting the police to shoot offenders resisting arrest or attempting to escape. The jails were filled with political prisoners, while in Miami, Fla., New York City, and other foreign cities large groups of exiles worked incessantly for Machado's overthrow.

The struggle raged with increasing ferocity from January, 1933, until August 11, when the Army withdrew its support from the President. Then the Machado régime collapsed and a long-oppressed people wreaked its vengeance upon its oppressors.

In January, there were additional murders under the *ley de fuga*. The bullet-riddled bodies of several students were found in Havana streets. The Spanish Embassy, claiming that one of them was a Spanish citizen, demanded the punishment of the policemen responsible for his death. There were street disorders in four cities on January 10, the third anniversary of the assassination of the student martyr, Julio Antonio Mella. English-language newspapers in Havana were placed under the censorship for the first time on January 9 and thereafter American periodicals containing criticisms of the Machado government were excluded from the Cuban mails.

February found guerrilla bands operating against the government in the interior. They attacked police posts and army patrols, wrecked trains and railway bridges, and burned extensive cane fields. Guerrilla activities increased alarmingly during March and April, while in Havana and other cities terrorism on both sides assumed more savage forms. The chief of the *Porra* was shot and killed in Havana, March 11, and new bombings were followed by the arrest of some 75 Oppositionists. The assassination of a Havana military supervisor on April 6, a score of bomb explosions in Havana April 13 and 14, and the execution of several students on the streets shortly afterward brought Havana to the verge of open rebellion. A correspondent of the New York Times watched while Negro sharpshooters posted on cliffs dominating a Havana street shot down two students who had been ejected from a Secret Service automobile and told to run.

Meanwhile the economic depression deepened and the financial straits of the government grew more critical. Government revenues had declined from \$87,000,000 in 1926-27 to about \$38,000,000

in 1932-33, despite heavily increased taxation. The army of 12,000 men, upon which Machado depended for his continuance in power, was costing \$10,000,000 annually. The public debt, which had doubled under Machado's administration, required large additional sums for interest and amortization. There were no funds in the Treasury to meet debt payments aggregating \$15,000,000 due June 30, 1933. Accordingly, Congress on March 31, authorized the President to declare a moratorium on foreign debts. The salaries of teachers and all other public servants, except the Army, were far in arrears.

By the end of May several thousand men, in widely scattered bands, were under arms against the government in the interior. The army had definitely failed to restore order, despite summary hangings and shootings by Maj. Arsenio Ortiz, who had been sent by Machado to crush the insurrectionary bands. The position of the government was becoming increasingly difficult when Sumner Welles, the new American Ambassador replacing Harry F. Guggenheim, arrived in Havana May 7, with instructions from President Roosevelt to end the Cuban turmoil, if possible, without precipitating American intervention.

AMERICAN MEDIATION. Coincident with the arrival of Ambassador Welles, President Machado released 51 political prisoners and transferred the censorship of the press from the Army to the Department of the Interior. Oppositionists charged that these gestures were designed to favorably impress Mr. Welles. Soon after his arrival, the Ambassador offered his services as mediator between the government and the Opposition. On June 15, both the government and the A.B.C. revolutionary organization—the most militant of the Opposition elements—accepted his good offices. Subsequently all Opposition groups except the Menocal Conservatives and the students agreed to negotiate a settlement. Representatives of the Opposition groups first met with Mr. Welles and reached an agreement upon the Constitutional reforms which they demanded of the government. Representatives of the government and of the Opposition parties then met under Mr. Welles' guidance to weld the Constitutional reforms into definite shape for adoption by Congress.

Before these negotiations could succeed, the Ambassador's carefully planned mediation efforts were frustrated by the action of Machado and the outbreak of a general strike during the first week of August. The President had made strenuous efforts to reach a settlement under which he would be permitted to serve out his term of office. On June 7 he promulgated his detailed plans for constitutional reform. They called for the restoration of the office of Vice President, the selection of a neutral to fill that position, and a new electoral code to be drawn up by Prof. Howard Lee McBain of Columbia University. He promised that Opposition political parties would be allowed full freedom to organize. Assassinations were ended, the censorship was raised, and more political prisoners were freed.

Except in the interior, where disorders continued, the main Opposition groups accepted the truce and terrorism subsided during the course of the peace negotiations. On July 26, President Machado announced the restoration of constitutional guarantees as a requirement for the continuance of the negotiations. In doing so he reiterated to the Senate his determination to re-

main in office until May 20, 1935. The Opposition groups, however, were unanimous in insisting upon his immediate resignation. The Ambassador's plans called for Machado's retirement in about six months, after the election of a Constituent Assembly and of a Vice President, who would succeed the President in office. Unwilling to relinquish his power without a struggle, Machado now sought to frustrate the American Ambassador's efforts. A barrage of opposition to the negotiations was raised in Congress. Opposition leaders were again harassed. An atmosphere of distrust obstructed the progress of the discussions. Then on August 2 occurred the strike of Havana street-car operators, which quickly spread to other industries and cities. By August 4 a general strike had paralyzed business throughout Cuba. The laboring classes took the fate of Machado out of the hands of the political negotiators.

DOWNFALL OF MACHADO. Ostensibly a sympathetic strike on behalf of the omnibus operators, the walkout was obviously aimed at the Machado administration. Thousands of Cubans who had seen Machado repudiate previous promises of reform and who had grown pessimistic over the prospects of the American ambassador's mediation, joined in the general strike as a protest against their government. Teachers, students, and doctors joined the laborers in passive resistance. The threats of the police failed to open the shop doors. Apparently hoping to break the strike by stirring the populace to violence and then crushing the outbreak, the government sent armed squads in automobiles through the city, firing into the air. The *Porra* commenced to hunt down Oppositionists once more. On August 7 Congress suspended constitutional guarantees. The same day an erroneous report that Machado had resigned was broadcast by radio, allegedly by one of the President's agents. The people, pouring into the capitol square with joyous shouts of "Long Live Free Cuba," were fired upon and dispersed by the *Porra* and the troops. Thirty persons were killed and more than 100 wounded.

On the same day Ambassador Welles, seeking to avert further bloodshed, presented the President with a memorandum urging him to appoint a man acceptable to all parties as Secretary of State and then to depart from Cuba on a leave of absence. The Secretary of State would then assume the Presidency, form a National cabinet, and undertake the restoration of constitutionalism and peace. Machado angrily rejected the proposal, called upon the people to fight against American intervention, and threatened to defend Cuba's sovereignty with the army. The people, unimpressed, continued the general strike.

Then came the decisive action of the army, motivated by the conviction that Machado intended to provoke American intervention. On August 11 the younger officers in the Cabana fortress at Havana defied their superiors and assumed control of the fortress. Then, under Lieut.-Col. Erasmo Delgado, they seized the Army headquarters in Havana and gave President Machado 48 hours to resign and leave Cuba. Unable to rally any of the officers to his assistance, Machado capitulated. He accepted the resignation of all Cabinet members except Secretary of War Alberto Herrera, signed his own leave of absence, and fled by airplane in the afternoon of August 12 to Nassau in the Bahamas, later going to Montreal, Canada. General Herrera automatically

became acting President, but the Army realizing that his presence in the office would mean further bloodshed, demanded a civilian. Herrera was forced to appoint Dr. Carlos Manuel de Cespedes as his Secretary of State and then to resign, leaving de Cespedes free to reorganize the government.

Machado's flight was followed by three days of delirious demonstrations throughout Cuba. In Havana mobs sacked the Presidential palace and the homes of Machado's colleagues. They destroyed the tyrant's statues, newspaper, grocery store, and every material vestige of his rule. Armed bands of A.B.C. members and other Oppositionists hunted down the hated members of the *Porra*, shooting them on sight. Within a few days 75 of Machado's henchmen had been killed and some 200 wounded in Havana; others remained in hiding or fled hastily to foreign ships or embassies.

With the consent of Provisional President Cespedes, President Roosevelt on August 13 sent three destroyers to Havana to protect American lives and extend moral support to the new government, which the United States immediately recognized. The general strike was terminated on August 14 and rioting subsided so that the last American destroyer was withdrawn August 18.

THE CESPEDES GOVERNMENT. Dr. Cespedes was the son of the father of Cuban independence and a lawyer, writer, and diplomat who held the confidence of the bulk of the Opposition groups. He formed a Cabinet of able and honest men, representing the various anti-Machado groups. During its short tenure of office, the Cabinet worked indefatigably to restore order and earned the approval of a large section of the public. Finding it impracticable to continue the guise of constitutionalism, it declared itself frankly revolutionary by a decree of August 24, dissolved Machado's Congress, annulled the constitutional reforms of 1928 by which Machado had extended his term of office, and restored the constitution of 1901. A consultative assembly was appointed to aid the Cabinet pending the election of a new Congress and President, set for Feb. 24, 1934. Discipline was restored in the army, serious strikes of railway operatives and Havana dock workers were settled, and the mob spirit in Havana was curbed. Throughout, the Cespedes government worked in close cooperation and sympathy with the American Ambassador.

REVOLT OF THE ARMY PRIVATES. On September 5, a revolt of the army rank and file, led by Sergeant Fulgencio Batista and instigated by the students and the radical wing of the university professors, overthrew the Cespedes government. The army privates were discontented with the prospects of a reduction in their numbers and wages. The students and radical elements were dissatisfied with the government's slow progress toward constitutional reform, its alleged subservience to the United States, its insistence upon orderly judicial procedure against Machado's adherents instead of their summary execution. Finally, there was the students' conviction that corrupt and discredited politicians were worming their way into office and that the Conservatives on one hand and the Communists on the other were conspiring to overthrow the government.

The insurgents followed the same procedure by which their superiors had overthrown Machado a month earlier. They seized control of the

Cabanas fortress and of the Havana army headquarters, displaced their officers, and replaced the Cespedes Cabinet with a junta of five intellectuals, led by Prof. Ramón Grau San Martín of the University of Havana. Other members of the junta were Dr. Guillermo Portela, also a Havana University professor; Porfirio Franco, a business man; José M. Irizarri, a young lawyer; and Sergio Carbo, a newspaper editor.

The new government assumed power without bloodshed, but with little public confidence and support. It was dominated by the immature student radicals, who were honest, high-minded, and passionately determined to free Cuba both from political corruption and tyranny and from subservience to the United States. Opposing it were the army officers, the A.B.C., another revolutionary group called the O.C.R.R., all the old political parties, a strong section of the professors, the Communists, and the more radical labor organizations. Another formidable handicap was the failure to secure recognition from Washington.

ROOSEVELT AVOIDS INTERVENTION. The *coup d'état* of September 5 apparently took Washington by surprise. Fearing that it presaged widespread disorders, the Roosevelt Administration dispatched about 30 war vessels to Cuban waters, concentrated 1000 marines at Quantico, and announced that Secretary of the Navy Swanson was en route to Havana. The State Department stated that intervention was not contemplated and that these moves were solely for the protection of the 6000 American citizens in Cuba. Washington's action, however, aroused resentment in some Cuban circles and much criticism in the United States and Latin America. President Roosevelt met this criticism by ordering Secretary Swanson not to land at Havana and by assuring the diplomatic representatives of Argentina, Chile, Brazil, and Mexico at a White House conference that he would take all possible steps to avoid intervention. Secretary of State Hull announced September 11 that the United States would "welcome any (Cuban) government representing the will of the people of the republic and capable of maintaining law and order throughout the island. . . ." The warships remained in Cuban waters during the critical weeks which followed.

THE STUDENT-ARMY GOVERNMENT. From the outset, the junta established by the student-army revolt was forced to rely upon the army for its continuance in office. After unsuccessful efforts to win the support of other revolutionary groups, the junta relinquished power on September 10, delegating all authority to Dr. Grau San Martín, who was named Provisional President. The Provisional President, however, faced the same opposition as had the junta. He and his cabinet were controlled by a directorate of students and professors, uncompromisingly determined to carry through a social revolution along intensely nationalistic and socialistic lines. They opposed both communism and fascism. Their model was the revolutionary republican régime in Spain.

On September 14, decrees were issued establishing a dictatorial régime pending the drafting of a new constitution at a convention for which elections were to be held "as soon as possible." The following day the President and his student colleagues initiated negotiations with Opposition groups for the formation of a coalition Cabinet. The students refused the unanimous demand of

the opposing elements that Dr. Grau San Martín resign and a deadlock ensued. While the students strove desperately to win over opposing groups, retain the fickle support of the army, and carry on governmental functions, Communist agitators gained increasing influence over the labor unions. The A.B.C. and other groups continued in passive opposition, but in the interior sporadic uprisings and disorders kept the government on edge. In various parts of the island laborers seized control of American and other foreign-owned sugar plantations and properties, bringing the threat of American intervention. The deposed army officers, armed and concentrated 521 strong in the National Hotel in Havana, rejected all overtures from the Grau government and demanded the restoration of Dr. Cespedes' coalition Cabinet.

Meanwhile the economic life of the island was in a large measure paralyzed. Business was at a standstill, credit was frozen, and bills and taxes remained unpaid. The government was practically without revenue.

The students acted vigorously to check the tide of opposition. They organized their own militia, and with the aid of the Army put down several attempts at insurrection in the provinces. On September 16 the student directorate sent half its members to organize the government throughout the island. In Havana a number of Opposition leaders were arrested and accused of conspiring against the government. A virulent Communist agitation in the capital was curbed on September 20, when troops broke up a great Red demonstration. Six persons were killed and 27 wounded in the accompanying riots. Thereafter the Communist agitation was rigorously suppressed.

The Grau government was further strengthened by the Army's victory in a clash with the deposed officers on October 2. After an all-day struggle, in which 100 were killed and 250 wounded, the officers surrendered. Despite extensive damage to the American-owned National hotel, which the officers used as a fortress, and the accidental killing of an American onlooker, the United States held steadfastly to its non-intervention policy.

The long expected break between the A.B.C. and the student-army groups occurred on the same day as the battle with the army officers. Following the surrender of the officers, there was extensive street fighting in Havana, with armed groups in automobiles firing upon the troops, police, and other supporters of the government. These outbreaks were attributed to the regular A.B.C. organization, as distinguished from the A.B.C. Radical faction, which continued to support the government. The following day the government rounded up many A.B.C. members, including Dr. Miguel Mariano Gomez.

Violent opposition to the government increased after the student directorate and the army on October 10 ended all hope for the formation of a coalition government by announcing their determination to retain the Grau government in office until the constitutional convention scheduled for May 20, 1934. Former President Mario G. Menocal, head of the Conservative party; the A.B.C. leader, Joaquin Martinez Saenz; and other Opposition party heads signaled the end of political negotiation by taking refuge in the United States. On October 14, Col. Fulgencio Batista, head of the army since the revolt of

September 5, called on all the civilian armed groups to lay down their arms.

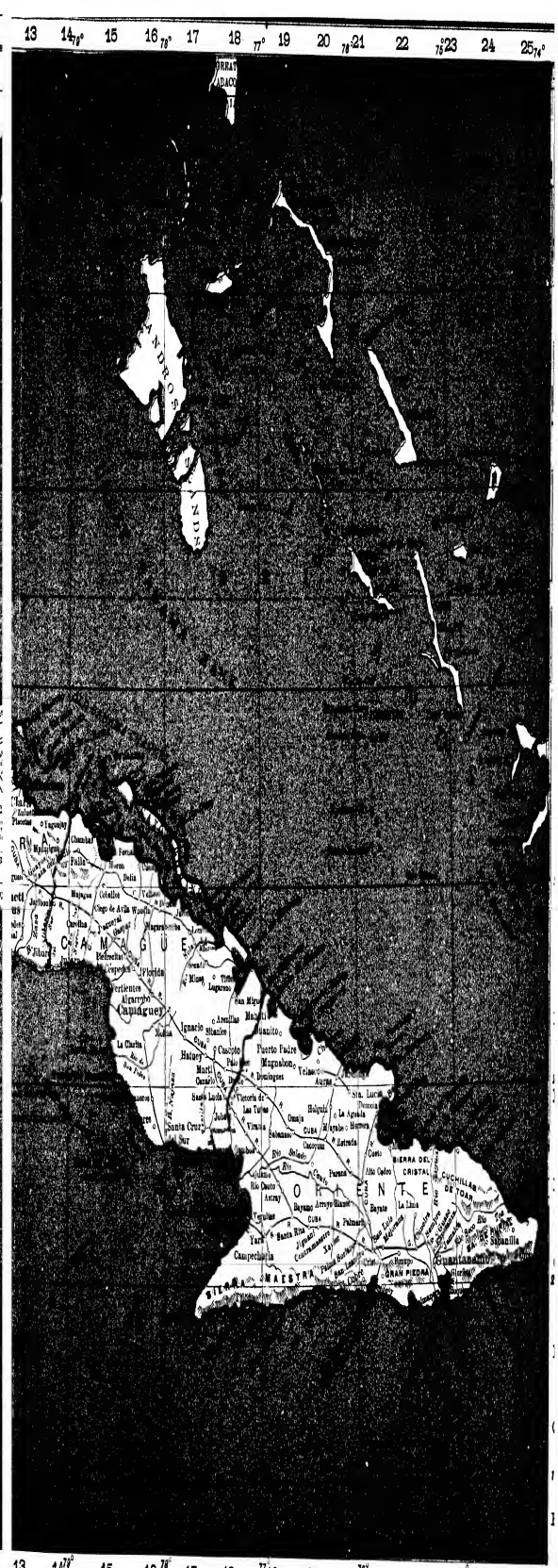
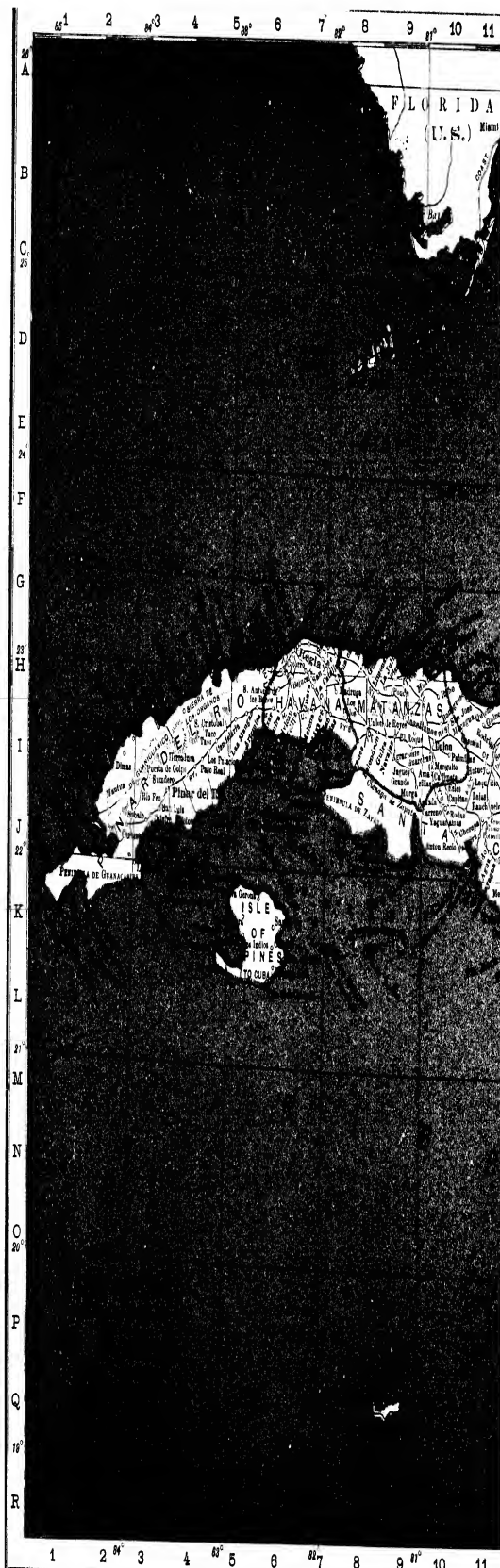
Shortly afterward the defection of the A.B.C. Radicals from the Grau régime was reported. The beginning of November found Havana again in a state of tension reminiscent of the last days of the Machado administration. There were general strikes against the government's "repressive methods," a series of terroristic bombings, and serious defections from the Grau government among the students, who had heretofore been its most vigorous supporters.

A second revolt against the Grau San Martín government was launched in Havana by supporters of Dr. de Cespedes on November 8. The rebel groups included some sergeants and privates of the air corps, members of the A.B.C., the garrisons of Forts Dragones, Atares, and San Ambrosio, the Havana police, and many unorganized civilians. Most of the army and navy remained loyal to the student-army government, however. After two days of heavy fighting in the Havana streets, the main body of rebels, concentrated in Fort Atares, were forced to capitulate before an artillery bombardment. Their commander, Col. Juan Blas Hernández, a popular guerrilla leader in the anti-Machado struggle, was killed in the fighting. The government forces were again victorious in street fighting with the remnants of the rebels on November 11, bringing to an end the revolt, which had cost some 300 lives.

Successful in the Havana fighting, the government was able to retain control of the capital until the end of the year. It was unable to restore order throughout the provinces, where numerous uprisings had occurred in connection with the Havana revolt. A state of underground warfare continued in Havana, with sporadic bombings, sniping, and arrests of Opposition leaders. Meanwhile negotiations for a working agreement between the government and the Opposition were continued, the principal effort being made by the Uruguayan Minister to Cuba, Dr. Fernández Medina. The formulas offered called for the resignation of Dr. Grau San Martín and the formation of a coalition government, conditions unacceptable to the Provisional President. On December 11 he broke off the negotiations, asserting he had no intention of resigning.

Thereafter the radical faction gained the ascendancy in the Grau San Martín régime. This change was marked by the resignation on December 22 of three conservative members of the cabinet and by a series of presidential decrees which furthered the government's radical economic policies. The decrees were aimed mainly at foreign-owned sugar mills and public utilities, as well as at large employers of Cuban labor. One decree ordered all concerns in Cuba to employ at least 50 per cent Cuban labor. This measure threw thousands of Spaniards in Cuba out of work and resulted in a protest demonstration on December 17 in which four were killed and 10 wounded. Another decree of December 6 ordered the American-owned Compañia Cubana de Electricidad to reduce its rates 45 per cent without reducing either personnel or salaries. Two large American-owned sugar mills were seized by the government on December 21. Meanwhile radical labor groups, through strikes and violence, were demanding extensive concessions from foreign companies. Colonel Batista appeared to be the chief advocate of moderation within the government.

Despite its domestic difficulties, the Grau San



Martin government continued to meet the monthly debt instalments due in New York on Cuban foreign obligations. On December 31, however, it defaulted on service charges totaling \$4,718,860 due New York banks on public works loans contracted by the Machado administration.

Despite the continued disorders in Cuba and pressure brought to bear from both Cuban and American business interests there, the United States government persisted in its decision not to intervene. On the other hand, it was equally adamant in refusing to recognize the Grau San Martín régime, although bitterly attacked by Cuban delegates to the seventh Pan-American Conference and by many American liberals on this score. Due to the antagonism of the Grau régime, the position of Sumner Welles as United States representative in Havana became increasingly difficult. After a long conference with Mr. Welles at Warm Springs, Ga., on November 19, President Roosevelt on November 24 announced the early withdrawal of the American envoy and his replacement by Jefferson Caffery, Assistant Secretary of State. Mr. Roosevelt expressed the hope that the Cubans soon would unite behind a provisional government so as to warrant recognition by the United States. He intimated that the United States was prepared to modify the permanent Cuban-American treaty, which included the Platt Amendment, and to conclude a new commercial pact. Mr. Caffery was greeted with cheers when he arrived in Havana December 18.

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CUFRA. See CYRENAICA.

CUMBERLAND PRESBYTERIAN CHURCH. A branch of the Presbyterian Church in the United States of America, originally the Cumberland Presbytery of Kentucky. For the early history of this church see *THE NEW INTERNATIONAL ENCYCLOPEDIA*, vol. xix, p. 181, and *THE NEW INTERNATIONAL YEAR BOOK* for 1932.

A general assembly which meets annually is the supreme judiciary, the 1933 meeting being held in Memphis, Tenn., June 14-19. In 1933 there were 1178 churches, reporting 758 ministers and a church membership of 69,516, in the denomination's 10 synods and 62 presbyteries. The Sunday school enrollment was approximately 52,250. The property of the church was valued at \$3,356,537, not including a \$500,000 endowment for education.

Missionary work is carried on among the Indians in the United States, in China, and South America. The denomination maintains Bethel College and the Cumberland Presbyterian Theological Seminary, both in McKenzie, Tenn. Its official organ is the *Cumberland Presbyterian*. The Rev. W. B. Cuninghame, D.D., of Union City, Tenn., was moderator of the general assembly in 1933, and the Rev. D. W. Fooks of Nashville, Tenn., was stated clerk and treasurer.

CUNO, ku'no, (CARL JOSEPH) WILHELM. A German industrialist and statesman, died at Aumuehle, near Hamburg, Jan. 3, 1933. He was born at Suhl, Thuringia, July 2, 1876, and was educated at the Universities of Berlin, Heidelberg, and Breslau, specializing in jurisprudence. After practicing in the Berlin courts he became counselor with the Prussian Finance Ministry in 1907 and in 1912 was made Privy Counselor. During the World War he was director of the grain organization of the Food Ministry, but resigned this post in 1917 to become a member of the board of directors of the Hamburg-American Shipping Line, and on the death of Albert Ballin in 1918 became its general director. He was economic expert for the German delegation at the Paris Peace Conference and at subsequent conferences in Brussels, Geneva, and Spa.

Dr. Cuno became Chancellor of Germany in November, 1922, but criticism of his policy of passive resistance to the French and Belgian military occupation of the Ruhr, and of the disastrous inflation of the mark, led to the resignation of his ministry in August, 1923. He then resumed the directorship of the Hamburg-American line, devoting his energies to the post-war rehabilitation of this line which he had inaugurated before accepting the chancellorship. By the terms of the Treaty of Versailles the aggregate tonnage of the shipping firms of Hamburg had been reduced from 1,643,000 tons in 1913 to 82,000 tons in 1918. Dr. Cuno was a leader in the spectacular revival of the fortunes of the port of Hamburg, having increased the tonnage of ocean shipping of his own line from 4000 tons in 1918 to 300,000 tons in 1922. In 1929 he formed with Lord Reading the Anglo-German Shipping Association and enlarged the field of the Hamburg-American Line by extending its operations to the western coast of the United States.

CURACAO, koo'ra-sä'ō or kūrā-sō'. A colony of the Netherlands in the West Indies comprising two groups of islands about 500 miles apart, one group consisting of the islands of Curaçao (210 square miles; 45,191 inhabitants on Jan. 1, 1932), Bonaire (95 square miles; 5805 inhabitants), and Aruba (69 square miles; 16,689 inhabitants) is just north of Venezuela; the other group consisting of the southern part of the island of St. Martin (17 square miles; 2568 inhabitants), and the islands of St. Eustatius (7 square miles; 1004 inhabitants), and Saba (5 square miles; 1512 inhabitants) is just west of the Virgin Islands. Total area, 403 square miles; total population, 71,769. Willemstad, the capital city on the island of Curaçao had a population of 20,972. In 1931 there were 2405 births, 502 marriages, and 1266 deaths. For the same year there were 44 schools with 10,432 students.

The chief products are maize, beans, pulse, cattle, phosphate of lime, and salt. Oil refining is the principal industry. Total imports for 1931 were valued at 248,101,115 guilders (guilder equals \$0.402 at par); exports were valued at 242,861,330 guilders. For the budget of 1933, revenue was estimated at 7,298,250 guilders and expenditure, at 5,727,702 guilders. There were 10,959 vessels aggregating 45,961,170 tons entered the ports in 1931. The colony is administered by a governor assisted by a council of 4 members and a colonial council of 13 members, all nominated by the sovereign. Governor in 1933, B. W. T. van Slobbe.

CURLING. The Gordon International Medal, signifying curling supremacy, was won in 1933 for the fourth consecutive time by Canada. The Canadians showed a marked superiority over the United States players. The Canadians won the annual tournament (curling is practically lawn bowling on ice) 259 to 194. The National Gordon Medal, vied for by United States teams, went to the Caledonians of New York, composed of George V. Cobban, James Whyte, P. F. Gilmarth, and W. Culbertson, skip. The Utica Country Club captured the Emmett Medal, downing St. Andrews of New York in the final. The Caledonia Club of New York won the Clyde Park Trophy and another Utica team rink won the Stockton Trophy. The Canadian championship saw the defeat after five years of the Manitoba team, which bowed in the final, 11 to 3, to the Edmonton Royals.

CURRENCY. See COINS, VALUE OF; FINANCIAL REVIEW; MONEY; UNITED STATES.

CURRICULUM. See EDUCATION IN THE UNITED STATES; UNIVERSITIES AND COLLEGES.

CURRIE, SIR ARTHUR WILLIAM. A Canadian soldier and educator, died in Montreal, Nov. 30, 1933. Born at Napperton, Ont., Dec. 5, 1875, he attended the Strathroy (Ont.) Collegiate Institute and from 1894 to 1900 taught school at Sidney and Victoria, B. C. He then became engaged in the real estate and insurance business in Victoria and was also president of a mining corporation. On joining the fifth regiment of the garrison artillery in 1897, he thereafter made service in the Canadian militia his avocation, being commissioned lieutenant in 1900 and commander of the regiment nine years later. In 1913 he was assigned to the command of the 50th regiment of the Gordon Highlanders of Canada, with the rank of lieutenant colonel.

On the outbreak of the World War Sir Arthur was appointed commander of the second infantry brigade of the Canadian Expeditionary Forces, being promoted after the arrival of the troops in France to the rank of colonel and then to brigadier general. In the latter capacity he was engaged in those battles of the British offensive in which the Canadian contingent especially distinguished itself, namely the second battle of Ypres (April, 1915), in which poison gas was used by the Germans for the first time in warfare, Festubert (May, 1915), and Givenchy (June, 1915). As commander after September, 1915, of the First Canadian Division, with the rank of major general, he participated in the battles of Mt. Sorrel (June, 1916); the Somme (September-October, 1916); and in the first battle of Arras (April, 1917) directed the storming of Vimy Ridge which resulted in the capture of 4000 prisoners and large quantities of war materials. In June, 1917, he succeeded General Byng as commander of the Canadian Corps in France, with the rank of lieutenant general, transferring its operation to Belgium where it participated in the capture of Passchendaele during the battle of Flanders.

During the closing Allied offensive of the War the Canadian forces were used as shock troops and distinguished themselves by piercing the Hindenburg line, not only capturing during the second battle of Arras (August-September, 1918) Wancourt, Monchy-le-Preux, Cherisy, Vis-en-Artois, and the Bois-du-Sait, but smashing the Quéant-Drocourt sector of the line. The Hindenburg line itself was broken in the capture of Cambrai (October, 1918) and of Valenciennes and Mons

(November, 1918). Sir Arthur commanded also the Canadian forces during the occupation of the Rhine in 1919. On his return to Canada he was promoted to the rank of general and was made inspector-general of the Canadian militia and principal military councillor.

Sir Arthur served after 1920 as principal and vice-chancellor of McGill University. In 1928 he won the libel suit which he brought against the Port Hope (Ont.) *Guide* and W. T. R. Preston, the author of the article "Mons," which charged that Sir Arthur had wasted the lives of his soldiers without reason on Nov. 10 and 11, 1918, in the 24 hours before the Armistice became effective. Among his decorations were the American Distinguished Service Medal, the French Croix de Guerre with palms, and the Croix de Guerre of Belgium. He was created a Companion of the Bath (1915), Knight Commander of St. Michael and St. George (1917), Knight Commander of the Bath (1918), Knight of the Grand Cross of St. Michael and St. George (1919), Grand Officer of the Order of the Crown of Belgium, and Commander of the French Legion of Honor.

CURTIS, CYRUS H (ERMAN) K (OTZSCHMAR). An American publisher and philanthropist, died at Wyncote, Pa., June 7, 1933. He was born in Portland, Me., June 18, 1850, and received his education in the public schools of that city. His future career was determined by his success at the age of 15 with a four-page boys' weekly entitled *Young America*, which he published on a small hand press, purchased out of the profits of his newspaper sales, and which achieved a circulation of 100 copies. He worked in a Portland dry goods store during 1867-70 and then went to Boston where he acted as advertising solicitor for the *Times*. He thrice attempted to enter the publishing field, with the *People's Ledger* in 1872, the *Boston Independent* in 1874, and, after removing to Philadelphia, the *People's Ledger*, *Boston* and *Philadelphia* in 1876. The first venture was wiped out by fire, while the other two did not succeed in weathering the perilous first year. His efforts were finally crowned with success with the establishment in 1879 of a weekly entitled the *Tribune-Farmer*. Associated with him were his brother-in-law, Hamilton Mayo, a Massachusetts banker, and Thomas Meehan, the distinguished horticulturist, who served as editor. Within two years the paper's circulation had reached 48,000 copies weekly.

The *Tribune-Farmer* was devoted primarily to agricultural topics, but a special feature was the woman's page, of which Mrs. Curtis assumed guidance. After 1883 it was issued as a separate supplement entitled the *Ladies' Home Journal*, its success leading Mr. Curtis to sell his interest in the *Tribune-Farmer* the following year and concentrate on its development. Mrs. Curtis continued to edit the *Journal* until 1889, when it passed under the direction of Edward W. Bok who made it one of the most popular magazines in the United States. Attaining a circulation of 2,000,000 copies monthly, it exerted a great influence in raising the standards of taste of women of the American middle class and in interesting them in bettering the conditions of their homes. In 1891 Mr. Curtis organized the Curtis Publishing Co., of which he was president until 1932 and chairman of the board at the time of his death.

The next phase in Mr. Curtis's publishing career

was the purchase in 1897 of the almost defunct *Pennsylvania Gazette*, founded in 1728 by Benjamin Franklin. He renamed the publication the *Saturday Evening Post* and employed a young Boston reporter, George Horace Lorimer, as editor. Its early circulation appeal was "Success for the men and romance for the women." Mr. Curtis stated that he spent a million dollars in advertising the periodical before it began to pay for itself, but its historical associations as the oldest weekly newspaper in the United States were successfully utilized and after the corner was turned it became not only the most profitable but the most influential of American weeklies. By 1902 it had attained a circulation of more than 500,000 copies weekly, while 30 years later it boasted a circulation five times as large. Mr. Curtis's third venture in the periodical field was the *Country Gentleman*, which he purchased in 1911 and moved from Albany to Philadelphia where he built up its circulation to 600,000 copies weekly.

In 1913 Mr. Curtis decided to enter the newspaper field once more, purchasing the Philadelphia *Public Ledger*, to which he added an evening edition in 1914. He later acquired the Philadelphia *Evening Telegraph* (1913), the Philadelphia *Press* (1920), and the Philadelphia *North American* (1925), which were merged with the *Public Ledger*. In 1923 he entered the New York field through the purchase of the *Evening Post*, and in 1930, through the Curtis-Martin Newspapers, Inc., which he headed in association with his stepson-in-law, John C. Martin, bought the Philadelphia *Inquirer*, the largest newspaper in Pennsylvania. His motto was: "Give the public the best it knows."

Mr. Curtis was a generous contributor to educational institutions, outstanding among his gifts being \$1,000,000 to the University of Pennsylvania, \$950,000 to Bowdoin College, \$850,000 each to Drexel Institute and Temple University, \$400,000 to Ursinus College, and \$100,000 to Wellesley College. Also he contributed \$1,500,000 for the construction and endowment of the Curtis Clinic of the Jefferson Medical College, and in 1930 gave the same amount to the Benjamin Franklin Memorial and Franklin Institute Museum in Philadelphia erected in 1932.

Mr. Curtis was greatly interested in art and in music, his personal art collection including some of the world's most noted paintings. The pipe organ was his favorite instrument, and not only did he have a splendid instrument in his home but he presented organs to various universities, churches, and institutes, the one given by him to the University of Pennsylvania, known as the Sesqui-Centennial organ, ranking fourth in size in the world. In 1924 he founded in Philadelphia the Curtis Institute of Music, whose permanent endowment on the appointment of Josef Hofmann as director three years later was increased to \$12,500,000.

In his later years Mr. Curtis spent much of his time on his yacht, the *Lyndonia*, being accustomed to hold conferences of his executives at such ports of call as Portland, Boston, and New York. He was also a member of the board of directors of the First National Bank of Philadelphia, the Mutual Life Insurance Co. of New York, and the Academy of Music Corp. In 1930 he received the gold medal bestowed annually by the Pennsylvania Society upon the "most characteristic American," while the Harvard Gradu-

ate School of Business Administration awarded him the Bok gold medal in recognition of the service he had rendered in maintaining a high advertising standard. His son-in-law, Edward Bok, told the story of his career in *A Man from Maine* (1923).

CYCLING. Besides the fact that the list of cycling titleholders was almost completely revised in 1933, the year was noteworthy for the revival of interest in bicycling for entertainment. In the spring and summer there were scenes reminiscent of the early days of the century when in all large cities throughout the United States throngs went bicycle riding. Bicycle sales mounted and renting shops did a brisk trade.

In the championship lists there were only two holdover champions, one a world's champion and the other a United States titleholder. Joseph Scherens of Belgium successfully turned back repeated challenges to retain his world's professional sprint crown, and Alfred Letourner, French star, kept his United States professional motor-paced title honors. Georges Spicher of France succeeded Alfred Binda as world's professional road champion and Charles Lacquehay of France displaced his compatriot, Georges Paillard, as world's professional motor-paced champion. The amateur sprint championship of the world went to Jacobus Von Egmond of Holland who succeeded Albert Richter of Germany, and Paul Egli of Switzerland won the world's amateur road title.

Norman Hill, San Jose, California rider, won the national professional all-around crown, displacing Cecil Walker, who had held the title eight times. Eddie Miller of New York City took the national amateur sprint honors, succeeding Tino Reboli as titleholder. George Dempsey, Australian, took the national professional sprint laurels, also displacing Walker.

Letourner and William (Torchy) Peden, Vancouver cyclist, shared honors in the six-day field. Teamed with Gerard Debaets of Belgium, Letourner won the race in Madison Square Garden in New York in March and in December won with Peden as his partner. Peden's triumph with Letourner was his eighteenth of his two-year-old career. Peden won five other six-day races throughout the United States and Canada in the course of the year.

Cycling was popular with spectators and the six-day races and the one-day matinees held throughout the country were well attended and were money makers for the promoters.

CYPRUS. A British island colony in the Mediterranean, 60 miles west of Syria and 40 miles south of Turkey in Asia. It was ceded to Great Britain for administrative purposes by Turkey in 1878, formally annexed by Great Britain on Nov. 5, 1914, and given the status of a British colony, May 1, 1925. Total area, 3584 square miles; total population (1931 census), 347,959, of whom 283,562 were Christians and 64,238 were Moslems. The estimated total population on Jan. 1, 1933 was 314,215. Births in 1932 numbered 10,117; deaths, 5745; marriages, 1747. Chief cities: Nicosia, the capital and principal trading centre, 23,677 inhabitants in 1931; Limassol, 15,349; Larnaca, 11,872; Famagusta (including Varosha), 9979. In the school year 1931-32 there were 1963 schools for primary education with a total enrollment of 53,010. There are many government-aided secondary schools managed by local committees.

The 1932 production of the principal agricul-

tural products was grapes and grape products, valued at £281,844; wheat, 1,144,242 bushels valued at £266,990; barley, 1,331,424 bushels valued at £147,935; carobs (beans), 38,555 tons valued at £96,387; potatoes, 442,864 cwt. valued at £55,357; oranges, lemons, and other citrus fruits, valued at £41,360; olives and olive oil, valued at £31,292; onions, valued at £15,843; cotton, valued at £11,849. Various other fruits are grown for home consumption. Sponge fishing is a minor industry. The mining of copper ore, asbestos, gypsum, terra umbra, and chromite is extensively carried on. For 1932, imports were valued at £1,347,288 of which £508 represented bullion; exports, £922,426, including £2746 for bullion.

The total revenue for 1932 amounted to £886,560; expenditure, £872,743; public debt, £615,000. Cyprus is administered by a governor aided by an executive council. Because of the riots which occurred in the colony near the end of 1931, the legislative council was abolished by Letters Patent (Nov. 12, 1931), and power to make laws was granted to the governor. Sir H. R. Palmer became governor and commander-in-chief during the latter part of 1933. See ARCHÆOLOGY.

CYRENAICA, sir'è-à'íkà. (CIRENAICA).

A district of Italian Libia in north Africa, bounded on the east by Egypt and north by the Mediterranean Sea. Area, about 75,340 square miles; including the hinterland (Cufra zone), 285,640 square miles. Population (1931 census), 164,607 of whom 18,861 were Europeans (chiefly Italians), and 139,193 were Moslems. Benghazi, the capital, had 43,000 inhabitants in April, 1931. Cattle raising, agriculture, fishing, and salt refining are the principal industries. Many colonists from Italy have settled on the land, the cost of transportation was furnished by a government commission.

In 1931, imports were valued at 146,945,540 lire (lira equals \$0.0526 at par); exports, 19,340,670 lire. The budget for 1932-33 was estimated to balance at 231,280,000 lire. Highways completed on Aug. 1, 1932 totaled 380 miles. There were 106 miles of railway open to traffic in 1930-31, and 106,563 passengers and 145,975 metric tons of freight were carried. During 1931, 1170 vessels aggregating 1,076,081 tons entered the ports, and 1153 vessels aggregating 1,072,900 tons cleared. The military force in 1932 was made up of 361 officers, 662 non-commissioned officers, and 9218 men (7163 natives; 2055 Italians). Governor with headquarters in Tripolitania, Marshal Italo Balbo, appointed Nov. 6, 1933; Lieutenant-Governor of Cyrenaica, Gen. R. Graziani. See TRIPOLITANIA.

CZECHOSLOVAKIA, chek'ò-slò-và'kì-à. A central European republic established Oct. 28, 1918. Capital, Praha (Prague).

AREA AND POPULATION. The area and census population by Provinces is shown in the accompanying table.

AREA AND POPULATION OF CZECHOSLOVAKIA

Province	Area, sq. miles	Population	
		1921	1930
Bohemia	20,102	6,670,582	7,109,376
Moravia and Silesia ..	10,334	3,335,152	3,565,010
Slovakia	18,882	3,000,870	3,329,865
Ruthenia	4,877	606,568	725,381
Total	54,195	13,613,172	14,729,632

The estimated population on Jan. 1, 1932, was 14,823,000. In 1932 there were 312,351 living

births, 210,352 deaths, and 127,593 marriages, the birth rate per 1000 of population being 21, and the death rate 14.1. By nationality the 1930 population (excluding Slovakia) was divided as follows: Czechoslovaks, 7,345,137; Germans, 3,088,530; Hungarians, 119,469; Russians, 458,095; Poles, 80,182; Jews, 120,277; aliens, 238,808. The final census returns for the chief cities in 1930, with 1921 figures in parentheses, were: Praha (Prague), 848,823 (676,663); Brno (Brünn), 264,925 (221,758); Moravská Ostrava, 125,347 (113,709); Bratislava (Pressburg), 123,884 (93,189); Plzeň (Pilsen), 114,704 (108,023). The religious distribution of the population (1930) was: Roman Catholics, 10,833,423; Protestants, 1,109,229; Greek and Armenian Catholics, 585,439; Orthodox Greek, 145,583; Jews, 356,768.

EDUCATION. Elementary education is compulsory between the ages of 6 and 14 years and there is almost no illiteracy, except in Slovakia. In October, 1931, there were 15,064 public and private elementary schools, with 1,793,356 pupils (895,967 boys and 897,389 girls). Secondary schools included 349 Latin and technical schools, with 93,608 pupils; 5 foreign Latin and technical schools, with 718 pupils; and 188 public schools of commerce, with 34,841 pupils. There were four universities (2 Czech, 1 German, and 1 Slovak), with 20,444 students, and four technical high schools (2 Czech and 2 German), with 10,568 students.

PRODUCTION. A rich agricultural, mining, and lumbering country, Czechoslovakia has also in the northwestern part one of the most advanced industrial regions in Europe. Beet sugar production for the 1933-34 season was estimated at 561,090 metric tons (632,959 metric tons in 1932-33). Production of other leading crops in 1932, with 1931 figures in parentheses, was (in 1000 quintals of 220.46 pounds): Wheat, 14,625 (11,222); rye, 21,759 (13,877); barley, 15,049 (10,746); oats, 16,639 (12,246); corn, 3093 (2277); potatoes, 92,763 (97,263); sugar beets, 39,614 (52,408). Tobacco, hops, wine, flax, and hemp are other crops. Livestock at the beginning of 1932 included 4,450,965 cattle, 2,464,616 cows, 2,575,921 swine, and 531,125 sheep.

Mineral and metallurgical production, in metric tons, in 1932 (preliminary), with final 1931 figures in parentheses, was: Coal, 11,053,000 (13,103,000); lignite, 15,910,000 (17,932,000); coke (excluding coke made from lignite), 1,277,000 (2,046,000); petroleum, 28,000 (20,000); iron ore, 602,000 (1,235,000); pig iron and ferro-alloys, 451,000 (1,165,000); manganese ore, 33,480 (83,883); steel ingots and castings, 682,000 (1,514,000); lead, 4800 in 1931; zinc, 5100 (7900); superphosphates of lime, 130,000 in 1931; salt, 190,000 (178,000). Forests cover 11,347,000 acres, or about 33 per cent of the total area.

Industrial establishments in 1930 numbered 12,033, including 1922 textile mills, 2326 glass works and stone factories, 1807 producing food products, 1407 furniture and bent wood factories, 950 machine factories, 928 metal foundries, 396 paper mills, and 645 chemical plants. Beer, shoes, and artificial silk are other important industrial products. The index of industrial production (base: 1928 = 100) declined from 104 in 1929 to 91 in 1930, 81 in 1931, and 59 in 1932. Industrial production declined approximately 42 per cent between 1929 and 1932, as compared with a world average of 30.6 per cent. Unemploy-

ment, at 636,000 for the end of July, 1933, was 40 per cent higher than for the same date of 1932.

COMMERCE. The decline in Czechoslovakia's foreign trade in merchandise during the period 1930-33 is shown in the accompanying table (in thousands of crowns, worth \$0.0296 at par).

CZECHOSLOVAK IMPORTS AND EXPORTS
[In 1,000 crowns]

	Imports	Exports	Surplus of exports (+) or imports (-)
1930	15,679,969	17,460,423	+ 1,780,454
1931	11,724,897	13,106,340	+ 1,381,543
1932	7,461,453	7,336,026	- 125,427

Leading imports, by value, in 1932 were (in 100,000 crowns): Raw cotton, 552; chemicals and dyes, 401; raw wool, 397; coal and coke, 322; silk manufactures, 259; tobacco, 247; wheat, 244; electric machinery, 214. Leading exports were (in 100,000 crowns): Leather and leather manufactures, 534; iron manufactures, 502; cotton tissues, 413; silk and its manufactures, 366; refined sugar, 350; fruit, vegetables, etc., 343; machines and vehicles, 339.

Germany in 1932 supplied 24.2 per cent of the total imports (28 per cent in 1931); the United States, 11.4 per cent (4.1); Free Port of Hamburg (transshipments), 8.2 per cent (9.7); Austria, 5.5 per cent (7.2); Yugoslavia, 4.8 (3.3); Poland, 4.6 per cent (5.3). Exports went principally to Germany, 16.2 per cent (15.5 per cent in 1931); Austria, 14 (13.7); United States, 6.8 (6.1); United Kingdom, 5.5 (10.3); Yugoslavia, 5.5 (6.3); France, 4.9 (3.5).

FINANCE. The state budget for 1934, as passed by Parliament, provided for revenues of 7,632,000,000 crowns and expenditures of 7,631,000,000 crowns, compared with estimated revenues of 8,634,000,000 crowns and expenditures of 8,633,000,000 crowns in 1933. Closed accounts for 1932 showed a deficit of 943,000,000 crowns in the ordinary and surplus of 692,000,000 crowns in the extraordinary budget, or a total deficit of 251,000,000 crowns. Ordinary expenditures were 9,310,000,000 crowns (final figure), compared with the receipts of 8,367,000,000 crowns. In 1931 there was a deficit of 1,347,000,000 crowns on total expenditures of 12,292,000,000 crowns.

Between Jan. 1 and Dec. 31, 1933, the national debt rose from 37,969,000,000 crowns to 38,737,000,000 crowns, mainly as a consequence of the flotation of an employment loan of 2,010,000,000 crowns and the issuance of new Treasury certificates of 269,663,000 crowns. These increases were offset in part by a reduction of 1,623,205,883 crowns through debt payments, purchases of bonds, and debt adjustments. The net debt increase was 767,649,406 crowns. Service on the debt was estimated at 1,697,455,753 crowns in 1934.

COMMUNICATIONS. Czechoslovakia in 1931 had 8606 miles of railway lines, of which 6002 miles were state owned and 1625 miles privately owned. All railways in 1931 carried 81,500,000 metric tons of freight (94,300,000 tons in 1930) and 294,000,000 passengers (334,000,000 in 1930). The deficit on the operation of the state lines in 1934 was estimated at 819,220,000 crowns (490,806,200 crowns in 1933). Highways in 1931 extended about 49,000 miles (5300 miles of national roads). The Danube, Vltava, and Elbe rivers are impor-

tant traffic arteries. There were 22 air routes in operation in 1931 (16 international and 6 national).

GOVERNMENT. The Constitution of Feb. 29, 1920, vested executive power in a president, elected for seven years by the two chambers of Parliament in joint session. The President appoints and recalls ministers. Legislative authority rests in a senate of 150 members, elected for eight years, and a chamber of deputies, of 300 members, elected for six years. President in 1933, Thomas Garrigue Masaryk, reelected May 27, 1927. Premier in 1933, Jan Malypetr, who headed a coalition cabinet formed Oct. 29, 1932. Foreign Minister, Eduard Beneš.

HISTORY

The Czechoslovak Republic during 1933 was preoccupied with three major problems—economic recovery, preservation of its territorial boundaries as fixed by the peace treaties, and protection of its liberal, democratic institutions against fascism.

THE ECONOMIC PROBLEM. During the first years of the world economic depression (1929-31), Czechoslovakia withstood the "economic blizzard" with better than average success. But in 1932 and 1933 there was a marked slump in industrial production and the condition of agriculture became desperate. Foreign trade was lower than at any time in the republic's short history. There were successive budget deficits. The number of registered unemployed rose from an average of 102,200 in 1931 to an average of 184,500 in 1932 and to 224,400 in the month of August, 1933. The country's inability to meet foreign competition in foreign markets more successfully was attributed to relatively high prices, as compared with the other exporting countries. The high price level was attributed, in turn, to the government's fiscal policy, which tended to absorb available credit, maintain high interest rates, and intensify the effects of a diminished currency. Other causes of high prices were the tariff and exchange restrictions limiting imports, the exactions of cartels, and a badly organized distribution system.

During the parliamentary session from Mar. 14, 1933, to the end of July, the government secured comprehensive legislation designed to permit price reductions and to assist agriculture and other depressed occupations. One measure authorized the government to issue a 5 per cent employment loan to finance productive investment schemes and thus to relieve unemployment. The loan received an unexpectedly enthusiastic reception, subscriptions totaling 2,010,000,000 crowns. Another measure reduced interest on government and other securities from 6 to 5 per cent. Still others prohibited rent increases, eliminated harsh features of the farm foreclosure laws, and gave the government emergency economic powers for a period of five months. A decree of Aug. 14, 1933, effective immediately, authorized the creation of agrarian syndicates "to insure an appropriate utilization of agricultural products." The scheme envisaged the restriction of imports of vegetable or animal products when their competition proved harmful to Czechoslovak agriculture. A syndicate controlling the production, sale, and prices of forest products also was established.

STAND AGAINST TREATY REVISION. The stimulus to the agitation for revision of the peace treaties

given by the accession of Adolf Hitler to power in Germany aroused much concern in Czechoslovakia. That country owed its existence to the Treaties of Versailles, Saint Germain, and Trianon and it prepared vigorously to defend them. Foreign Minister Beneš played a leading part in welding the Little Entente states (Czechoslovakia, Rumania, and Yugoslavia) into a permanent, unified international organization in preparation for the expected struggle with the anti-treaty powers (see **LITTLE ENTENTE** for details).

The Foreign Minister outlined the government's policy before the Foreign Affairs Committee of Parliament on April 25. He admitted the possibility of minor revisions of the peace treaties, but insisted that they must be made under Article XIX of the League Covenant, i.e. by voluntary agreement with the states concerned. He vigorously opposed Premier Mussolini's plan for a four-power pact (see **ITALY** under *History*), until assured by France that the interests of the Little Entente would be duly safeguarded. Czechoslovakia joined with the other Little Entente states in signing a non-aggression pact with the Soviet Union on July 4, 1933. A closer understanding was reached with Poland and a rapprochement with Austria was inaugurated by Foreign Minister Beneš' visit to Chancellor Dollfuss in October. These moves were all inspired by Czechoslovakia's fear of German aggression, a fear which was aggravated by the German withdrawal from the Disarmament Conference and the League of Nations. Observers in Prague toward the end of 1933 reported that the Czechoslovaks were convinced that Germany was rearming and that when her preparations were complete she would precipitate a new European war. With little hope that the League or the world's peace machinery could avert the crisis, they were preparing for armed resistance and perfecting arrangements for coöperation with the armies of France, Poland, Rumania, and Yugoslavia.

THE FASCIST MENACE. The overthrow of democracy in Germany and Austria during 1933 left the democratic Czechoslovak republic surrounded by a ring of Fascist or semi-Fascist states. Fascist influences and propaganda swept across all its borders, winning many converts among the Czechs as well as among the German, Austrian, and Hungarian minorities. The government was forced to take vigorous action to defend itself from the Fascist assault. It played its hand with such skill and moderation as to retain the support of the minority parties and emerged victorious in the first phase of the conflict.

On May 8 the government acted to prevent the spread of Nazi propaganda by banning 334 foreign newspapers, mostly German and Austrian, from the Czechoslovak mails. In the northern frontier districts, it issued manifestoes warning the inhabitants against the cultivation of relations with the German Nazis. The German National Socialist party in Czechoslovakia attempted in vain to form a solid front of all Germans in the republic against the Prague government. Except for the German Nationalists, the other German parties rejected the proposal. They enjoyed extensive minority privileges in Czechoslovakia and for years had shared in the government. Opposed in principle to *Fascism* and *Hitlerism*, they joined with the Czechs deputies in Parliament

in passing legislation which banned all Fascist groups regardless of their nationality and imposed drastic penalties upon civil servants who spread Fascist propaganda.

The Czech Fascist movement suffered a severe blow when a court martial at Brno on June 26 sentenced 58 defendants to prison for terms of six months to six years for participating in the Fascist revolt of 1932 (see 1932 **YEAR BOOK**). The German Fascist party announced its own dissolution on October 4, a few hours before a government order banning it and the German National party, with which it was about to amalgamate. Three of the party leaders were arrested. Nation-wide raids on Fascist centres and homes followed, accompanied by numerous arrests and the confiscation of propagandist material. When Parliament reassembled October 17, the government gave notice that it was prepared "to defend democracy to the utmost" and to take even more drastic steps if necessary. Vacant seats of the German Nazi party were redistributed among the coöperating German parties.

THE SLOVAK AGITATION. The government also took action to check the agitation for greater autonomy which had been carried on for some years among the Slovaks, as well as the Hungarian Irredentist movement. On September 25, gendarmes broke up an autonomist demonstration at Tyrnau by the Slovakian People's party, led by Father Andrej Hlinka. The Slovaks' chief demand was for the replacement of Czechs by Slovaks in the public administration of Slovakia.

OTHER EVENTS. Following the British example, Czechoslovakia made "token payments" on her war debt to the United States government on June 15 and Dec. 15, 1933. On June 15 she paid \$180,000 instead of the \$1,500,000 due and on December 15, \$150,000 on an installment of \$1,682,813. In September the Cabinet at a special meeting decided to formally protest against a letter allegedly written by the Papal Nuncio Ciriaci to Father Hlinka, which had created a furore when published in a Nationalist newspaper. The letter complained that the Nuncio had been subjected to insults and criticized Prague as a place of residence. The Cabinet demanded that the Nuncio be recalled to Rome to explain his action to his superiors.

See **REPARATIONS AND WAR DEBTS**; **LITTLE ENTENTE**; **GERMANY, AUSTRIA, and FRANCE**, under *History*. Consult Robert Machray, "The Nazi Threat to Eastern Europe," *Current History*, December, 1933.

DAHOMÉY, dā-hō'mā. A French colony between Nigeria and Togoland, on the west coast of Africa, a subdivision of French Africa (q.v.) Lieutenant-Governor in 1933, M. Blacher.

DAIRYING. The dairy industry suffered more seriously in 1933 than in 1932 from a curtailed foreign and domestic demand, reduced consumption, and low prices of dairy products which were aggravated by an increased production.

The number of milk cows and heifers two years old and over on farms in the United States reached an all-time record in January, 1933, of 23,136,000, as estimated by the United States Bureau of Agricultural Economics. This number increased about 3 per cent during 1933. The number of calves and heifers kept on farms for future milk production also approached an all-time record. The prevalence of a prolonged drought in several production areas, particularly

the South, limited feed and forage so that milk production per cow decreased about 2 per cent. However, with the increase in the number of milk cows, total milk production in the United States increased about 3 per cent. The changes in the production were considerably influenced by lighter feeding throughout the year although average production was reported heavier during August and September. Fall pastures were relatively good in most sections.

An unusually heavy production of butter was noted in the fluid milk areas, particularly in New York State, toward the close of the year. This increase, an indication of excessive fluid milk surpluses, had a tendency to lower butter prices.

It was very difficult to estimate the production of the various manufactured dairy products during the year because of the changes in the production programmes of different dairy plants on account of the uncertain market conditions. Butter production in 1933 was estimated at about $2\frac{1}{2}$ per cent greater than in 1932, and cheese production about 3 per cent larger. While condensed milk showed a decrease, the manufacture of evaporated milk, by far the most important of these products from the standpoint of the milk used, increased more than 10 per cent. The total milk equivalent employed in the manufacture of dairy products was estimated to have increased nearly 4 per cent as compared with 1932.

As a result of these conditions, coupled with a small foreign demand and reduced consumption at home, cold storage stocks of both butter and cheese reached unprecedented high levels. On September 1 and October 1 there were about 175,000,000 pounds of butter in storage, in comparison with 107,000,000 pounds on Sept. 1, 1932, and 89,000,000 pounds on Oct. 1, 1932. More than 90,000,000 pounds of cheese were reported in storage at the same time in 1933. In terms of milk equivalent, the stocks of butter and cheese in cold storage and condensed and evaporated milk in manufacturers' hands were 76 per cent greater on Nov. 1, 1933, than at the corresponding date of 1932. An agreement reached on Oct. 20, 1933, between the Agricultural Adjustment Administration and the Dairy Marketing Corporation (representing producers, processors, and distributors) to purchase surplus dairy products in coöperation with the Secretary of Agriculture, was an important factor in helping to lower the excessive stocks of butter and cheese. In the fall of 1933 the government purchased about 61,000,000 pounds of butter and 4,500,000 pounds of cheese under this plan. The Federal Surplus Relief Corporation was to distribute the products to the unemployed. On December 1 stocks of butter were only 7,000,000 pounds in excess of the 5-year average for that date. The butter industry also organized a campaign to stimulate consumption by educating the people of the home and community in both rural and consuming centres as to the nourishing properties of butter and its special merits and desirability as a food product.

On account of the dissatisfaction of producers on prices received for milk, a farm strike movement gained considerable headway in October in the Central West. It materially affected deliveries of milk for cheese manufacture and resulted in the closing of the factories in large sections of Wisconsin where the movement was particularly vigorous.

To assist in curtailing production of dairy products, the United States Bureau of Dairy Industry recommended more rigid culling of the poor cows from the herds, thus reducing feed costs and increasing profits.

INTERNATIONAL CONDITIONS. The foreign trade of the United States, which has been falling off in total volume year by year, continued the decline in 1933, month by month, with few exceptions. Exports in particular were near the vanishing point, evaporated milk being the dairy product of which the largest quantities were exported. Butter prices in domestic and foreign markets reached so near the same level that exportation of some of the record supplies on hand in the United States might be possible were it not for existing foreign exchange rates, numerous foreign tariffs, and trade restrictions.

There were also heavy stocks of butter in storage in Great Britain and Canada which, on September 1, were 53,957,000 pounds in the former and 41,490,000 pounds in the latter country. There were very heavy withdrawals from storage in Great Britain in the early fall, and in December storage stocks fell below 1932. Butter shipments from Australia, New Zealand, and Argentina during the late summer and fall of 1933, were below the high levels reported for late 1932 shipments, but heavy production was reported in the late fall.

An increased consumption of butter in Great Britain and Germany caused, particularly during the latter part of the year, a reduced consumption of margarine. In the first nine months of 1933 the apparent consumption of butter in the United Kingdom was 734,791,000 pounds as compared with 661,637,000 pounds in the corresponding period of 1932. The Empire Marketing Board reported that per capita butter consumption in the United Kingdom increased from 14.8 to 20.7 pounds from 1924 to 1931. Apparently this trend continued in 1933, and was favored by cheaper butter prices and lowered margarine production and importations.

Under fat control measures promulgated in Germany by the German Reich, margarine was heavily taxed to bring about a reduction in the production of margarine (from imported materials) and an increased use of domestically-produced butter and other fats. The scheme was apparently successful as margarine sales were lowered from 30 to 35 per cent, and butter sales increased about 15 per cent.

A sharp reduction in ocean freight rates announced in July provided a cost of 0.7 cents per pound for refrigerated shipments of butter from Denmark to New York, and about 1.5 cents for shipments from New Zealand to New York, taking account of differences in exchange rates. The last is about the same as the cost of shipping butter from Minneapolis to New York.

Critical situations in the European countries were met in various ways. In Germany a tariff of about 8 cents per pound was placed on butter, and quota restrictions were set up. Great Britain also had a tariff of about 3 cents per pound on all but Empire butter. Depreciated currencies gave New Zealand, Denmark, and Australia a decided advantage in these markets and practically prohibited United States butter.

Butter production was reduced in Denmark, but not as heavily as exports, and prices declined. Attempts were made to meet the situation by slaughtering large numbers of cows for use in

the manufacture of meat meal (see LIVESOCK). The Netherlands required that margarine consumed domestically contain 40 per cent butter. Other countries attempted to meet the situations by similar methods.

The bulk of the foreign trade of the United States in dairy products was mainly limited to exports of concentrated milk and imports of foreign types of cheese, principally from Italy and Switzerland.

RESEARCH. Investigational work in the United States and other countries continued along previously established lines. In the attempt to reduce production costs and emphasize work which might have application to the solution of problems which arose as a result of the depression, more attention was given to the possibilities for greater utilization of pastures and forage crops, cheaper feeds, and greater amounts of roughage in the ration.

The Massachusetts Agricultural Experiment Station completed a three-and-one-half years' study on the influence of high-roughage low-grain rations as compared with low-roughage high-grain rations on milk production. The results of this investigation showed that the cows receiving the larger amounts of grain maintained milk production better than those in the high-roughage group, and reproduction was better. The high-roughage ration, however, involved a considerably smaller cash outlay. The digestibility of dried pasture herbage was studied by the Washington Agricultural Experiment Station, in cooperation with the United States Department of Agriculture, to furnish basic information on the feeding value of common pasture grasses. Artificially dried young grass was found at the Vermont Agricultural Experiment Station to closely resemble a good dairy ration. Excellent results were obtained when ten pounds of this grass was fed with hay and silage without grain, and average milk production was obtained. The improvement of pastures by fertilization was studied at many of the experiment stations in the dairy producing sections of the United States. The carrying capacity of pastures was improved by the application of fertilizers in studies in New Zealand so that 20 more cow days of pasture were obtained per acre. The vitamin content of pasture grasses was investigated at the Idaho Agricultural Experiment Station. All of these studies, and many others with pastures, not only indicated the relatively low cost of pasture feeding, but also showed that pasture grasses have a high nutritive value.

Roughages were studied from many points of view, but of special interest was the qualitative studies of them. Sorghum was found by the Texas Agricultural Experiment Station to contain vitamin A, although in insufficient quantities to supply adequate amounts of the vitamin to producing dairy cows when no other source of this vitamin was supplied in the ration.

With the increased public recognition of the importance of vitamins in human nutrition, studies were conducted on possibilities of modifying the amounts of vitamins A and D in the milk of dairy cows by changes in the ration. The vitamins A and D contents of the milk were increased by cod-liver oil and irradiated yeast feeding in experiments conducted at the Ohio Agricultural Experiment Station and at other institutions.

Much importance in infant feeding attended

the discovery several years ago, by the Utah Agricultural Experimental Station, of an important relation between the softness of curd in milk and its digestibility. Although soft-curd milk was superior to hard-curd milk for infant feeding, hard-curd milk was found last year to be preferable to soft-curd milk for cheese making as it not only gave a better yield, but a higher quality product was produced from it.

Much investigational work was related directly to improvements in the technical phases of dairy manufacturing, which increased the assurance of purity and freedom from disease transmission and facilitated the more certain and economical production of a high quality product. *Acidophilus* milk is objectionable and unpalatable to certain individuals for whom it is recommended. The Washington Agricultural Experiment Station found that some of the strains could be incorporated in sherbets without destroying their viability, thus providing the beneficial organism in a more palatable form.

An interesting indication of the frequent widespread application of the fundamentals of dairy research was the adoption by the Japanese government of the well-known Breed direct microscopic count method for the sanitary control of dairy products. This method was developed at the New York State Agricultural Experiment Station several years ago.

NECROLOGY. Clarence H. Eckles, professor of dairy husbandry at the University of Minnesota, and one of the best known scientific authorities on dairy cattle feeding in the country, died on Feb. 13, 1933. Professor Eckles had studied at the University of Wisconsin, Göttingen University, and the University of Bern, and in addition to the position occupied at the time of his death, held important positions at Iowa State College and Missouri University earlier in life.

The death of Dr. Charles L. Beach occurred on Sept. 15, 1933. He was professor of dairy husbandry at the University of Vermont from 1896 to 1908, after which time he was president of the Connecticut Agricultural College. R. C. Munkwitz, professor of dairy manufacturing at the University of Maryland, died on Jan. 6, 1933. He was succeeded by Dr. Charles W. England.

Arthur J. McGuire, manager of Land O'Lakes Creameries, Inc., and which was made up of about 400 creameries in and around Minnesota, died in October, 1933.

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DAKAR. See FRENCH WEST AFRICA.

DALAI LAMA OF TIBET, THE. See NGAG-WANG LOBSANG THUBDEN GYA-TSHO.

DALE, PORTER HINMAN. An American lawyer and legislator, died at Newark, Vt., Oct. 6, 1933. Born at Island Pond, Vt., Mar. 1, 1867, he received his education in private schools in Philadelphia and Boston and then acted for two years as principal of the Green Mountain Seminary at Waterbury, Vt. On deciding on a legal career he studied law with his father, George N. Dale, and was admitted to the Vermont bar in 1896. After 1900 he practiced in the United States courts. He was also president of the Island Pond National Bank, the Island Pond Electric Co., the Fitzgerald Law and Lumber Co., and the Fitzgerald Paper Co. and from 1897 to 1910 served as chief deputy collector of customs at Island Pond. At the Republican State Conventions of 1898 and 1920 he was appointed chairman. He was also a member of the Vermont Senate for the terms 1911-13 and 1913-15 and represented the second Vermont district in the national House of Representatives during 1915-23. Elected to the United States Senate in 1923 to fill the unexpired term of William P. Dillingham, he was reelected in 1926 and again in 1932.

Senator Dale was a member of the committees on civil service, pensions, and public lands. His stand, however, in voting for the soldiers' bonus and the postal employees' pay increase after President Coolidge's veto not only caused resentment among certain of his constituency, who felt that he should have been more loyal in his support of a Vermont-born President, but resulted in his receiving no Federal patronage in Vermont.

DALMATIA. A former crownland of Austria now incorporated in Yugoslavia (q.v.).

DAMS. Dam construction during 1933 has gone forward at a remarkable pace and apparently without being seriously affected by depression conditions. Such works, of course, usually involve several years for construction and many of them have been under way for some time. Nevertheless, there has been a surprising number of new projects initiated in the depression years.

BOULDER DAM. With the change in administration the name Hoover has been dropped and this great work is now generally referred to by its original designation—Boulder Dam. At the beginning of the third year of construction this colossal undertaking was two years ahead of schedule. This is probably to be accounted for by the fact that the unprecedented size of the undertaking led to adopting a conservative progress estimate, and that conditions at the site have been more favorable than could have safely been anticipated.

The first stage of the construction was completed in November, 1932 when the river was bypassed around the site, by means of a temporary cofferdam, which caused the flow to pass through

the four huge diversion tunnels in the side walls of the canyon.

The final cleaning up of the river bed for the dam foundation was rapidly accomplished and confirmed the predictions by the consulting geologists of a bed rock of excellent character to support the huge structure. Concreting began in June and by December 12 over 1,000,000 cubic yards had been placed, bringing the dam up to 162 ft. of its total height of 729 ft. Many features of this concrete work are of interest.

Unusual precautions are being taken to secure a solid, monolithic concrete mass in the dam. It is a well known fact that the chemical reactions, which take place in cement during setting, generate very considerable heat. Upon subsequent cooling, shrinkage occurs. Accordingly the Reclamation engineers responsible for this record breaking structure specified a "low heat" cement. This is not as strong as the standard product but is claimed to be more durable due to its decreased tri-calcium-aluminate content. Furthermore, as it may take years for the concrete in this massive structure to cool, it is placed in vertical prisms each of which is surrounded by cooling pipes. Some 300 miles of one-inch pipe will be used, through which cold water is constantly circulated while the temperature is checked by thermometers placed throughout the dam. The shrinkage gaps between each prism are pressure grouted when the proper temperature is attained.

It was at first proposed to use a concrete mixed with sufficient water to give what is known as a 1 to 1½ inch "slump." Experience showed that such a dry concrete cannot be properly placed in the 8 cu. yd. units employed. Accordingly a wetter, 2½ to 3 inch slump, concrete is being used. As the *Engineering News-Record* remarks, "If the gain in strength, durability and impermeability of a drier mix are weighed against the increased harshness, cost of placement, and tendency to non-uniformity in compaction due to decreased plasticity, the disadvantages will be found to outweigh the advantages."

The gravel and concrete plants for this work are themselves huge constructions meriting detailed description. Much attention has been given to them in the engineering-contracting periodicals and we should remember that the construction of a work of this magnitude is made possible not alone by advances in the theory of dam design, but primarily by progress in the art of construction. This is reflected in all phases of this undertaking but particularly in the remarkable progress on the diversion tunnels (see 1932 YEAR BOOK), in the gravel and concrete plants, in the huge cableways used in placing the concrete, and in the fact that the colossal steel pipes for the penstocks are being fabricated at the site.

The largest of these pipes are 30 ft. in diameter and 2¾ inches thick—far larger and heavier than any pipe ever built. Transportation difficulties made it necessary to do the fabrication at the site. Flat steel plates, shipped from eastern steel plants, are planned, bent into cylindrical form, welded together to form pipe; the joints are inspected by X-rays, and finally the sections are annealed at 1200° F. in a special furnace, the largest of its kind, to relieve fabrication stresses. Practically all of the smaller pipe, 8½ and 13 ft. in diameter, has been completed. A special 150-ton cableway, five times the capacity of any previously built, has been completed to handle the installation of these great tubes,

As the year closes the spillway construction is practically completed and excavation is going rapidly forward on the smaller penstock tunnels. With the rapid progress on the dam proper it would appear that this great work would be completed before the All-American Canal (see RECLAMATION) and other facilities for using its water and power are ready.

PINE CANYON DAM. Among the smaller gravity-masonry dam structures this 245 ft. work in the San Gabriel Canyon, by means of which the Pasadena water supply will be augmented, is of special interest. Due to a longitudinal fault at the dam site and to the possibility of seismic disturbances, this dam is being constructed with a special keyway over the fault and is designed to resist earthquake shock.

EARTH AND ROCK FILL DAMS. In many cases where foundation conditions are not suited to gravity structures, earth or rock fill dams are being constructed. This is particularly true on the West Coast where the recent volcanic rocks are frequently badly shattered or uncompacted and where moderate earthquake shocks are of common occurrence. The El Capitan Dam on the San Diego River is a hydraulic fill structure 220 feet high with heavy rock facing. The Bouquet Canyon Dams for Los Angeles, built to regulate the flow of the Owens River, are also earth embankments but of the rolled-fill type. The Cle Elum Dam on the Yakima River, a United States Bureau of Reclamation project, is also an earth structure. The San Gabriel Dams, No. 1 and No. 2, now under construction for flood control and water conservation (irrigation) are both rock-fills. The Middle Rio Grande Conservancy District is constructing a metal faced, gravel fill dam in New Mexico. Indeed, the activity in this type of dam construction extends to the East where, in fact, several record structures such as the Dix River, the Cobble Mountain, the Saluda and the Davis Bridge Dams, already exist. Baltimore, for example, has increased its water supply by means of the Pretty Boy Dam on the upper Gun Powder River, 29 miles from the city. This is 147 feet high with a core wall extending part way through the structure.

The interesting and difficult core wall problem (see FOUNDATIONS) encountered in connection with the Quabbin Reservoir for the Boston Metropolitan System, has also emphasized the growing importance of the earth fill type of dam.

Bibliography. A series of articles on the compaction of earth fills by R. R. Proctor in the *Engineering News-Record* of August and September is a particularly valuable contribution in this field. The results of this study are being applied in connection with the Bouquet Dams for Los Angeles noted above.

MOVABLE DAMS. The advantages of the various forms of movable dams have frequently been lost sight of by engineers in general practice due to the fact that their construction has been confined largely to river canalization—a type of work carried on only by the U. S. Corps of Engineers. Several smaller but interesting structures of this form have been under way or proposed during the year. Army engineers have built a small A-frame type of dam to provide an increased depth of waterway on the Cumberland River near Nashville. In the past this type has given trouble due to its tendency to collect gravel and silt. It is expected that improvements in this particular design will obviate this difficulty. In the govern-

ment project to provide a 9-foot channel from St. Louis to St. Paul, Army engineers have also been building a roller gate dam known as Dam No. 15 at Rock Island, Ill., on the Mississippi. A similar type of dam has also been proposed by Army engineers for the Kanawha River in West Virginia.

TENNESSEE AUTHORITY. In connection with the much discussed Muscle Shoals or Wilson Dam and the work of the recently constituted Tennessee Valley Authority, work is under way on the Norris Dam at Cove Creek on the Clinch River near Knoxville, Tenn. This site had previously been examined by U. S. Army engineers in connection with navigation proposals. Due to bad caves in the limestone rock, the original height of 250 feet has been reduced by 14 feet and the dam is being built by the Authority but designed by the Denver Office of the U. S. Bureau of Reclamation. Existing dams in this area are largely for "run-of-river" plants and the Authority proposes to build dams of the reservoir type so as to increase the available power in times of low river flow.

COLUMBIA RIVER. Bids were opened on November 20th for a \$63,000,000 work on the Grand Coulee site on the Columbia River. It is said that this dam is the key to the Columbia Basin development. The final plan calls for a dam 370 feet high for power and irrigation. It is planned to use part of the power developed to pump water into a storage basin formed in the coulee, or ancient river channel. The present project is for a 145-foot structure which can later be increased in height.

On September 29th the P.W.A. approved another project on the Columbia River, that for a dam at Bonneville, Ore. This is to be a combination power and navigation work.

CENTRAL VALLEY CONSERVATION PROJECT. This undertaking, designed to develop the Central Valley area of California, involves two dam constructions—the Kennet and the Friant—which may be undertaken with P.W.A. assistance.

OTHER AMERICAN WORKS. Among the other American constructions, we note that work on the Rodriguez Dam near Tia Juana in Mexico, to be the record dam (250 feet) of the Ambursen type, has been resumed after 18 months shut down. Also the R.F.C. has made a loan to repair the Lake Pleasant Dam on the Aqua Fria River in Arizona. It will be recalled that this multiple arch structure, 170 feet high and completed in 1927, developed cracks and was lowered by 24 feet in 1929. Progress should also be noted on the Madden Dam on the Chagres River, Panama Canal Zone. (See 1932 YEAR BOOK.)

GEBEL AULIA. Bids for the construction of this reclamation structure on the White Nile about 30 miles south of Khartoum in Upper Egypt, were accepted late in the year.

FAILURES. Following two abnormally dry seasons with the reservoir drawn down to the lowest level ever reached, hydrostatic pressure under the upstream concrete facing of the Belle Fourche Dam, on the reclamation project of this name in South Dakota, caused an extensive slide on August 2nd. Repairs were immediately undertaken.

The failure of the combination rock fill and masonry Castlewood Dam in Colorado was, unfortunately, more serious than the partial failure at Belle Fourche. The dam, criticized by many engineers, is on Cherry Creek, 35 miles from

Denver. The entire east half of the structure, including the spillway, was washed out following a cloud-burst. Two lives were lost and much damage done in Denver.

DANISH LITERATURE. See SCANDINAVIAN LITERATURE.

DANUBIAN UNION. See UNITED STATES OF EUROPE; ITALY under *History*; LITTLE ENTENTE.

DANZIG, dän'tsik, FREE CITY OF. A port and territory on the Gulf of Danzig, Baltic Sea, established as a free city on Nov. 9, 1920 by articles 100 and 102 of the Treaty of Versailles. It was formerly a part of the German Empire. The port occupies a strategic position at the mouth of the Vistula River. Total area, 754 square miles; total population (August, 1929), was 407,517, of whom 235,237 were in the city proper. The population was 95 per cent German and less than 5 per cent Polish in 1929. German is the official language. In 1929, there were 44,632 students in elementary schools, 3228 in middle schools, and 6207 in high schools. In the winter term of 1931-32 the Technical University had 1826 students.

Danzig is well situated with relation to the great Polish, Russian, and German grain districts and has been the chief outlet for the commerce of Poland, which exercises joint control with the Free City of the harbor administration. The territory is also within the Polish Customs administration. Traffic through the port in 1933 amounted to 6,207,733 metric tons. The prosperity of Danzig was adversely affected by the new Polish port of Gdynia (see POLAND under *Communications*).

In 1932 shipping aggregating 2,750,000 net registered tons entered, and 2,920,000 net registered tons left the port of Danzig. The ordinary budget for 1932 was estimated to balance at 78,637,530 gulden. Four main railway lines connect Danzig with important German cities, while three other main lines run to Polish cities. Air lines link the port with various German and Polish points.

Danzig is under the protection of the League of Nations, which appoints a High Commissioner to settle disputes between the Free City and Poland. Foreign relations are controlled by Poland, but the Free City exercises a veto power. The Constitution, as approved by the League of Nations on May 11, 1922, vests executive power in the President of the Senate, which is the highest state authority. A Diet of 72 members elected for four years by universal suffrage elects the members of the Senate and its President. The composition of the Diet elected on May 28, 1933, was: National Socialists, 38; Socialists, 13; Centrists, 10; Communists, 5; Nationalists, 4; Polish, 2. The National Socialists (Hitlerites) polled 108,000 of the total 215,000 votes recorded. H. Rauschning (National Socialist leader) was elected President of the Senate on June 20, 1933. On Oct. 26, 1933 Sean Lester of the Irish Free State was appointed by the League of Nations to succeed H. R. G. Rosting as High Commissioner. See GERMANY and POLAND under *History*.

DARTMOUTH COLLEGE. A nonsectarian institution for the higher education of men in Hanover, N. H., founded in 1769. The 1933 autumn session had an enrollment of 2422 students, most of whom were working for the B.A. degree, the exceptions being 15 graduate students, 41 students in the medical school, 18 in the Thayer

School of Civil Engineering, and 87 in the Tuck School of Administration and Finance. There were 270 members on the faculty. The endowment amounted to \$18,650,000, while the income for the year was \$592,000. The Fisher Ames Baker Memorial Library contained 370,678 volumes. President, Ernest Martin Hopkins, A.M., Litt.D., LL.D.

DAVIS, ARTHUR POWELL. An American civil engineer, died in Oakland, Calif., Aug. 7, 1933. He was born at Decatur, Ill., Feb. 9, 1861, and was graduated from the State Normal School at Emporia, Kans., in 1882 and from Columbian (later George Washington) University in 1888. Until 1894 he was associated with the United States Geological Survey as topographer in charge of surveying expeditions in Arizona, New Mexico, and California. He then became hydrographer in charge of stream measurements and the selection and surveying of reservoir sites for the Irrigation Survey, and from 1898 to 1901 conducted hydrographic examinations of the Nicaragua and Panama canal routes. His long connection with the United States Reclamation Service dated from the enactment of the Reclamation Law in 1902, when he was appointed principal assistant engineer in charge of surveys and construction. In 1907 he became chief engineer for the Service, serving the next year as consulting engineer on the construction of the Panama Canal. He was also commissioned by the Russian government to conduct an irrigation investigation in Turkestan in 1911, and in 1914 was a member of the board of engineers sent by the American Red Cross to investigate flood control and irrigation problems in China.

Appointed director of the United States Reclamation Service in 1914, Mr. Davis directed some of the most important dam construction for irrigation purposes in the United States, including the Arrowrock in Idaho, the Shoshone and Pathfinder in Wyoming, the Elephant Butte in New Mexico, and the Roosevelt Dam in Arizona. During his entire service he built more than 90 dams, hundreds of tunnels including the great Gunnison Tunnel in Utah, and 15,000 miles of canals, bringing the total area of existing irrigation enterprises, according to the Census of 1920, to 35,890,811 acres. On his retirement in 1923 he became chief engineer and general manager of the East Bay Municipal Utility District, having charge of the development of the Hetch Hetchy Water Supply System, planned to deliver water from the Mokelumne River through a 94-mile conduit to cities on the eastern shore of San Francisco Bay. In 1929 he went to the U.S.S.R. as chief consulting engineer for examining and reporting upon irrigation projects in Turkestan and Transcaucasia and directed the building of a hydroelectric system for the Soviet government.

Previous to his death Mr. Davis was named by the Bureau of Reclamation consulting engineer on the construction of Boulder Dam, whose possibilities he had envisaged 13 years previously when he had been directed by Congress through the Kinkaid Act to report on the improvement of the Colorado River basin with special attention to the impounding of water for irrigation purposes and adequate flood control for the Imperial Valley. In 1920 he was president of the American Society of Civil Engineers and in 1922 and 1924 Lyman lecturer on hydraulics at the Sheffield Scientific School of Yale University. He

published *Elevation and Stadia Tables* (1893); *Progress of Stream Measurements* (1897); *Irrigation near Phoenix, Arizona* (1897); *Hydrography of the American Isithmus* (1902); *Water Storage on Salt River, Arizona* (1903); *Irrigation Works Constructed by the United States Government* (1917); and *Irrigation Engineering* (1918).

DAVIS, CHARLES H (AROLD). An American landscape painter, died at Mystic, Conn., Aug. 5, 1933. He was born at Amesbury, Mass., Jan. 7, 1856, and studied with Otto Grundmann at the Boston Museum School and afterward under Boulanger and Lefèvre at the Académie Julian in Paris. On his return to the United States in 1890 he took up his residence at Mystic, and in 1901 was elected an associate of the National Academy of Design and in 1906 an academician. Among the other honors bestowed on him were the Palmer prize of the Chicago Art Institute in 1890, the Lippincott prize of the Pennsylvania Academy of Fine Arts in 1901 and the Sesnan gold medal in 1919, the Altman prize of the National Academy of Design in 1917 and the Saltus medal in 1921, and the second W. A. Clark prize and Corcoran silver medal of the Corcoran Gallery, Washington, in 1919; also medals at the Chicago, Atlanta, Paris, Buffalo, St. Louis, and San Francisco expositions.

Davis's early landscapes were chiefly evening effects, often of a sombre nature but characterized by direct vision and simple workmanship. Among the more notable were: "Evening" and "August" (Metropolitan Museum of Art, New York City); "The Deepening Shadows" (Corcoran Gallery, Washington); "Close of Day" and "Twilight" (Art Institute, Chicago); "Moonrise at Twilight" (Carnegie Institute, Pittsburgh); and "At Sunset" (Art Museum, Worcester, Mass.). His later work showed a tendency to interpret nature in her more cheerful moods, with a spirit of light and joy predominating. This was especially seen in "Summer" (National Gallery, Washington); "Clouds" (Museum of Fine Arts, Boston); "Early Summer" (Institute of Art, Minneapolis); "Clouds and Hills" (City Art Museum, St. Louis); and "The Time of the Red Winged Blackbird" (Museum of Art, Syracuse, N. Y.).

DAVIS, STEPHEN BROOKS. An American lawyer, died in New York City, Feb. 24, 1933. He was born at Middletown, Conn., Nov. 18, 1874, and was graduated from Wesleyan University in 1895 and with the LL.B. degree from Yale in 1897. Admitted to the New Mexico bar in 1898, he practiced at Las Vegas for several years. In 1903 he was appointed district attorney for the Fourth District of the Territory, in 1908 the Territory's Assistant United States Attorney, and in 1912 upon the admission of New Mexico to the Union the State's first United States Attorney, holding the latter office for two years. He also served during 1921-22 as associate justice of the Supreme Court of New Mexico. In 1923 he was appointed Solicitor of the United States Department of Commerce, and in that capacity helped solve the question of the supervision and control of radio broadcasting through framing the law that led to the creation of the Federal Radio Commission.

Mr. Davis was also vice-chairman of the International Radiotelegraph Conference held in Washington in 1927, counsel for the United States on the St. Lawrence Waterways Commis-

sion, Federal representative on the North Platte River Commission, and New Mexico's representative on the Colorado River Commission. In 1927 he retired to private practice in New York City. His book, *The Law of Radio Communication* (1927), received the Linthicum Foundation prize from the law school of Northwestern University.

DE ANGELIS, JEFFERSON. An American actor, died at Orange, N. J., Mar. 20, 1933. Born at San Francisco, Calif., Nov. 30, 1859, he received a public school education in San Francisco, Philadelphia, and New York City and at the age of 10 made his début in a vaudeville act at the Odeon Theatre in Baltimore. His repertoire during the next ten years consisted of dancing, singing, clowning, tumbling, and melodramatic bits in the performances which his father, mother, and sister staged on their tours of the newly-settled West. In 1880 he formed his own company, with which he toured Australia, China, Japan, Burma, India, and South Africa, presenting during the next four years such favorites as *Uncle Tom's Cabin*, *One Word*, and the Gilbert and Sullivan operettas.

On his return to the United States in 1887 Mr. De Angelis joined the McCaull Opera Co., singing in about ten light operas. From 1891 to 1895 he was leading comedian at the Casino Theatre, New York City, appearing in *Apollo*, *The Grand Duchess*, *Indigo*, *The Tyrolean*, *Uncle Celestin*, *The Child of Fortune*, *The Vice-Admiral*, *The Passing Show*, and *The Little Troupier*. He considered that his ultimate ambition was achieved when in 1897 he appeared with Lillian Russell in *The Wedding Day*, destined for a two-year run at the Casino. His greatest success, however, was in *Fantana*, with which he toured under his own management in 1904 and 1906 and appeared at the Lyric Theatre, New York in 1905.

Mr. De Angelis later appeared in *The Great White Way* (1907), *The Beauty Spot* (1909), *The Mikado* (1910), *The Pearl Maiden* (1912), *Rob Roy* (1913), *The Passing Show of 1917* (1917-18), *The Merry Widow* (1921), *The School for Scandal* (1925), *Revelry* (1927), *The Royal Family* (1927), and *Apron Strings* (1930). The story of his career was told in *The Vagabond Troupier* (1932), of which he was co-author with Alvin F. Harlow.

DEATH RATE. See VITAL STATISTICS.

DEBTS, PUBLIC. See PUBLIC FINANCE; GREAT BRITAIN, FRANCE, GERMANY, ETC.

DEFICIT. See UNITED STATES under *The Treasury*.

DELAWARE. POPULATION. The population of the State on Apr. 1, 1930, according to the Fifteenth Census, was 238,380; in 1920 it was 223,003; in 1933 (Federal estimate), 241,000. Wilmington, the chief city, had (1930) 106,597 inhabitants; Dover, the capital, 4800.

AGRICULTURE. The following table shows the acreage, production, and value of the principal crops for 1933 and 1932:

Crop	Year	Acreage	Prod. Bu.	Value
Corn	1933	145,000	3,625,000	\$1,776,000
	1932	147,000	4,263,000	1,194,000
Wheat	1933	77,000	1,078,000	927,000
	1932	79,000	908,000	481,000
Hay (tame)	1933	73,000	122,000*	1,305,000
	1932	73,000	114,000*	1,060,000
Sweet potatoes	1933	7,000	910,000	410,000
	1932	7,000	805,000	282,000

*Tons.

FINANCE. State expenditures in the year ended June 30, 1932, as reported by the U. S. Department of Commerce, were: for maintaining and operating governmental departments, \$7,306,371 (of which \$2,366,100 was for local education); for interest on debt, \$166,339; for permanent improvements, \$6,442,253; total, \$13,913,963 (of which \$3,340,513 was for highways, \$32,163 being for maintenance and \$3,015,350 for construction). Revenues were \$12,471,532. Of these, property and special taxes furnished 61.3 per cent; departmental earnings and compensation to the State for officers' services, 5.4; sale of licenses, 20.4 (in which was included a gasoline sale tax that produced \$1,099,054). Funded debt outstanding on June 30, 1932, totaled \$3,215,500, of which \$2,905,000 was for highways. Net of sinking-fund assets, the debt was \$2,071,264. The State levied in the year no general ad-valorem tax on property.

EDUCATION. All salaries in the public-school system were reduced by legislative enactment, from the levels of the academic year 1931-32: those running from \$1000 to \$1500, by 5 per cent; above this and to \$3000, by 10 per cent; above \$3000 and to \$5000, by 15 per cent; and above \$5000, by 20 per cent. The school fund, however, was sufficiently ample to render it possible to carry on instruction in the public schools through 1933 with comparatively few curtailments of service. The allowance of 1 per cent of the State's school budget for the education of adults was continued. Many graduates of the high schools, according to report in the *Journal* of the National Education Association, returned to these schools to take additional work.

The number of persons of school age in the State, according to an estimate for 1932, was 53,000. There were enrolled in the public schools, in 1933, 44,074 pupils. Of these, 28,900 were in common schools or elementary grades; in high schools (junior and senior), 15,774. The expenditures of the year 1932-33 for public-school education totaled \$6,351,945. Salaries of teachers averaged, by the year, \$1542.

LEGISLATION. The Legislature met in regular session on January 3. It created a convention of 17 delegates at large, to be chosen by a special popular election and to act for the State on amendments to the Federal Constitution. There was created by statute a liquor commissioner empowered to buy and sell liquor somewhat after the manner of a State dispensary. Producers, importers, and hotels selling alcoholic drinks were placed under a system of licenses. In the banking panic of February and March power was given the banking commissioner to suspend payment of State banks' time deposits and to suspend, in any part, their payment of demand deposits; he was enabled to conduct the business of an embarrassed State bank without need of bringing action in court.

POLITICAL AND OTHER EVENTS. There were elected on May 27, by popular vote in the proportion of about 3½ to 1, 17 delegates at large, all favorable to the repeal of the Federal Eighteenth Amendment. They met in State convention on June 24 and voted the State's ratification of repeal by the superseding amendment proposed by Congress. Governor Buck declared a banking holiday on March 4, halting the operation of banks in the State. In the boundary suit of New Jersey against Delaware before the Federal Supreme Court, William L. Rawls, special master,

recommended to the Court on October 9 a determination of the boundary, in the estuary of the Delaware River, that would preserve Delaware's claim to territory as far as the low-water mark of the New Jersey shore within a radius of 12 miles from New Castle, but held that farther down the watercourse the boundary should follow the centre of the ship channel and not, as Delaware had contended, the geographical central line. The result was favorable to New Jersey, which sought to establish sovereignty over oyster beds.

OFFICERS. The chief officers of the State, serving in 1933, were: Governor, C. D. Buck; Lieutenant-Governor, Roy F. Corley; Treasurer, George S. Williams; Auditor, J. Henry Hazel; Secretary of State, Charles H. Grantland; Attorney General, Percy W. Green.

Judiciary. Chancellor, Josiah O. Wolcott; Chief Justice of Supreme Court, Daniel J. Layton; Associate Judges of Supreme Court, Richard S. Rodney, David J. Reinhardt, W. W. Harrington, Charles S. Richards.

DELAWARE, UNIVERSITY OF. An institution of higher learning in Newark, Del., founded in 1833. The enrollment in 1933-34 was 741, of whom 449 were men and 292 were women. The enrollment in the 1933 summer session was 456. The faculty numbered 125 members, 95 of whom were on the regular teaching staff, the others being members of the experiment station and extension staff. Appropriations from the State and Federal governments amounted to approximately \$445,330; invested endowment funds amounted to \$604,360. The library contained approximately 69,000 volumes. President, Walter Hüllihen, Ph.D., D.C.L., LL.D.

DEMERARA. A county of the colony of British Guiana, sometimes incorrectly used to designate the entire colony. See **BRITISH GUIANA**.

DE MOLAY, ORDER OF. A nonsectarian secret organization for young men between the ages of 16 and 21, founded in 1919 by Frank S. Land in Kansas City, Mo., and named in honor of Jacques De Molay, the last military grand master of the Knights Templars. The members are pledged to the precepts of love of parents, reverence, patriotism, cleanness, courtesy, fidelity, and comradeship, and to the promotion of the public school system and good citizenship. The order is governed by a grand council of Freemasons, while the chapters are sponsored by Masonic bodies or groups of Masons. However, it is not a junior Masonic fraternity, and more than 60 per cent of its members are from non-Masonic families. In November, 1933, the membership numbered 150,000. There were three chapters in the U. S. Navy, namely Battle Fleet, Admiral Dewey, and Asiatic, with membership confined solely to sailors. The official organ is *International De Molay Cordon* (monthly). Frank S. Land, the founder, is grand scribe; Dr. Stratton D. Brooks, former president of the Universities of Oklahoma and Missouri, is executive director. International headquarters are at 201 East Armour Boulevard, Kansas City, Mo.

DENISON UNIVERSITY. A co-educational Baptist institution of higher education in Granville, O., founded in 1831. The enrollment for the autumn of 1933 was 713. The 1933 summer session had an attendance of 120. The faculty numbered 60. The endowment amounted to \$3,280,700, and the income for the year to \$280,800. There

were 75,000 volumes in the library. President, Avery Albert Shaw, A.M., D.D., D.C.L., LL.D.

DENMARK, KINGDOM OF. The smallest of the three Scandinavian countries; comprising the peninsula of Jutland, the two main islands Zealand and Funen, with about 200 smaller adjacent islands in the Baltic, the Faroe Islands and Greenland. The King of Denmark is also the King of Iceland (q.v.). Capital Copenhagen (København). King in 1933, Christian X.

AREA AND POPULATION. Denmark has an area of 16,576 square miles, excluding the Faroe Islands (area, 540 square miles) and Greenland (area ca. 827,000 square miles with a population of 16,000 Eskimos). Denmark had a population in 1932 estimated at 3,590,000, compared with 3,566,000 in 1931, 3,542,000 at the census of 1930, and 3,285,000 in 1921. For the five years 1928-1932, births averaged 65,776 annually and deaths 38,864; the birth rate per 1000 of the population averaged 18.4 and the death rate 11.08. Emigrants in 1932 numbered 768, compared with an average of 3856 annually for the five years 1928-32. The population of the leading cities in 1930 and 1925 was: Copenhagen (København), 771,168 (731,406 in 1925); Aarhus, 81,279 (76,226); Odense, 56,759 (52,376); Aalborg, 44,365 (42,819).

EDUCATION. Primary education is free and compulsory between the ages of 7 and 14. On Jan. 1, 1931, there were 497,430 pupils attending elementary schools and 51,468 attending secondary schools. The enrollment in all divisions of the University of Copenhagen averaged about 5000; in the University of Aarhus, about 200.

PRODUCTION. Danish economy is based chiefly upon agriculture and dairying, and farm products account for about three-fourths of the value of all exports. In 1931, 1932, and 1933 foreign markets for these exports were impaired by the general decline in purchasing power and the increase in tariffs, particularly by the Ottawa Agreements which curtailed the British market. About 66 per cent of the total area, or ca. 7,000,000 acres, was under cultivation. Livestock in 1932 included 3,237,400 cattle, 4,866,300 swine (compared with 4,384,000 in 1933), and 496,200 horses. In 1931 there were slaughtered 654,000 cattle and calves, and 50,000 sheep and goats. Production of butter (1932) was 415,000,000 pounds (430,000,000 pounds in 1931), of bacon 853,534,000 pounds (813,998,000 pounds in 1931). The chief crops in 1932 were: Wheat, 10,900,000 bushels; rye, 8,700,000 bushels; barley, 46,300,000 bushels; oats, 72,500,000 bushels; potatoes, 48,000,000 bushels, sugar beets, 1,433,000 metric tons; forage roots, 25,970,000 metric tons. The deep sea fisheries yielded 89,847 metric tons of fish to a value of 33,200,000 crowns (1 crown = \$0.268 at par). The turnover of Danish coöperative societies declined from 1,664,200,000 crowns in 1930 to 1,413,800,000 crowns in 1931.

Many of the world's motor ships are built in Danish yards; in 1932 motor ships comprised 16,000 tons out of 22,000 gross tons of shipping launched in Denmark. Food products, cigars and cigarettes, cotton yarn, cotton cloth, cement, bricks, paper, oils, and varnishes are other leading products. Of about 369,000 organized workers in 1932, an average of 99,500 were unemployed. In the first week of November, 1933, there were about 97,000 organized workers registered as unemployed, compared with 180,000 at the same time in 1932 and 63,000 in 1931.

COMMERCE. Due to lower prices and restricted markets, Danish foreign trade declined from 1929 through 1933. Imports in 1932 totaled 1,142,000,000 crowns (\$316,000,000 at par), against 1,465,000,000 crowns (\$392,600,000 at par) in 1931. Exports totaled 1,137,000,000 crowns (\$305,000,000 at par) compared with 1,333,000,000 crowns (\$357,244,000 at par) in 1931. Iron and steel, fabrics of vegetable fibre, mineral oils, coal, fertilizers, and automobiles were the chief imports in order of value in 1932, while pork, bacon, and butter were the principal exports. Germany in 1932 took 13.5 per cent of all exports (by value); Sweden and Norway, 6 per cent; and the United Kingdom 67 per cent. Germany furnished 26 per cent of the total imports by value; the United Kingdom, 22.3 per cent; United States, 7.7 per cent; and Norway and Sweden, 7.5 per cent. Denmark's statistics for 1932 showed exports to United States of 4,976,000 crowns (\$1,335,000 at par) (\$1,881,000 in 1931) and imports from United States of 87,630,000 crowns (\$23,500,000 at par) compared with 154,000,000 crowns (\$41,300,000 at par) in 1931. In 1933, imports were 1,264,789,000 crowns and exports 1,200,451,000 crowns, the import surplus being 64,338,000 crowns.

FINANCE. Budget operations for the fiscal year ended Mar. 31, 1933, ended with a surplus of 7,800,000 crowns as against an anticipated deficit of 900,000 crowns and a surplus of 88,000 crowns for the preceding year. The budget for the fiscal year 1933-34 as of Apr. 1, 1933, anticipated a deficit of about 45,000,000 crowns, but it was expected that this would be considerably reduced by additional revenues levied after that date. The budget estimate for 1933-34 placed revenues at 338,028,000 crowns and expenditures at 331,737,000 crowns. The total debt as of Mar. 31, 1933 was 1,255,488,000 crowns (\$336,470,000 at par), of which the internal debt comprised 564,823,000 crowns, and the external debt 690,665,000 crowns. Denmark abandoned the gold standard on September 28, 1931. The crown (Krone), par value \$0.208, exchanged at \$0.2676 in 1930, \$0.2506 in 1931, \$0.1883 in 1932, and \$0.2333 in the week of Dec. 5-10, 1933.

COMMUNICATIONS. Railroad lines in operation Mar. 31, 1932, extended 3280 miles, of which 1550 miles belonged to the state and 1730 to private companies. The government lines in 1932 reported gross receipts equivalent to \$28,600,000 at par and the private lines receipts equivalent to \$5,960,000 at par. A bridge for the state railroads spanning "Lille Bælt" connecting the mainland with the Baltic Sea island Fyn (Funen) was under construction in 1933. Work was also under way on the construction of the "Storestrøms Bridge," a bridge connecting the two islands Zealand and Falster, to speed up the traffic to the south. Highways extended about 32,060 miles. The addition of 25 new vessels to the Danish merchant marine during 1932 brought the total to 1,238,245 gross tons. Gross freight earnings, exclusive of coastwise shipping, were \$34,800,000 in 1932, compared with \$40,100,000 in 1931. A total of 39 vessels of 80,000 gross tons were idle on Oct. 1, 1933, compared with 106 vessels of 260,000 gross tons on Oct. 1, 1932. The only commercial airline in 1932 reported a flight distance of 160,357 miles, with a total of 4985 passengers, 49,000 pounds of freight, and 53,133 pounds of mail.

GOVERNMENT. The constitution as amended

Sept. 10, 1920, vests executive power in the King, who acts through a responsible cabinet. Legislative power is vested in the Rigsdag (Parliament), composed of the Folketing (lower house) and the Landsting (upper house). The Folketing has 149 members, of whom 117 are elected for four years on the basis of proportional representation; the Landsting has 75 members, 19 of whom are elected by the Landsting itself, the remainder being elected indirectly by voters over 35 years of age, for eight years. The composition of the Folketing after the election of Nov. 16, 1932, was: Social Democrats, 62; Liberals, 39; Conservatives, 27; Radicals, 14; Communists, 2; others, 5. After the election of Sept. 13, 1932, the Landsting had 28 Liberals, 27 Social Democrats, 13 Conservatives, 7 Radicals, and 1 Home Rule advocate from the Faroe Islands. Premier in 1933, Th. A. M. Stauning (Social Democrat), who was supported by a coalition of the Social Democratic and Radical parties.

HISTORY

ECONOMIC DEVELOPMENTS. Throughout 1933, Danish attention was concentrated chiefly upon the struggle to check the economic decline caused by the world depression and the almost universal prevalence of higher tariffs. The Social Democratic government intervened in the nation's economic affairs to an unprecedented extent in its effort to alleviate unemployment and agricultural distress. In January the Danish Employers' Association decided to lock out more than 100,000 workers who had refused to accept a 20 per cent wage reduction and longer hours. The government intervened and secured the passage by the Rigsdag on January 31 of a law making strikes and lock-outs illegal for one year. The government secured Opposition acquiescence in the anti-strike law by raising the official exchange rate of the pound sterling to 22.50 crowns from a previous level of 19.30 crowns. This resulted in a 10 per cent rise in the price of butter and eggs, benefiting the farmers, but caused the official index for wholesale prices to rise to 124 in February from 117 in January, largely through increases in the price of meat, textiles, clothing, and imported goods. The government had previously obtained an increase in bacon prices by forcibly curtailing shipments to Great Britain. Forced sales of farms were reduced by a moratorium on foreclosures.

Protected by the drastic restrictions on imports and by the low exchange value of the crown, the textile, tanning, clothing, footwear, glass, paper, and other industries producing for the domestic market were fairly prosperous. The export industries also showed some improvement over the preceding year.

The government's general economic programme, as announced early in the year, called for the speeding up of public works and building construction and the reduction of hours of labor to increase employment; placing part of the unemployed on small land holdings; distribution of 125,000,000 crowns worth of meat to the unemployed; a 75,000,000-crown public works programme to be financed from a national bank fund; assumption by the national government of part of the local governmental expenditures; and the reduction of bank interest rates to a maximum of 3 per cent for time and 3½ per cent for demand deposits.

Much of this programme was placed in effect

during the year. A new banking law passed in April established a crisis fund to insure greater liquidity of credit. The fund consisted of some 160,000,000 crowns of Treasury bills, to be discounted by the National Bank. Credit was to be advanced to agricultural credit institutions, banks, business enterprises, and other agencies whose liquidity had been impaired by the farm moratorium and other laws. The law also provided for the reduction in bank interest rates.

Another law, passed in May, completely reorganized the social services, effective Oct. 1, 1933. It grouped all such services under three main headings of workmen's compensation, general insurance and poor relief. Sickness, invalidity, and old-age insurance was provided for under the heading of general insurance and all persons between 21 and 60 years of age were required to insure under the sickness and invalidity funds. Annual expenditure under the bill was estimated at 203,979,000 crowns (\$54,673,322 at par), of which 82,040,000 crowns were to be supplied by the national government.

A series of measures known as "crisis bills" were introduced by the government when the Rigsdag reconvened in the middle of September. These measures provided further extensive relief to farmers, the unemployed, and low-income groups in general at the expense of the higher-income classes. One imposed a 10 per cent tax in addition to the normal income tax on income derived from securities and housing property. This tax was expected to bring in some \$9,500,000, which was to be used in financing the other "crisis" measures. These measures provided for: (1) a reduction of agricultural interest rates either by direct subsidy or by conversion; (2) the fixing of a maximum rate of interest on real estate mortgages; (3) government loans for the reconstruction of old housing property; (4) the fixing of a minimum price for grain and butter; (5) devices for raising the price of meat; (6) continuation of the existing hog-control scheme; (7) cheap loans to small traders and craftsmen; (8) loans to needy fishermen; (9) extension of unemployment relief, and (10) the distribution of free meat to the unemployed. These proposals met strong opposition from the Conservative groups in the Rigsdag.

COMMERCIAL TREATIES. Seeking to preserve her chief foreign market as well as her domestic market, Denmark on Apr. 24, 1933, signed an important trade agreement with Great Britain. She received assurance that the bulk of her agricultural exports would have a steady market in Britain for at least three years. In return, the Danish government promised that the country would increase its purchases of British goods. The British agreed to purchase not less than 62 per cent of their bacon and ham imports from Denmark and to admit them duty free; to purchase at least 2,300,000 hundredweight of Danish butter annually; and to take agreed quantities of Danish eggs, cream, condensed milk, and fish. Denmark agreed to purchase 80 per cent of her coal imports from Britain, instead of the 43 per cent previously obtained there; to increase her annual purchases of British steel and iron goods by 25,000 tons; to keep a long list of British imports on the free list; and not to raise the existing tariff on a list of other British imports (see GREAT BRITAIN under *History*). The Folketing approved the treaty on April 27, with only the two Communist members dissenting.

The treaty with Britain offset in some degree the serious blow dealt Danish agriculture by the raising of the German agricultural tariff in February. The new German tariff was estimated to have involved an annual loss to Danish farmers equivalent to between \$4,000,000 and \$5,000,000. Moreover the British succeeded in raising their domestic output of bacon and ham and on November 1 the British government authorized a 16 per cent reduction in bacon and ham imports. This was expected to reduce Danish exports by another \$13,500,000 annually.

NAZI PROPAGANDA. The hostility toward Germany aroused in Denmark and the other Scandinavian countries by the new agricultural tariff was increased as a result of Nazi propaganda within their borders. This agitation was particularly violent and outspoken in the ranks of Nazis of German blood in the Danish South Jutland district, which was returned to Denmark as a result of a plebiscite in 1920. The Nazis made no secret of their intention of uniting South Jutland with Germany. The Danish government prohibited the wearing of political uniforms on April 12, but the Nazis continued their agitation through the schools, churches, agricultural credit associations, and other agencies. Denmark received official assurance from the German government that it had nothing to fear, but the agitation in South Jutland continued. Premier Stauning declared in the Folketing October 17 that the frontier "will be defended by all the means at our disposal." The mutual fear of Nazi aggression led Premier Hansson of Sweden to visit Premier Stauning in Copenhagen a week later and to discuss plans for closer collaboration. Norway, however, proved somewhat cool toward Danish proposals for establishing a united Scandinavian front against Nazi Germany.

THE GREENLAND DECISION. A major reason for the Norwegian coolness, in addition to Norway's relative isolation from Germany, was the victory scored by Denmark in the controversy over the possession of parts of the east coast of Greenland. (For background of this controversy, see the 1931 and 1932 YEAR BOOKS under GREENLAND). The dispute had been submitted to the Permanent Court of International Justice at The Hague. The World Court, in a 12-to-2 decision issued Apr. 5, 1933, held that Norway's occupation of Eastern Greenland was unlawful and invalid. The Norwegian government accepted the decision and withdrew the official it had sent to administer Eric the Red's Land.

See NORWAY, SWEDEN, and GERMANY under *History*; *WORLD COURT*.

DENVER. See *AQUEDUCTS*.

DENVER, UNIVERSITY OF. A coeducational institution of higher learning in Denver, Colo., founded in 1864. The registration for the autumn quarter of 1933, excluding duplicate enrollments, totaled 2261 and was distributed as follows: Graduate school, 205; college of liberal arts, 982; school of science and engineering, 130; school of commerce, 510; school of law, 67; school of art, 132; school of librarianship, 30; city college, 227; and extension and correspondence, 153. The enrollment in the summer session of 1933 totaled 715. The faculty had 180 members. The assets of the university consisted of plant assets, \$1,713,309; endowment assets, \$2,176,243; and current assets, \$180,528. The total income for the year was \$490,654. The li-

brary contained 78,000 volumes. Chancellor, Frederick M. Hunter, Ed.D., LL.D.

DEPAUW UNIVERSITY. A coeducational institution for higher learning in Greencastle, Ind., under the auspices of the Methodist Episcopal Church founded in 1837. The enrollment for the autumn session of 1933 was 1325, including 792 men and 533 women. Of this number, 1240 were registered in the college of liberal arts and 85 in the school of music. The college of liberal arts had a faculty of 81 members and the school of music a faculty of 17. The productive funds of the university amounted to \$5,346,986.60, including assets of \$2,206,839.34 of the Rector Scholarship Foundation. The income from productive funds was \$214,777.76, while the total current income for the year was \$529,083.90; \$69,894.20 of the income from productive funds was for scholarships. The total amount of gifts for permanent funds received during the year was \$88,849.53. The library contained 78,764 volumes. President, G. Bromley Oxnam, D.D., LL.D., Litt.D.

DEPRESSION. See *BUSINESS REVIEW*; *BANKS AND BANKING*; *EDUCATION IN THE UNITED STATES*; *FINANCIAL REVIEW*; *TAXATION*; articles on basic industries, such as *COTTON*, *IRON AND STEEL*, *SUGAR*; and sections on *Commerce*, *Finance*, and *Production* in articles on various countries, such as *GERMANY*, *GREAT BRITAIN*, *FRANCE*, ETC.

DERBY. See *HORSE RACING*.

DESTROYERS. See *NAVAL PROGRESS*.

DETROIT, UNIVERSITY OF. An institution of higher education in Detroit, Mich., under the auspices of the Roman Catholic Church and conducted by the Jesuit Fathers, founded in 1877. In the Autumn of 1933 there were 2400 students registered, distributed as follows: arts and sciences, 406; engineering, 446; commerce and finance (day), 256; law, 186; dentistry, 85; commerce and finance (evening), 268; foreign trade (evening), 10; graduate division, 206; Thursday-Saturday School, 216. The summer school registration was 411. The faculty numbered 156. The income in 1932-33 was \$453,485. There were 82,937 volumes in the library. President, Rev. Albert H. Poetker, S.J., Ph.D.

DEUTONS. See *CHEMISTRY*.

DE WINDT, HARRY. A British explorer, died in Bournemouth, England, Dec. 1, 1933. Born in Paris, France, in April, 1856, he attended Magdalene College, Cambridge. After serving his brother-in-law, Rajah Brooke of Sarawak, as aide-de-camp during 1876-78, he traveled by land from China to France in 1887, and two years later from India to Russia by way of Persia. An interest in penal reform led him to inspect the prisons of western Siberia in 1890 and the mines and political prisons of eastern Siberia in 1894. The following year he served as English delegate to the Penal Congress held in Paris. He then resumed his exploration work but while endeavoring to travel from New York to Paris by land for the *Pall Mall Gazette* in 1896, nearly perished in the Bering Straits region, following his capture by a hostile tribe, the Tchuktchees; he was subsequently rescued by a whaling vessel. In 1897 he explored the Klondike gold fields, and three years later was sent to Russia by the London *Daily Express*. While serving the same newspaper he succeeded in journeying by land from Paris to New York during 1901-02, negotiating the distance of 18,484 miles via Siberia, Bering Straits, and Alaska by foot, horseback, and rail in 248 days.

His companions were the Viscomte de Clainchamp Belle Garde, George Harding, and Stephen Rastorugyeff, a Cossack. Three years later he traversed the Balkan States for the *Westminster Gazette* and during 1911-13 traveled in the Sahara and Morocco. Mr. De Windt was a Fellow of the Royal Geographical Society. He described his adventures in *On the Equator* (1882); *From Peking to Calais by Land* (1887); *A Ride to India* (1890); *Ennui de Voyage* (Poems, 1890); *Siberia As It Is* (1892); *The New Siberia* (1895); *Through the Gold Fields of Alaska to Behring Straits* (1898); *True Tales of Travel and Adventure* (1899); *Finland As It Is* (1901); *From Paris to New York by Land* (1903); *Through Savage Europe* (1905); *My Restless Life* (1908); and *Russia As I Know It* (1916).

DICTIONARIES. See PHILOLOGY, MODERN.

DIESEL ENGINES. See INTERNAL COMBUSTION ENGINES.

DILLON, EMILE JOSEPH. A British journalist, died in Barcelona, Spain, June 9, 1933. Born in Ireland in 1855, he received his education at the Collège de France, Paris, and the Universities of Innsbruck, Leipzig, and Tübingen. From the University of St. Petersburg he received the degree of Master of Oriental Languages and from Louvain University that of Doctor of Oriental Languages. The University of Kharkoff conferred on him the degree of Master of Comparative Philology and Classical Languages in 1883 and that of Doctor of Comparative Philology in 1884 in recognition of such works, in Russian, as *Dualism in the Zend Avesta and The Place Occupied by the Armenian Language in the Indo-European Family*. He published also *The Home and Age of the Avesta*, *L'Alphabet de la Langue Bactrienne*, *Die Transcription der Eranischen Sprachen*, *History of the Scandinavian Literature in the Middle Ages* (in Russian), *Maxim Gorky*, and *The Original Poem of Job*. In 1885 he founded *Le Muséon*.

Appointed Russian correspondent for the *London Daily Telegraph* in 1887, Dr. Dillon held that post until the outbreak of the World War. He represented the *Telegraph* also as special correspondent in Armenia during 1894-95, arousing the protest of the Christian world by his description of the atrocities committed by the Turks. Before and during the Spanish-American War he was in Spain, and on the outbreak of the Boxer Rebellion in China. On the conclusion of the Russo-Japanese War in 1904 he accompanied Count Witte to the Portsmouth Peace Conference in the capacity of adviser. He covered the Dreyfus trial at Rennes in 1906 and was an eyewitness of the Portuguese Revolution of 1910. After the Balkan Wars of 1912-13 he attempted to negotiate a pacific agreement between Greece and Turkey.

During the World War Dr. Dillon published such timely works as *A Scrap of Paper* (1914); *From the Triple to the Quadruple Alliance: Why Italy Went to War* (1916); *Ourselves and Germany* (1916); and *The Eclipse of Russia* (1918). The Paris Peace Conference found him in attendance, and he published his impressions under the title *The Peace Conference* (1920). He recorded the march of events after the War, in *Mexico on the Verge* (1921); *President Obregon*, *A World Reformer* (1923); and *Russia Today and Yesterday* (1929). His memoirs, *Leaves from Life*, were published in 1932.

DINDINGS. See STRAITS SETTLEMENTS.

DIBIGIBLES. See AERONAUTICS.

DISARMAMENT. The Disarmament Conference at Geneva resumed its work on Feb. 2, 1933—one year after its first meeting—with a general debate on the French plan for disarmament. This plan rested upon a general agreement implementing the Kellogg Pact with provisions for consultation and sanctions, and a special organization for Continental Europe based on a uniform military system and a European security pact. The security issue was referred to the Political Commission where it was discussed in relation to the European pact, while questions of disarmament were reserved for the General Commission itself.

The discussions from the outset revealed a widening breach between France and the states determined to preserve the *status quo* on the one hand, and Germany and Italy, leaders of the revisionist bloc, on the other. To the revisionist powers the French plan was unacceptable in many vital respects. Germany criticized the plan for its failure to provide for effective reduction or abolition of aggressive weapons. It raised objections to the European security pact and the proposed international force, as well as the international control of civil aviation. Meanwhile France, alarmed by the triumph of Hitlerism in Germany, declined to consider further reductions except as part of the general plan for security. When the principle of the French security pact was put to a vote on March 7, 14 countries, including France and the Little Entente, voted in favor, while five—Germany, Italy, Austria, Hungary, and Holland—voted against. Moreover, an effort to appoint a committee to study the proposal further was blocked when Germany and Italy refused to participate on the ground that they could not cooperate on a proposal to which they were opposed.

On March 2 some progress appeared to have been made when the Political Commission, with several states abstaining, unanimously adopted a British proposal to renounce the use of force in the settlement of international disputes between European states. This proposal supplemented the Anti-War Pact which, while renouncing war, does not refer explicitly to acts of force. The United States abstained from this vote, apparently on the ground that the proposed agreement would affect only European countries.

Another effort to clarify the Anti-War Pact and the League Covenant was made by the Soviet delegation which on February 6 proposed a definition of "aggressor" nation. The Soviet definition would make the use of armed force in the territory of another state an act of aggression, regardless of the justification. Apparently because of its possible effect on the Far Eastern controversy, the Soviet definition was viewed with extreme caution by the great powers, and was criticized by Great Britain and the United States as well as Japan.

The Disarmament Conference on March 27 unanimously voted to accept the British draft treaty as a basis for discussion and to adjourn until April 25, thus reversing its unanimous decision of March 23 to continue work until Easter. This vote had been practically forced on the conference by the Little Entente and Poland, which believed that the Mussolini plan for a concert of the four great powers—Italy, France, Germany, and Great Britain—boded no good to the rights of small states.

In April, 1933, Europe was confronted by one of the most serious political crises since the close

of the World War. By May the atmosphere had materially changed. The three events which contributed to this striking change were Hitler's address to the Reichstag on May 17; the news published on May 21 that the Mussolini four-power pact had been revived in modified form; and the American declaration of policy made by Norman H. Davis at the Geneva Disarmament Conference on May 22. As a result of these developments, the German delegation abandoned its opposition to the British plan for the reorganization of European armies. Under this plan the five leading armies of Europe would each be fixed at 200,000 men; every government would abolish tanks above 16 tons and large guns above 155 millimeters; and military aircraft would be drastically reduced—to 500 planes in the case of each great power.

In his appeal of May 16 President Roosevelt gave Chancellor Hitler an opening for a moderate answer to the extremist statements of Viscount Hailsham and others. Hitler on May 17 not only accepted the American proposal for a non-aggression pact, but gave assurances that Germany did not wish to change the map of Europe by force or to "Germanize" alien peoples. He also accepted the principle of international supervision of armaments, provided it is universal.

Ambassador Davis's statement accepted the British arms proposal as a forward step. Apparently having Germany in mind, Mr. Davis declared that "if at this decisive point any nation should fail to give conclusive evidence of its pacific intentions and insist upon the right to rearm, even though the other powers take substantial steps toward disarmament, then the burden of the Disarmament Conference, with the incalculable consequences of such a failure, would rest on the shoulders of that nation."

Going further than any previous spokesman of the American government, Mr. Davis proceeded to say that if a disarmament treaty could be concluded, the United States would assist in "the organization of peace." First, it would be "willing to consult the other States in case of a threat to peace with a view to averting conflict." Second, "in the event that the States, in conference, determine that a State has been guilty of a breach of the peace in violation of its international obligations, and take measures against the violator, then, if we concur in the judgment rendered as to the responsible and guilty party, we would refrain from any action tending to defeat such collective effort which these States may thus take to restore." Third, the United States was "heartily in sympathy with the idea that means of effective, automatic, and continuous supervision should be found whereby nations will be able to rest assured that, as long as they respect their obligations with regard to armaments, the corresponding obligations of their neighbors will be carried out in the same scrupulous manner." Finally, Mr. Davis intimated that the "simplest and most accurate definition of an aggressor is one whose armed forces are found on alien soil in violation of treaties."

The Geneva Conference adjourned on June 29 until October 16. On June 1, the General Commission adjourned after the reading of the Draft Convention which they had prepared, to meet again not later than July 3. The Bureau was instructed to prepare a text for the second reading and to request Arthur Henderson, president of the Conference, to undertake any useful negotia-

tions with a view to the preparation of that text. The General Commission unanimously decided on June 8 that the Draft Convention submitted by the United Kingdom delegation should be accepted as the basis for the future Convention.

Mr. Henderson, on June 27, informed the Bureau, that owing to the pressure of work devolving on the Delegates at the London Conference he had been unable to make satisfactory progress with the negotiations, and that in order to carry them to a successful conclusion he proposed that the work of the Conference should be adjourned until October.

Herr Nadolny, the German delegate in the General Commission, opposed adjournment, but added that the future Convention would be faithfully and loyally observed by Germany. Whereupon, the Commission authorized the President unanimously, save for Germany's adverse vote and Hungary's abstention, to enter into the necessary negotiations with a view to preparing a text of the second reading of the Draft Convention. It was then that the General Commission adjourned until October 16.

As the Prime Minister of Great Britain pointed out when he presented the Draft Convention, it was a compromise proposal, designed to embody the maximum of agreement likely to be achieved at the present time. It involved a degree of disarmament on land and in the air. The naval clauses were intended to serve merely as a stop-gap until the next naval conference in 1935.

Up to July 23, 1932, the work of the Conferences consisted of discussions of general principles; from July 23, 1932, until Mar. 22, 1933, it labored on the tasks of formulating general principles; after Mar. 23, 1933, decisions of principle gave way to definite decisions in the form of this Draft Convention.

Disarmament conversations which began in September in Paris between representatives of France, Great Britain, Italy, and the United States and continued in Geneva proved more important than the formal proceedings of the Disarmament Conference which resumed its work at Geneva on October 16.

Germany's response to the armament terms advanced by Great Britain, France, Italy, and the United States at the conclusion of the private conversations in Geneva in October exposed the full gravity of the crisis that confronted the Disarmament Conference. For the first time since the last war Europe was faced with the demand of a defeated power not merely for treaty revision and equality, but for actual rearmament; and for the first time in its seventeen months' history the Conference was brought face to face with the political issue which had divided Europe for a decade. The crisis differed only in degree from that which faced the Conference in March, when Ramsay MacDonald presented the British draft convention as a possible compromise between the extreme demands of France and Germany. In March Germany was not prepared openly to press its demand for rearmament to the extent of requesting "samples" of the weapons forbidden in the Treaty of Versailles. Hitler's conciliatory speech on March 17, however, preserved all the essential demands of the German government and merely postponed the inevitable conflict.

As in March, Germany's position in October was based on the complete application of the principle of equality. The only essential difference was that, in the answer given to the four great

powers on October 6, the Nazi government officially requested samples of all weapons allowed to other powers under the proposed disarmament treaty, but forbidden to Germany in the Treaty of Versailles. The German answer laid down three counter-proposals:

First, that the trial period of four years, suggested by France for testing a system of supervision of armaments, should be reduced to six months;

Second, that definite reductions in armaments must be made simultaneously with the application of the system of supervision;

Third, that samples of all armaments retained by other countries must be allowed to Germany.

The first effect of the German terms was to strengthen the unity of the other great powers. Great Britain's position was revealed by Stanley Baldwin, the second ranking Minister in the British cabinet, in a speech before the Conservative party conference on October 6. Mr. Baldwin warned that any country that deliberately prevents a disarmament convention would have no friend in the civilized world, and reaffirmed Great Britain's pledge under the Locarno treaty. In referring to Locarno he declared: "What Britain has signed she will adhere to. She adhered to her signature regarding Belgium, for her signature and her agreements are sacred."

While France, Italy, and the United States made no official comment on the German demands, they indicated their strong opposition to all demands for rearmament. When the Bureau of the Conference met on October 9 to prepare for the full meeting of the Conference on October 16, Germany faced what appeared to be a virtual united front on the issue of rearmament. The crisis, however, was not relieved by the growing unity of the armed powers. Having admitted the principle of equality, the conference was still confronted with the question of applying this principle in a disarmament convention.

On October 14, at a morning session, Sir John Simon delivered a legalistic, unimpassioned speech summarizing the British, French, and American stand. It set the official seal on the triple union. Although couched in conciliatory terms, it firmly denied Germany the right to any armaments until the end of the supervisory period, when she could begin to rearm gradually. She would not reach equality with the other powers until the end of the eighth year. If the bureau had been fearful of the effects of such a firm stand they were completely astounded by the swiftness with which Hitler struck back. Without waiting for twelve hours to pass, he announced Germany's withdrawal from the Disarmament Conference and from the League and all its works. His action left the world astounded, shocked and for the moment gravely apprehensive. Germany's big guns had been fired on the eve of the convening of the Disarmament Conference proper, scheduled October 16. Its first session lasted only half an hour. The business consisted of approving a stern reply to Germany's notification of withdrawal. After that it was voted to adjourn until October 26 so that the delegates could "consult their governments."

Norman Davis's instructions from the first had been to concern himself solely with the problem of disarmament without involving the United States in European politics. These instructions he had followed with the utmost discretion. On learning that there was some uneasiness at home over his close alignment with the positions of France and Britain, he issued a clarifying statement to the

press: "We are in Geneva solely for disarmament purposes. We again make clear that we are in no way politically aligned with any European power. During this week there will be consultations between the capitals of Europe. We do not wish to take an active part in these, as the implications are clearly political."

In Washington the American policy was made doubly clear when Secretary of State Hull gave newspapermen an emphatic declaration that the government would remain aloof from the Geneva Conference until and if the direct problem of arms reduction again came to the front. Ambassador Davis decided to remain in Geneva as a neutral observer and to watch developments. His position was made additionally delicate by the wish of the League that the United States continue to exert its influence as a consultative power. It was thought highly undesirable that, considering the nervous state of Europe, the American government should take advantage of its geographical isolation and retire completely from the field. As Ambassador Davis put it, "the time has come for all of us to keep our heads and use them more than ever."

Opinion at Geneva and elsewhere continued to be divided as to the wisdom of adjourning the disarmament conference. The bureau or steering committee of the conference voted on October 25 a recommendation to the general disarmament commission that the conference should be resumed not later than December 4, and that the bureau in the meanwhile should continue the work of the conference. But on November 21, Mr. Henderson fixed the middle of January, 1934, for the reconvening of the conference.

The end of the year found the situation unchanged with regard to the attitude of France and Germany toward disarmament, with Great Britain in the habitual rôle of a friendly but unpredictable mediator. A conversation on December 21 between the British and French Foreign Ministers, Sir John Simon and Joseph Paul-Boncour, brought out that France was still definitely opposed to Germany's rearmament proposals. In the meantime, Hitler asked when France was going to begin her reductions of armaments. See NAVAL PROGRESS.

DISCIPLES OF CHRIST. A communion, known also as the Churches of Christ, which sprang from a movement for Christian unity in American Presbyterian circles at the beginning of the nineteenth century, under Barton W. Stone in Kentucky and under Thomas and Alexander Campbell in western Pennsylvania. In 1933 the total church membership throughout the world was 1,716,958, and in the United States and Canada, 1,575,451. The Bible school enrollment for the world was 1,258,976, and for the United States and Canada, 1,188,061. Contributions for missionary, benevolent, and educational purposes, reported for the fiscal year in the United States and Canada, totaled \$2,482,902. The work was carried on through the United Christian Missionary Society, Board of Education, Board of Temperance and Social Welfare, Association for the Promotion of Christian Unity, and Pension Board, besides missionary societies in the several States and provinces. The International Convention at its meeting in Pittsburgh in October, 1933, approved the separation of the National Benevolent Association from the United Christian Missionary Society, also the separation of the Board of Church Extension from the American Christian Missionary Society (a constituent member

of the United Christian Missionary Society) and the department of church erection from the United Christian Missionary Society, merging the latter two into one Church Extension Board.

The denomination's foreign missionary work in 1933 embraced the Belgian Congo, Africa, China, India, Jamaica, Japan, Mexico, Philippine Islands, Puerto Rico, Argentina, Paraguay, and Tibet (Batang, on the border). During the year there were 9301 baptisms. The communion maintained 539 mission schools with an enrollment of 17,573 and 15 hospitals and 13 dispensaries which gave 460,174 treatments. Work in America was conducted among the French, Highlanders, immigrants, Negroes, Orientals, Spanish-Americans, and Mexicans. The department of benevolence maintained six homes for children, an equal number of homes for the aged, and one hospital. In 1933, 29 colleges cooperated with the Board of Education. Among the periodicals published by the denomination are *World Call*, *Christian Evangelist*, *Christian Standard*, and *Christian Unity Quarterly*. The acting president of the International Convention at the close of the year was the Rev. George A. Campbell of St. Louis, Mo. The Rev. Stephen J. Corey was president of the United Christian Missionary Society, whose headquarters are at 222 Downey Avenue, Indianapolis, Ind.

DIVORCE. See MARRIAGE AND DIVORCE; LAW.

DIXON, JAMES MAIN. An American educator and author, died in Los Angeles, Calif., Sept. 27, 1933. He was born at Paisley, Scotland, Apr. 20, 1856. On his graduation from St. Andrews University in 1879 he was appointed professor of English and secretary of the Imperial College of Engineering in Tokyo, Japan, and seven years later was called to the Imperial University in the same capacity. In 1887 he founded in Tokyo the Ladies' Institute and the following year was decorated by the Emperor for his contribution to the advancement of higher education in Japan.

Dr. Dixon came to the United States in 1892 to accept the chair of English literature at Washington University, St. Louis. After acting during 1903-04 as president of Columbia College, Milton, Ore., he was called to the University of Southern California, serving as professor of English literature until 1911 and as professor of Oriental studies and comparative literature until 1931. Among his works were: *Twentieth Century Life of John Wesley* (1902); "Matthew Arnold" in *Modern Poets and Christian Teaching* (1906); *A Survey of Scottish Literature in the Nineteenth Century* (1907); *The Spiritual Meaning of Tennyson's "In Memoriam"* (1920); *Manual of Modern Scots* (with William Grant, 1920); and *Emotional Values in Australasian Verse* (1931). He compiled also a *Dictionary of Idiomatic English Phrases* (1891).

DOAK, WILLIAM NUCKLES. An American labor leader and former United States Secretary of Labor, died near Washington, D. C., Oct. 23, 1933. Born at Rural Retreat, Wythe Co., Va., Dec. 12, 1882, he attended the Southern Business College at Bristol, Va., and in 1900 entered the service of the Norfolk and Western Railway Co. in the capacity of yardman, being later promoted to conductor and assistant yardmaster. He began his career as a labor leader in 1904 when he became a member of the Brotherhood of Railroad Trainmen, serving as chairman of the local grievance committee and then as president of his local lodge. From 1908 to 1916 he was general chairman of the brotherhood of the Nor-

folk and Western System, from 1912 to 1916 chairman of the State legislative board for West Virginia, and from 1909 to 1916 secretary-treasurer of the southern association of general committees for the Order of Railroad Conductors and Brotherhood of Railroad Trainmen.

During the Federal government's war-time administration of railroads Mr. Doak was a member of the railway board of adjustment, organized for the purpose of handling disputes between the railways and the railway brotherhoods, and from 1921 to 1928 represented the Brotherhood of Railroad Trainmen on the train service boards of adjustment for the southeastern and eastern territories. He assisted also during this period in the adjustment of numerous wage movements, including the national movement of 1919-20 and the territorial movements of 1923-24 and 1926-27. Elected a vice-president of the Brotherhood of Railroad Trainmen in 1916, Mr. Doak served after that date as its national legislative representative in Washington. In 1927 he was its acting president and after 1928 editor of its organ, the *Railroad Trainmen*.

In December, 1930, President Hoover appointed Mr. Doak Secretary of Labor, succeeding James J. Davis. His tenure of this office was marked by vigorous enforcement of the policy of deporting so-called undesirable aliens on the grounds either that they were public charges or were engaging in activities subversive to the political and economic institutions of the United States. On the expiration of his term Mar. 4, 1933, he resumed his labor organization activities.

DODD, LEE WILSON. An American author and playwright, died in New York City, May 16, 1933. Born at Franklin, Pa., July 11, 1879, he was graduated from Yale University in 1899 and after attending the New York Law School was admitted to the bar in 1902, acting as chief counsel for the Standard Oil Co. Five years later, however, he turned to literature, in which he made a distinct accomplishment for his salty wit, gay fancy, and satirical touch. The most typical of his novels was *The Golden Complex* (1927), a satire on the excesses of psychoanalysis. Among his other prose works were: *His Majesty Bunker Bean* (1915); *Pals First* (1917); *The Book of Susan* (1920); *Lilia Chenoworth* (1922); *The Girl Next Door* (1923); and *The Sly Giraffe* (for children, 1925). In addition to dramatizations of *His Majesty Bunker Bean* and *Pals First* he wrote the plays *The Return of Eve* (1909); *Speed* (1911); and *The Changelings* (1923). His poetry included *A Modern Alchemist* (1906); *The Middle Miles* (1915); and *The Great Enlightenment* (1928).

Mr. Dodd served as critic for the *Saturday Review of Literature* and at various times was special lecturer on the English drama and kindred subjects at Smith College, Wesleyan University, and the Bread Loaf (Vt.) Writers' Conference, sponsored by Middlebury College. He was also a member of the English faculty of Sarah Lawrence College and previous to his death was appointed associate professor in the drama department of Yale University, succeeding George Pierce Baker.

DOGS. Despite a slight falling off in the number of entries in the shows, and a lessening of purses in many shows, the dog show sport kept very much alive in 1933 and definite trends were shown both here and abroad. In the United States there were ten more licensed bench shows than the year before and one more field trial and at-

tendance was quite a bit greater, especially at the outdoor fixtures. Of course, there was less importing of stud dogs from England and other countries, but the fine specimens of breeds in the United States served to keep the thoroughbred demand satisfied, although prices for fine dogs have undeniably not approached their boom time level.

The champion dog of the year is generally recognized as the winner of best-in-show at the Westminster in New York in February. In 1933 this coveted ribbon went to S. M. Stewart's aire-dale, Ch. Warland Protector of Shelterock judged by Mrs. M. Hartley Dodge, the first woman ever to judge best at Westminster. Warland Protector did not perform as well afterwards as had previous Westminster winners and probably the most consistently fine dog of the year was Ch. Heather Reveller of Sporrán, Scottish terrier, owned by S. S. Van Dine, author. Heather Reveller was best-of-breed in New York and took innumerable bests along the circuit. Epping Eville, wire-haired fox terrier bitch, owned by John G. Bates, was adjudged best in show at Mrs. Dodge's Morris and Essex show at Madison, N. J. in June. This was the largest one-day show ever held in the world, with a record total of 2343 dogs benched.

Many breeds increased in popularity during the year and others slipped back in the public fancy. The Cocker spaniel made a fine showing and deserved to be ranked as the most popular breed of 1933.

DOLE. See UNEMPLOYMENT; LABOR, AMERICAN FEDERATION OF; GREAT BRITAIN; GERMANY.

DOLLFUSS, ENGELBERT. See AUSTRIA; MILITARY PROGRESS.

DOMESTIC RELATIONS. See LAW.

DOMINICA. See LEEWARD ISLANDS, BRITISH.

DOMINICAN REPUBLIC (SANTO DOMINGO). A West Indian republic, occupying the eastern part of the island of Hispaniola (Haiti). Capital, Santo Domingo.

AREA AND POPULATION. The republic has an area of 19,332 square miles. The estimated 1932 population was 1,275,000 (894,665 at the 1920 census). The population is composed of: Whites (mostly of Spanish descent), 25 per cent; negroes, 25 per cent; mestizos or other mixed races, 50 per cent. Populations of the chief cities (estimated, 1932) were: Santo Domingo, 47,200; San Pedro de Macoris, 31,000; Santiago, 25,000; La Romana, 10,000; Puerto Plata, 9,000. There were about 320,000 illiterates in 1930; school enrollment in 1931, 75,209.

PRODUCTION. Agriculture is the principal occupation and sugar, cacao, coffee, tobacco, rice, and corn are the main crops. Production is best measured by the export statistics (see *Commerce*). The raw sugar yield in 1932-33 was estimated at 446,000 short tons. The 21 sugar centrals are mostly owned and operated by American companies. The livestock estimate for 1930 was 900,000 cattle, 1,100,000 swine, 63,000 sheep (in 1932), 650,000 goats, and 345,000 horse, mules, and asses. The forests produce lignum-vitæ, mahogany logs, railroad ties, and dyewoods. There is little mining and sugar refining is the only important manufacturing industry.

COMMERCE. Dominican imports were valued at \$7,794,000 in 1932 (\$10,152,000 in 1931) and exports at \$11,164,000 (\$13,067,000 in 1931). Leading imports, by value, in 1932 were: Cotton manufactures, \$1,515,000 (including piece goods, \$1,106,000); machinery, \$314,000; iron and steel,

\$436,000; jute bags, \$432,000; gasoline, \$409,000; rice, \$396,000. The principal 1932 exports, by quantity and value, were: Raw sugar, 969,013,000 pounds, \$6,859,000; coffee, 14,137,000 pounds, \$1,255,000; cacao, 38,275,000 pounds, \$1,027,000; sugar cane, 258,212 tons, \$550,000; molasses, 191,988,000 pounds, \$441,000. The United States, including Puerto Rico, supplied 59.3 per cent of the 1932 imports (58.2 in 1931) and took 26 per cent of the exports (29.8 in 1931). The United Kingdom purchased 43.4 per cent of the 1932 exports (31.0 per cent in 1931); France, 18.9 (23.7).

Preliminary 1933 trade returns showed imports of \$9,322,688 and exports of \$9,625,473.

FINANCE. Government receipts in 1931 were reported at \$7,311,000 and expenditures at \$8,403,000. For 1932 actual revenues were reported at \$7,527,000 and expenditures at \$7,263,000. The 1933 budget authorized expenditures of \$7,063,000 and called for revenues of \$7,094,000. On Dec. 31, 1932, the external funded debt totaled \$16,498,000 (\$16,593,500 on Dec. 31, 1931) and the estimated floating debt was about \$3,500,000. Sinking fund payments on the external debt were suspended in October, 1932, but interest payments continued to be met. The United States dollar is the unit of currency.

COMMUNICATIONS. Railways of the republic in 1932 extended 788 miles, including 144 miles of public carrier lines (62 miles state owned) and 644 miles of sugar company railways. The high-way mileage in 1930 was 845 miles (686 of macadam). A contract for a \$300,000 bridge over the Higuamo River was awarded to an American firm in 1933. Santo Domingo and San Pedro de Macoris are ports of call on the Pan American Airways system. In 1932, 1375 vessels of 1,864,000 net registered tons entered the Dominican ports and 1339 ships of 1,880,000 tons cleared. A new fast freight and passenger service between the northern ports of the country and New York, providing refrigeration facilities, was inaugurated in August, 1933.

GOVERNMENT. The Constitution vests executive power in a president elected for four years and a cabinet chosen by him. It provided for a senate of 12 members and a lower chamber of 33 members, all elected for four years, supposedly by direct suffrage. President Rafael Leonidas Trujillo Molina, who assumed office Aug. 16, 1930, following the revolution of February, 1930, scrapped the former bi-party system and organized a new (Dominicano) party, in which all members of the government and many state employees and citizens enrolled. All other parties went out of existence and those opposition leaders who did not go into exile retired from public life.

HISTORY. News from the Dominican Republic during 1933 indicated that President Trujillo was consolidating his dictatorship and preparing to secure reelection in 1934. There were repeated charges that the President was severely repressing all opposition. On Sept. 23, 1933, Secretary of the Navy Swanson announced the appointment of Major Thomas E. Watson of the U. S. Marine Corps to assist President Trujillo in training the Dominican army. This assignment aroused a protest from Dr. Raymond L. Buell of the Foreign Policy Association, who said that "Secretary Swanson is unconsciously inaugurating a policy of underwriting dictatorship in the Dominican Republic. . . ."

President Trujillo during 1933 inaugurated a policy of establishing farm colonies on unused

land. It was reported that more than 300 families were placed on the land and supplied with tools and expert advice in their farming enterprises.

By a decree of Nov. 22, 1933, the President ordered that a special referendum be held at the same time as the elections of 1934 to determine whether the women of the republic desired the right to vote and hold office on the same terms as men. If the vote favored woman suffrage, an amendment to the Constitution would be in order.

DONALD, SIR ROBERT. A British journalist, died in London, Feb. 17, 1933. Born in Banffshire, Scotland, in 1861, he served his journalistic apprenticeship as reporter and feature writer in Edinburgh, Northampton, Paris, New York, and London. In 1893 he founded, and thereafter managed, the *Municipal Journal* and the *Municipal Year Book*. Joining the staff of the *London Daily Chronicle* in 1902, he became editor in 1904 and thereafter devoted his energies, until his retirement in 1918, to making this one of the sanest and most progressive of British Liberal journals. He was also from 1911 to 1918 managing director of the United Newspapers, Ltd., and at the time of his death was chairman and managing director of the Everyman Publishing Co., Ltd.

During the World War Sir Robert was connected with the Ministry of Information as director of British propaganda in neutral countries. He assisted during 1912-14 in the organization of the British-American Peace Centenary Committee, of which he was honorary secretary, and in raising funds for the purchase of Sulgrave Manor, Washington's ancestral home. In 1924 he was chairman of the publicity committee of the British Empire exhibition, being responsible for the inquiry which led to its reorganization. He was also chairman in 1924 of the Committee on Imperial Wireless Telegraphy and of the Committee on Organization of Imperial Wireless Services and was a member of the Committees on Reconstruction of Local Government (1917-18), Royal Commission on London Government (1923), Royal Commission on Transport (1930), and Committee on British Industries Fair (1930).

One of the organizers of the Imperial Press Conference of 1909, Sir Robert served as chairman of the Empire Press Union from 1915 to 1926 and as vice-chairman from 1926 until his death. He was also president in 1913 of the Institute of Journalists, and in 1924 was created a Knight of the Grand Cross of the Order of the British Empire. Among his publications were: *Imperial Press Conference in Canada* (1921); *A Danger Spot in Europe* (1925); and *The Tragedy of Trianon* (1928).

DOUBINE ERADICATION. See VETERINARY MEDICINE.

DOYLE, THE RT. REV. MGR. RICHARD BARRY. See BARRY-DOYLE, THE RT. REV. MGR. RICHARD.

DRAKE, DURANT. An American educator and philosopher, died in Poughkeepsie, N. Y., Nov. 25, 1933. He was born in Hartford, Conn., Dec. 18, 1878, and was graduated from Harvard University in 1900, receiving the Ph.D. degree from Columbia University in 1911. After serving for a year as instructor in philosophy at the University of Illinois, he became in 1912 associate professor of ethics and philosophy at Wesleyan University and in 1915 professor of philosophy and education at Vassar College. His early position as a philosopher, as set forth in *The Problem of Things in Themselves* (1911), was that of an epistemological dualist, impressed by the dual-

ity between the cognitive state, which is the vehicle of knowledge, and the object known. This view was later modified to that of an epistemological monism, namely, that in so far as perception is accurate the data of our experience are the very physical things that surround us.

Dr. Drake was one of a group of seven who published the *Essays on Critical Realism* (1920). Among his other writings were: *Problems of Conduct* (1914); *Problems of Religion* (1916); *America Faces the Future* (1922); *Mind and Its Place in Nature* (1925); and *The New Morality* (1928). According to the personal statement, "The Philosophy of a Meliorist," set forth in *Contemporary American Philosophy* (1929), he held that the consummation of happiness was through a rigorously scientific training in fact and a parallel development of human affections and of religious ardor.

DRAMA. During its first nine months the year 1933 produced but little in the Theatre or the Drama, particularly in the United States, to distinguish it from its immediate predecessors. If any degree of difference, other than that of names and dates, was perceptible, it lay in the still more pronounced fewness of the new plays with even slight claims to importance and the staggering percentage of quick, decisive failures. Probably in no like period before have so many offerings been withdrawn after only a performance or two, and runs of a mere fortnight or less were too common to arouse comment. Certainly never before since America accumulated a substantial Drama has so great reliance been placed on revivals of very recent successes, usually at reduced prices, for keeping the playhouses open at all. But with the coming of fall a few bright rays of hope flared up and, with something to feed upon, taken in conjunction with certain appreciable reforms in the manner of marketing the tickets of admission, the public's taste showed signs of once more turning theatre-ward.

The first production of the year to achieve even moderate popularity was *Pigeons and People*, of which George M. Cohan was both author and star. It could scarcely be described as a play—scarcely, indeed, he described it at all save, perhaps, in its writer's own words, as a "comic state of mind in continuous action." It contained no perceptible plot but, instead, an abundance of highly entertaining discourse on a variety of topics, phrased in the best Cohan manner and delivered accordingly, often very nearly as a monologue, with a number of contributory characters introduced as foils. Next came a musical comedy, *Pardon My English*, by Herbert Fields and the brothers Gershwin, but not a great hit as such things go. Then Elmer Fisk blazed forth in an honest outburst of long-smoldering indignation at the slough into which political and economic conditions have been permitted to bring this country. This bitter and violent protest he entitled *We, the People*, but though undeniably powerful and interesting by virtue of the very heat of his wrath, it proved too pessimistic and disturbing for the public fancy, falling just short of 50 performances. The same month, January, brought also one of the few substantial successes of the first half of the year, Noel Coward's long-heralded *Design for Living*, a witty, sophisticated, highly immoral and hilariously nonsensical concoction which yet supplied the material for scintillating portrayals by Alfred Lunt, Lynn Fontanne and Mr. Coward himself, which, after

all, was the particular purpose of its existence.

Evensong, an adaptation by Edward Knoblock and Beverly Nichols of the latter's novel of the same name, was brought over from London together with its British star, Edith Evans, but failed to find here the marked favor with which it had met at home; and this despite Miss Evans' admirable stage portrait of a prima donna fighting a brave but losing battle with oncoming age. *Melody*, a musical romance by Edward Childs Carpenter with lyrics by Irving Caesar and score by Sigmund Romberg, was a pleasant feature of the Spring—a piece of the type that covers several generations of the same family, with Evelyn Herbert appearing as both heroine and heroine's granddaughter, and with Everett Marshall, Hal Skelly, Victor Morley, Harrison Brockbank, Walter Woolf, and Jeanne Aubert also agreeably involved. Then followed one of the season's inexplorable surprises, an extremely slender bucolic comedy by James Hagan bearing the name *One Sunday Afternoon*, an offering with little to recommend it beyond a cloying wholesomeness and rustic brand of humor, yet somehow it managed to round out a run of approximately ten months. The principal characters were taken by Lloyd Nolan, Francesca Bruning, Percy Helton, and Mary Holsman, and Leo Bulgakov was responsible for the direction. Through the unaccountable irony of fate a much better play by Owen Davis, entitled *A Saturday Night* and presented at about the same time, was able to endure for but five weeks, even with such capable players as Peggy Wood, Hugh O'Connell, Arthur Margetson, Owen Davis, Jr., and young Richard Jack to enact the participants in the varied events of a most hectic evening.

For her second offering of the season Katharine Cornell selected Sidney Howard's *Alien Corn*, a somewhat sombre drama of frustration, disappointment and yearning, involving the tragedy of the aspiring genius with wings clipped by economic necessity. The play was staged beautifully and reflected high credit upon all concerned—especially the star, but likewise her husband and director, Guthrie McClintic, and the notable cast, which included James Rennie, Siegfried Rumann, Charles Waldron, Luther Adler, Charles D. Brown, E. J. Ballantine, Jessie Busley, and Lily Cahill. It scored a run of nearly 100 performances. Not so happy was the fortune of the Theatre Guild with *American Dream*, the first drama of George O'Neil, poet. The piece is a trilogy, whose three distinct episodes depict the manner in which a family characteristic can persist down through the generations, being modified—or, in the instance illustrated, degenerating—in the processes of civilization. Notwithstanding certain striking features, the piece barely lasted out the Guild's subscription requirements.

With March arrived a Negro folk drama on the religious order, *Run, Little Chillun*, the work of one Hall Johnson. The piece was chiefly remarkable for the fervor, abandon, and atmosphere injected into one of its four scenes, on the strength of which, as acted effectively by its Negro cast, it piled up well over 100 performances. March 1 witnessed also the première of an only slightly lesser hit, *Forsaking All Others*, a pleasant enough comedy by Edward Roberts and Frank Cavett, which restored to the American stage one of its players who had been carving a niche for herself in London during several

recent seasons, the vibrant Tallulah Bankhead, whose return occasioned no little acclaim. It also introduced to the legitimate stage as a regular actor Fred Keating, the genial young magician whose tricks have been gracing vaudeville and revues for a number of years. Two other productions of the same month likewise passed the century mark—*Strike Me Pink!*, a revue in which Hope Williams, Jimmie Durante, Hal Le Roy, Lupe Velez, and Roy Atwell were the luminous features, and a Theatre Guild offering, Maxwell Anderson's *Both Your Houses*, which was awarded the Pulitzer Prize for 1933. Despite the source of its title, this work bore no relation to the Montagues and Capulets but concerned rather the two legislative branches of our national government whose operations had aroused much unfavorable criticism. By a concatenation of circumstances, however, Mr. Anderson's scathing impugment reached the stage just as the new administration at Washington was effecting at least a temporary change in the conditions under arraignment, but even with its point thus slightly blunted, the piece gained for its author the distinction already noted and fair patronage for its sponsors.

Eva LeGallienne, who had transported her stage production of *Alice in Wonderland* northward from 14 Street to 42 Street, New York City, in time for the 1932 holiday season, now added to the bill a revival of her Civic Repertory presentation of Tchekov's *The Cherry Orchard*, an exceptionally interesting and creditable offering which was alternated with *Alice* for several weeks. Alla Nazimova repeated her admirable portrayal of the charming but impractical Madame Ranevsky while Josephine Hutchinson and Miss LeGallienne herself again had the rôles of the daughter and step-daughter respectively. A harum-scarum comedy entitled, madly but appropriately enough, *Three-Cornered Moon*, introduced a new playwright, Gertrude Tonkonogy, and kept Ruth Gordon, Cecilia Loftus, Brian Donlevy, Elisha Cook, Jr., and several others hilariously occupied for some nine or ten weeks; but six proved the limit for a slight though agreeable piece called *The Party's Over*, likewise by a little-known writer, Daniel Kussell. This one employed the services of Harvey Stephens, Katharine Alexander, Effie Shannon, Peggy Conklin, and Ross Alexander.

April brought three new works from which more was expected, mainly by reason of their authorship, than was achieved, not one of them lasting even a full month. These were Somerset Maugham's *For Services Rendered*, well received in London the previous year but too harrowing and gloom-drenched for the times in New York; *The Comic Artist*, by Susan Glaspell and Norman Matson; and *Nine Pine Street*, rewritten by John Colton and Carleton Miles from a play by William Miles and Donald Blackwell, based rather freely on the famous Lizzie Borden murder case of some four decades back. In it Lillian Gish undertook to portray the notorious paricide but with only indifferent success. Even worse fortune attended an anglicized, refurbished German version of John Gay's 18th Century classic, *The Beggar's Opera*, called in this instance *The 5-Penny Opera*.

But two more new plays worthy of inclusion in the record and one notable revival were staged before the inglorious season of 1932-33 limped haltingly to its close. Edouard Bourdet, the

French dramatist whose works heretofore have usually depicted some form of human perversion, was represented by an amusing farce-comedy, *Best Sellers*, an English adaptation of his *Vient de Paraître*, giving a humorous aspect to the competition for the Parisian equivalent of the American Pulitzer Prize for fiction. Ernest Truex and Peggy Wood competently handled the principal rôles. The Theatre Guild fulfilled its schedule by resurrecting an Italian item that had failed in New York some ten years earlier—Luigi Chiarelli's *The Mask and the Face*, now in a new adaptation by Somerset Maugham. Even with creditable acting by Judith Anderson, Stanley Ridges, and Leo G. Carroll to recommend it, the piece accomplished little more than keeping faith with the Guild's subscribers. But the Players Club scored the greatest popular success of its career as producer of a series of annual revivals with *Uncle Tom's Cabin*, presented interestingly and in all seriousness by a particularly notable cast which included Otis Skinner as Uncle Tom, Fay Bainter as Topsy, Elizabeth Risdon as Eliza, Thomas Chalmers as Simon Legree, and, in the minor parts, Cecilia Loftus, Pedro de Cordoba, Ernest Glendinning, Minnie Dupree, Lois Shore, Sylvia Field, John Daly Murphy, Edward MacNamara, Gene Lockhart, and the veteran Kate Mayhew. Announced, as usual, for only a single week, public demand extended its run to three, ending the season on at least a pleasant memory.

From then until well past mid-August the theatre, in so far as the metropolis was concerned, remained in a virtual state of coma. The summer playhouses in the various resorts and outlying districts were, however, more numerous and busier than ever, dividing their attention fairly evenly between stock presentations of recent successes, often with a visiting star, and test productions of new works, of which a surprisingly small number had reached the professional stage in New York up to the close of the year.

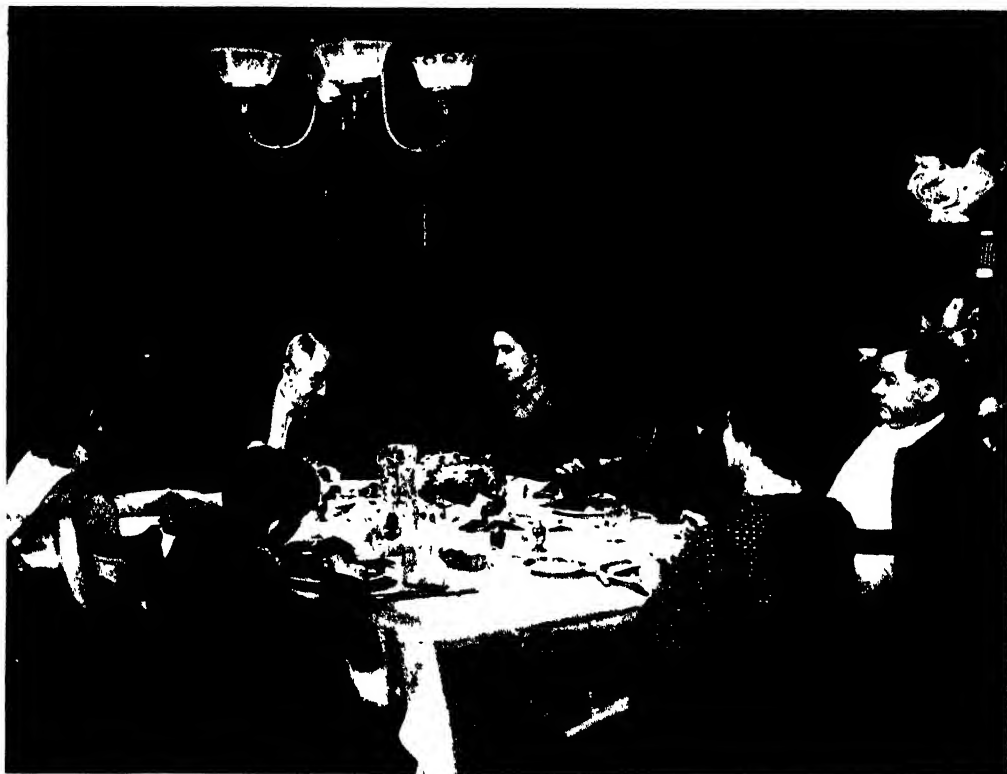
The new season finally began to bestir itself when, on August 23, William A. Brady again, as in 1932, set the ball rolling by importing from London Ivor Novello's comedy, *Party*, to which title Mr. Brady prefixed the article A, with the object, or so it was reported, of capturing first place in the alphabetical theatrical advertising columns. Though something of a hit at home, the piece lasted but five weeks when transplanted, despite the producer's astuteness in enlisting Mrs. Patrick Campbell for its central rôle, a character supposed to represent that lady herself, albeit taken in London by another actress. This circumstance proved to be the chief claim of *A Party* to distinction, though the presence of Cecilia Loftus with an opportunity to revive her gift of mimicry was a pleasant feature. For its first three weeks this piece had the field of novelty all to itself as the only new offering worth consideration, but toward the middle of September a couple of rivals entered the lists—*Murder at the Vanities*, a not too happy blend by Rufus King and Earl Carroll of two seemingly unmixable ingredients, the mystery melodrama and the pictorial musical revue; and a straight western melodrama, *Heat Lightning*, written by one Leon Abrams, doctored and staged by George Abbott, which was one of the few survivors of the summer try-outs. The former piece, presumably by virtue of the *Vanities* element, lasted the year out; the latter met with no such good fortune, notwithstanding interesting

performances by Jean Dixon and Robert Gleckler.

By this time new plays were appearing in rapid succession and a marked improvement in their quality was detectible. One of the earlier was *Double Door*, by Elizabeth McFadden, also a melodrama and based, somewhat freely, on certain sensational phases of the life of the now famous Wendel family of Fifth Avenue. This, too, had passed muster in the summer theatres and, largely through the excellent and uncompromising portrayal by Mary Morris of a bitter and unscrupulous spinster, continued on beyond the end of the year. Fate was rather less kind, however, to the new "Joe Cook show," *Hold Your Horses*, a piece cut to the measure of that amusing person but depending for its fun largely upon his latest set of absurd mechanical devices. A still more decisive turn for the better was marked by *Men in White*, written by Sidney S. Kingsley and produced by the Group Theatre in association with another management. The piece concerned itself with phases of life in a large metropolitan hospital and particularly with the exacting demands made by the medical profession upon its younger members as well as the temptations to which they are subject. The play was admirably acted, especial credit going to Alexander Kirkland and J. Edward Bromberg as junior and senior surgeons, respectively.

The first of two propagandist works on the Nazi theme to fail summarily was *Kultur*, an adaptation from the German, which was later followed by one entitled *Birthright*. Quite the reverse was the lot of an hilarious, ribald, salty farce by Kenyon Nicholson and Charles Robinson, *Sailor, Beware!*, portraying the romantic side of Navy life in the tropics, which New York took straight to its heart. Then followed what seemed likely, up to the end of the year, to rank as the bright particular musical hit of the season, a revue boasting a book by Moss Hart and score by Irving Berlin, *As Thousands Cheer*. Its formidable roster of entertainers was headed by Clifton Webb, Marilyn Miller, Helen Broderick, and the dusky Ethel Waters, a combination of talent that bade fair to equal, if not surpass, the success achieved two years previously by *Of Thee I Sing*, the first musical comedy ever to be awarded the Pulitzer Prize. Incidentally, the authors of that hit, Messrs. Kaufman, Ryskind, and the two Gershwins, at about this time themselves attempted to duplicate their greatest triumph by offering a sequel with the same chief characters and the same people to play them. This was called *Let 'Em Eat Cake* but, though highly diverting, failed to come anywhere near the goal of its ambition.

The Theatre Guild opened what gave every indication of being a banner season with an altogether delightful domestic comedy, Eugene O'Neill's *Ah, Wilderness!*, disclosing that usually militant playwright in an uncharacteristic but eminently becoming and very welcome, even if only temporary, benign and gentle mood with no more serious problems than those of adolescence demanding solution. George M. Cohan, drafted for the rôle of a sympathetic and understanding father in the piece, gave one of the most ingratiating and mellow performances of his career, ably and engagingly seconded by Elisha Cook, Jr., as his son. The production quickly attained the status of an outstanding success. Next on the Guild's schedule came an entirely new adaptation of Molière's *The School for Husbands* by Lawrence Langner, of the Guild's own forces, and Arthur

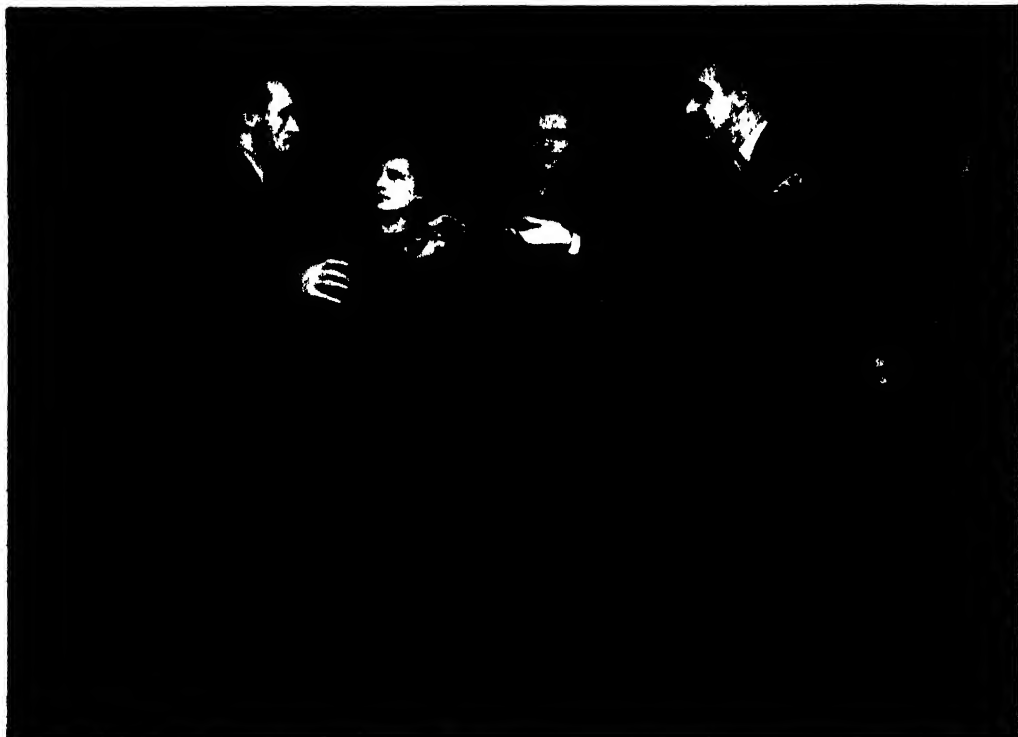


"ALL WILDERNESS"
Featuring George M. Cohan



"MEN IN WHITE"
Left to right: J. Edward Bromberg, Alexander Kirkland, and Morris Carnovsky

DRAMA



"THE GREEN BAY TREE"

Left to right: O. P. Heggie, Jill Esmond, Laurence Olivier, and James Dale



"MARY OF SCOTLAND"

Helen Hayes as Mary and Philip Merivale as the Earl of Bothwell

Guiterman, who reset the old French classic into English rhymed couplets. The innovations included the introduction of appropriate songs and music and the interpolation of a ballet lifted bodily from another work of the same dramatist. The result was distinctly pleasing and enjoyed considerable prosperity. To Osgood Perkins fell the leading part, originally taken by Molière himself, and June Walker and Flora Le Breton contributed further enjoyable elements. Then, at the beginning of December, the Guild staged Maxwell Anderson's newest poetic historical drama, *Mary of Scotland*, which promptly took rank as a more than worthy successor to his *Elizabeth the Queen* of a few seasons back, and won high credit for author, producers, and players. Helen Hayes portrayed the title part with exceptional distinction, Helen Menken was an admirable Elizabeth, and Philip Merivale presented an impressively romantic figure in the possibly somewhat idealized rôle of the Earl of Bothwell. As the year closed, the Guild had all three of these offerings running concurrently and a fourth in active preparation.

That cleverly original and sparkingly whimsical playwright, Clare Kummer, emerged after a long silence with two new works, one a negligible bit, *Amourette*, that fell far short of its author's standard and was speedily shelved; the other an excellent example of her best and most scintillating style entitled *Her Master's Voice*. This instantly caught the public fancy and was ranked among the year's bright spots, profiting considerably from uncommonly astute casting, such exactly right players for the matter in hand as Roland Young, Laura Hope Crews, and Elizabeth Patterson having been retrieved from Hollywood for the occasion. Lawrence Langner, already mentioned in connection with the Molière work, was quite as busy outside the Guild as within, and brought to the regular stage two offerings previously tested out in his own summer theatre in Connecticut. The first was an intentionally rakish trifle written by himself and Mrs. Langner, entitled *The Pursuit of Happiness*, set in Revolutionary days and concerning itself with the comic possibilities of the old Colonial practice of "bundling" as an incident of courtship. Its most notable result was the bringing into prominence of a pleasing and welcome new, youthful leading man, Tonio Selwart, of foreign birth but American by adoption. The other Langner offering was a new version of the periodically recurrent light opera of Johann Strauss, *Die Fledermaus*, known in this latest revival as *Champagne, Sec*, with its sketchy plot and familiar airs competently handled by Peggy Wood, Helen Ford, and George Meader.

A hit of the preceding London season, *Ten Minute Alibi*, a play of murder without mystery, made considerable progress toward duplicating its English record. The same was equally true of another British importation, *The Green Bay Tree* by Mordaunt Shairp, a serious, thoughtful work depicting the baleful effect on human character of a life of too much ease and luxury, finely played by James Dale, Laurence Olivier, Jill Esmond, O. P. Heggie, and Leo G. Carroll. But then followed a succession of offerings that met with but moderate favor if any at all—*Spring in Autumn*, an adaptation from the Spanish featuring Blanche Yurka; *The World Waits*, a melodrama of South Polar exploration with an all-male cast including Blaine Corder, Reed Brown, Jr., and Donald Gallaher; *Three and One*, an unsavory bit from

the French of Denys Amiel; *The Divine Drudge*, a dramatization by Vicki Baum, with the assistance of John Golden, of her novel, *And Life Goes On*; a nautical melodrama of mutiny on the high seas, *Eight Bells*, a success in London; a stage version of Christopher Morley's fantastic story, *Thunder on the Left*; a somewhat too strong-scented "horsey" melodrama called *Thoroughbred*, with Florence Reed as featured player; something from the Polish entitled *Doctor Monica* with a cast consisting entirely of three women, headed by Alla Nazimova; Lennox Robinson's latest comedy of Irish whimsy, *Is Life Worth Living?*; and another fairly recent product of the French stage, *I Was Waiting for You*. This lengthy sequence of mediocrity and bad luck was finally broken in mid-November by a musical comedy, *Roberta*, based on Alice Duer Miller's story, *Gowns by Roberta*, with a score by Jerome Kern. For this event the veteran Fay Templeton was once more lured from retirement to take the title rôle. The other chief entertainers were Tamara, Bob Hope, and Lyda Roberti.

Next came an even more striking comedy triumph in *She Loves Me Not*, Howard Lindsay's dramatization of Edward Hope's hilarious story of the same name—one of those rapid-fire pieces demanding special and original stage effects to insure speed and continuity in its complicated and highly mirth-provoking action. Herein John Beal, Polly Walters, Burgess Meredith, Charles D. Brown, and Jane Buchanan were outstanding among those amusingly involved. Then *The Dark Tower*, a sophisticated mystery melodrama resulting from the collaboration of George S. Kaufman and Alexander Woolcott, differing from the general run of its type in that the spectators, though seeing the murder committed in full view, are nevertheless treated to a complete surprise. Important contributions to the moderate success of this offering were made by Basil Sydney, Ernest Milton, William Harrigan, Margalo Gillmore, Margaret Dale, and Margaret Hamilton.

A stage version by Jack Kirkland of Erskine Caldwell's gruesome novel, *Tobacco Road*, brought new histrionic honors to the normally debonair Henry Hull for his merciless and uncompromising portrayal of a degraded, repulsive specimen of Georgia's "poor white trash." The opportunities for self-effacing acting of which he and several other members of the company availed themselves were about the only claims of the piece to a place in the theatre. A rather labored comedy of the Parisian "Left Bank" by the S. J. Perelmans entitled *All Good Americans* supplied limited facilities, but a fair amount of smart and witty dialogue, to Hope Williams and Fred Keating. Just before Christmas Owen Davis' long-heralded dramatic romance of the old South, *Jezabel*, finally reached the stage with Miriam Hopkins in the rôle for which Tallulah Bankhead had been sought, secured and, through illness, lost. Miss Hopkins was found quite equal to its requirements but the play itself failed to rise to expectations. A somewhat similar verdict greeted the American production of a London hit, *The Lake*, by the late Dorothy Massingham and Murray MacDonald, in which Katharine Hepburn, the young actress who, after a very brief experience on the stage, attained rapid and extraordinary popularity on the screen, returned prematurely to the theatre in the capacity of a star. The play contained a symbolic and tragic significance, not too clearly developed, that proved to be beyond Miss Hepburn's limited

range. Associated with her in the production were such capable and talented players as Colin Clive, with whom she had also appeared in at least one screen presentation, Frances Starr, and Blanche Bates, both of whom were lured from retirement for the occasion. Thanks, in large part, to the personal following of the cast, the offering seemed destined to enjoy a reasonable degree of success.

At Holiday time also Cornelia Otis Skinner introduced her new and interesting sequence of historical character sketches, *The Loves of Charles II*. The year in New York closed, however, on an indication of the fallibility of even the most experienced judgment. After many years of inactivity as producer, the veteran Daniel Frohman brought out an English version of a work that had achieved exceptional favor in the Yiddish theatre, *Yoske Kalb*, a folk-play dramatized from a novel and done in its native tongue by Maurice Schwartz. Its career in its new medium ended with the third performance.

EUROPE. In Great Britain, meanwhile, London of course remained the active producing centre, though the habit of sending metropolitan successes on tour through the outlying towns and provinces was becoming less and less prevalent, the custom being largely supplanted by a corresponding increase in the number of local professional repertory companies and amateur "little theatre" organizations. Frequently these groups were responsible for productions, particularly first showings, of considerably greater significance than those originating in London. Another especially noticeable tendency throughout the year was the constant interchange of dramas between England and America, although the fact that a play had met with high favor in one country gave no assurance whatever that it would do so in the other. Numerous instances of this uncertainty have already been noted in the foregoing record of the theatre in New York. But among the importations from the States were several that did manage virtually to duplicate their American success—the Kaufman-Ferber hit of the preceding year, *Dinner at Eight*, Rachel Crothers' *When Ladies Meet*, with Marie Tempest and Mary Newcomb in leading rôles, and *Music in the Air*, featuring Mary Ellis. *The Late Christopher Bean* was not in quite the same category for, though a great favorite on both sides of the Atlantic, two distinct versions of René Fauchois' original French comedy were used. Other American works seen in London during the year were *Once in a Lifetime*, *This One Man*, *Gay Divorce*, with Fred Astaire and Claire Luce, and a revamping of the old farce, *Ladies' Night*; also Eugene O'Neill's *All God's Chillun Got Wings*, with Paul Robeson.

The home products of the British metropolis included several new light comedies by the actor-playwright, Ivor Novello—*Fresh Fields*, *Flies in the Sun*, and the highly entertaining *Sunshine Sisters*; Hugh Walpole's first original drama, *The Young Huntress*; a showy piece by E. P. Montgomery entitled *Double Harness*; and a serious work by John Drinkwater, *Laying the Devil*. Lennox Robinson's broadly satirical *Drama at Innish* attracted sufficient favor in a trial presentation to warrant a regular production later under the title *Is Life Worth Living?*, and enjoyed considerable popularity in London yet failed utterly in New York. Two other plays which emerged from the experimental state into substantial successes were *The Lake* and *Richard of Bordeaux*, the latter an historical drama by one

Gordon Daviot (a pseudonym) that proved to be the outstanding hit of the year and firmly established its leading player, John Gielgud, in the regard of the British public. There were also at least two plays dealing biographically with the Brontë sisters—one, by Alfred Sangster, entitled simply *The Brontës*; the other, by Clemence Dane, *Wild Decembers*, in which Diana Wynyard scored a triumph as Charlotte. Still another historical biographical drama, Ronald Gow's *Gallows Glorious*, on an American subject, won favorable attention in London though destined later to fail summarily in New York under the name of its central figure, *John Brown*. A distinctly artistic work based on an authentic episode in the life of Francis Thompson, poet, was a pleasant medium for Ernest Milton, who also appeared to picturesque advantage in *Night's Candles*, Grant Yalis' adaptation of Alfred de Musset's Florentine item, *Lorenzaccio*. Keith Winter's dramatization of his own novel, *The Rats of Norway*, provided an effective, yet grim and forbidding, vehicle for Gladys Cooper and Raymond Massey.

During the summer, attention focused on the customary dramatic festivals at Canterbury and at Malvern, where, as the modern example with which to close his survey of the history of the English theatre, Sir Barry Jackson introduced James Bridie's latest work, *A Sleeping Clergyman*, creating sufficient interest to warrant a regular production shortly thereafter. The new season disclosed also John van Druten's *The Distaff Side*, the cast of which included Sybil Thorndike and Haidee Wright, and the satirical *Sheppey*, announced by Somerset Maugham as his final play. A near-riot of anti-Hitler sentiment was precipitated by the first personal appearance in the British capital of the German screen actor, Werner Krauss, who nevertheless displayed unsuspected power in a production of Hauptmann's *Before Sunset*. Sir John Martin Harvey contributed an admirable type of romantic acting in his revival of Irving's old favorite, *The Bells*. Then, in October, came the strikingly novel musical entertainment, *Nymph Errant*, adapted from a story by James Laver, which might be described as a politely amusing feminine version of Anatol's "affairs," and which formed an excellent medium for a skillful performance by Gertrude Lawrence. The flair for plays biographical continued with Talbot Jennings' *This Side Idolatry*, an imaginative study of Shakespeare, with Leslie Howard as the Bard and Margaret Rawlings as the Dark Lady; also an unimportant drama by Elswyth Thane dealing with the youth of Shakespeare's equally famous contemporary, Elizabeth of England. A play of medical student life in Edinburgh, *The Wind and the Rain*, the work of a physician, Dr. Merton Hodge, was favorably received. The Charlott revue, *Please*, succeeded in living up to its title as a vehicle for the comic gifts of Beatrice Lillie and the antics of Lupino Lane. Late in the Fall London witnessed the world première of Robert E. Sherwood's *Acropolis*, another piece in that playwright's familiar idiom, the amusingly incongruous blend of antiquity and modernity, which failed, however, to catch the popular fancy.

December added several items of more or less note and varying prospects of success, starting with Bernard Shaw's latest political animadversion, *On the Rocks*, a lengthy and characteristically discursive, but quite entertaining, opus on dictatorship, with scene laid in Downing Street. J. B. Priestley's new piece, *Laburnum Grove*,

leaned rather heavily on a particularly ingenious last act. An English adaptation by R. C. Trevelyan of Melchior Lengyel's *Angel* likewise disclosed various uncommon features though suffering from over-insistence on the idea of make-believe. Another German film star, Elisabeth Bergner, brought extraordinary vitality, eloquence, and resourcefulness to the living stage by appearing in *Escape Me Never*, Margaret Kennedy's continuation of her saga of the Sanger family. The year in London may be said to have closed on a brilliant performance by Marie Tempest, approaching 70 but still going strong, in H. M. Harwood's comedy, *The Old Folks at Home*.

Paris witnessed during 1933 new plays by most of the active native dramatists of the day, with the notable exception of Marcel Pagnol, the French master of the long run. In addition, several comparatively new writers for the stage came into prominence, among them Yvan Noe with two items to his credit, one with an English title, *Teddy and Partner*, the other, *Monsieur Le Comte*, with English characters. Alfred Savoir's contributions were *La Voie Lactee*, whose chief figure was regarded as a sketchy portrait of Sacha Guitry, and *Maria*, a return to the old-time "problem" type. The prolific Guitry himself turned out a variety of novelties—*Châteaux en Espagne*, in which he also acted and with him Jacqueline Delubac, making her début as the successor of Yvonne Printemps; *Un Tour au Paradis*, written for Victor Boucher; a play with music, *Florestan I, Prince of Monaco*; a Biblical piece and several minor items. Marcel Achard was responsible for both *The Woman in White* and *Petrus*; Henri Bernstein for *Bonheur*, an excellent example of his mastery of theatrical technique, in which Mlle. Printemps took the leading part, and *Le Messager*; Henri Duvernois for *Maison des Confidences*. Jacques Deval provided the French version of the American hit, *Dinner at Eight*, besides two original pieces, the cynical *Prière pour les Vivants* and *Tovaritch*. Other plays of comparative importance were *Une Poule sur un Mur* by Leopold Marchand, Jean Giraudoux' very charming *Intermezzo*, a rhapsodic piece by Paul Raynal entitled *Francerie*, Andre Obey's symbolic *Loire, Le Paradis Perdu* by Paul Gavault, Maurice Rostand's *Les Marchands de Canons*, Steve Passeur's notably vital *L'Amour Gai*, J. J. Bernard's *Jeanne de Pantin*, and French versions of the British *Payment Deferred* and the American *Abie's Irish Rose*, the latter under the name *Bloch de Chicago*. To these may be added an appreciable sprinkling of musical comedies, including a couple based on the lives of well-known composers—Offenbach for one, the other concerned with the two Johanns Strauss, father and son.

The German stage during 1933 underwent a considerable transformation upon the rise to power of the Nazi element. As a phase of Hitler's anti-Semitic campaign, the directors of the leading producing theatres in Berlin, practically all of them Jews, were cased out or forced out of their positions and supplanted by a personnel more to the liking of the régime. Thereafter an edict went forth indicating the type of dramatic presentations which would accord with the principles it was purposed to inculcate. But even prior to these developments Berlin had lost much of its prestige as a theatrical centre and productions of a more generally satisfying character were being found in the smaller cities. As early as February about

all that was left of the capital's vanishing glory was a scattering of musical offerings, such as Paul Abraham's *Ball at the Savoy*, a notable revival of Offenbach's *Princess of Trapezunt*, and *Frühlingstürme* by the Czech composer, Weinberger, in which Richard Tauber undertook to sustain the Viennese tradition. Subsequently another, *La Vallieri*, marked the operatic début in Germany of Louis Graveure. At about the same time, a well-known criminal lawyer named Alsberg turned playwright and gave the world a drama dealing with legal professional ethics entitled *Conflict*. Then, as the closing feature of his activities in Berlin, Prof. Max Reinhardt staged elaborately Hugo von Hoffmannsthal's *Grosses Welttheater*, from the Spanish of Calderon. Similarly Barnowsky, dean of the capital's notable directors, presented Franz Arnold's comedy, *Da Stimmt Was Nicht*, as his swan song.

Under the new order one of the more important offerings was Hanns Johst's *Schlageter*. The public, however, did not too readily accept the Nazi domination of the theatre and by late summer the change of sentiment had resulted in at least a temporary return to type with Gregor Schmitt's comedy, *Don Juan's Raincoat*. It was after this that a more determined effort was made by the Hitler forces to color the output of the theatre industry. The results were none too happy, but in the fall an uncommonly charming operetta appeared in *Bezauberndes Fraulein*, with book and music both by Ralph Benatzky. Still later, encouragement was given to revivals of Schiller as conforming to regulations. Munich, rather than Berlin, saw the première of a new work by Hauptmann, *The Golden Harp*, which nevertheless proved to be of little importance.

In Vienna one of the outstanding events of the year in the theatre was Fritz Kreisler's operetta, *Sissy*, the central figure of which was the late Empress Elizabeth. Its score, however, was only partially new for into it the composer worked several of his familiar and long-popular airs. An apparent taste for the biographical was further evidenced by Sil Vara's charming comedy of England's Victoria, *The Girlhood of a Queen*. Budapest, in its turn, produced in the fall two new plays representative of Hungarian drama in its most felicitous latter-day form—Otto Indig's *The Man Under the Bridge* and Istvan Zagon's *The Land of Promise*. Meanwhile both the Scandinavian capitals turned to America for the chief of their novelties, offering translations or adaptations of Eugene O'Neill's *Mourning Becomes Eleoira* and the older *Desire Under the Elms*, this being the first production of the former in Europe, and of the Kaufman-Ferber *Dinner at Eight*.

DREAMS. See PSYCHICAL RESEARCH.

DUCA, ION GHORGHE. A Rumanian statesman, died by assassination at Sinaia, Dec. 29, 1933. Born at Craiova, near Bucharest, in 1879, he attended the Universities of Bucharest and Paris, receiving the LL.D. degree from the latter institution. At the time he was studying in Paris, he contributed to *Universal*, a Bucharest newspaper, a sensational series of foreign comment articles. Elected to the Chamber of Deputies in 1907, he interested himself in the coöperative movement among the Rumanian peasantry, instituting communal purchase of farm machinery and marketing of crops. Under Ionel Bratianu he served as Minister of Education during 1914-18, and as Minister of Agriculture in the Coalition Cabinet of 1918. While holding the latter port-

folio he instituted the agrarian reforms by which there were later expropriated and divided among the peasantry landed estates of more than 500 hectares in the old kingdom of Rumania and of more than 100 hectares in Bessarabia, Transylvania, and Bukowina.

As Minister of Foreign Affairs in the Bratianu cabinet of 1922-27, Dr. Duca attended various League of Nations' meetings and the Lausanne conference of 1923 at which drastic revision was made of the whole Near East Settlement as registered in the Treaty of Sèvres. He originated also the periodical conferences of the Little Entente (composed of Czechoslovakia, Rumania, Yugoslavia, and, on occasions, Poland) for the discussion of their mutual interests. He was appointed Minister of the Interior in the Ionel Bratianu cabinet of 1927 and retained the same post under Vintila Bratianu in 1928.

Upon Vintila Bratianu's death in 1930, Dr. Duca assumed the leadership of the Liberal party, and on Nov. 12, 1933, became Premier of Rumania. His assassination was instigated by leaders of the Iron Guard, a Fascist and anti-Semitic organization, who hated him for his tolerant attitude toward the Jews and his defense of Liberalism in the face of the on-sweeping tide of Fascism and Communism. The organization had recently been suppressed.

DUKE UNIVERSITY. An institution of higher education in Durham, N. C., affiliated with the Methodist Episcopal Church, South. Having its origin as York Academy in 1835, it was expanded in 1858 into Trinity College and in 1924, through benefactions from James B. Duke, into Duke University. The enrollment for the autumn of 1933 was 2840. The faculty numbered 258. The endowment funds amounted to approximately \$23,334,000. The library contained approximately 350,000 volumes. President, William Preston Few, Ph.D., LL.D., Litt.D.

DUNKIRK. See PORTS AND HARBORS.

DUNWOODY, BRIG.-GEN. HENRY HARRISON CHASE, U.S.A., RET. An American soldier and meteorologist, died in Interlaken, N. Y., Jan. 1, 1933. Born in Highland Co., O., Oct. 23, 1842, he attended the United States Military Academy and on his graduation in 1866 served for three years as lieutenant with the 4th Artillery of the United States Army. He then became recorder for the Tactics Board in St. Louis, Mo. In 1872 he was appointed meteorologist with the Signal Corps office in Washington, directing for nearly 20 years the observation and prediction of storms, river floods, excessive heat or cold, and destructive winds. He also systematized these official forecasts for the benefit of agriculture, commerce, and navigation, published after 1875 a daily weather map of the Northern Hemisphere, and promoted the establishment of weather services in the various States.

On the transfer of the Weather Bureau to the Department of Agriculture in 1890 Dunwoody was commissioned major in recognition of these services. He served during the Spanish-American War as chief signal officer, with the rank of colonel, and previous to his retirement in 1904 was commissioned brigadier-general. His papers on meteorological subjects include: *Decrease of Temperature with Elevation and Reduction of Barometer to Sea Level; Tables of Rainfall and Temperature Compared with Crop Production; Weather Proverbs; Absolute Humidity and Mean*

Cloudiness in the United States, and Geographical Distribution of Rainfall in the United States.

DUTCH EAST INDIES. See NETHERLAND INDIA.

DUTCH GUIANA. See SURINAM.

DUTCH REFORMED CHURCH. See REFORMED CHURCH IN THE UNITED STATES OF AMERICA.

DUTCH WEST INDIES. The Netherlands possessions in the West Indies. See SURINAM; CURAÇAO.

DUXOCHROME. See PHOTOGRAPHY.

DYNAMO ELECTRICAL MACHINERY. The business of manufacturing electrical machinery suffered a considerable decrease in 1932 but by the end of 1933 had recovered until it reached a point 31 per cent above 1932 and about 65 per cent of the peak figures for 1929 and 115 per cent of the 1923-25 average. The American Standards Association issued the first report on Standards for Electrical Rotating Machinery. The report includes standards for direct current rotating machines; synchronous generators; motors and converters, induction motors and a.c. and d.c. fractional horse power motors. It is based on the standards of the American Institute of Electrical Engineers and the National Electrical Manufacturers Association representing both the users and makers of electrical apparatus.

One new turbo generator broke the record for size this year, rated at 183,333 kv-a., 90 per cent power factor or 165,000 kw. operating at 188 r.p.m. to be used in Philadelphia and the water-wheel driven generator under construction for Boulder Dam will break the record for size in this class. Four have been ordered, each rated at 82,500 kw. at 180 r.p.m., from two different companies, General Electric and Westinghouse Co. In Chicago there was put into operation a 100,000 kv-a. bank of "Phase Shifting" transformers for tying together two power systems and regulating the flow of power between them.

An unusual piece of apparatus was a 3-phase generator of 60 kv-a. for a frequency of 4800 cycles for operating induction furnaces in metallurgical work.

A new type of synchronous motor is able to start with a heavy load, pull into synchronous speed and establish its own field excitation automatically at the proper instant. Some are capable of operating at either of two speeds such as 600 or 900 r.p.m. This is accomplished by dividing the stator or primary winding into several circuits from which various combinations are made and by putting on the rotor or secondary both a squirrel cage and a definite wound induction motor winding. The rotor excitation in the definite winding is made at a definite slip frequency by automatic devices.

Enclosed motors have come into more general use because of the increased use of individual drive in exposed places, such as the decks of ships and shops where there is much dust or explosive fumes. There are several types, "Splash," "Weather," and "Explosion" proof, the latter particularly for oil refineries. Synchronous motors are now built of the enclosed type if desired.

Many mercury arc rectifiers of 3000 kw. capacity for railway work at 625 volts were installed this year. There are two forms in vogue; one of a single rectifier tank for the whole power and another of a combination of four 750 kw. tanks assembled in an interchangeable standardized set-up.

A new and much simpler device has been de-

veloped and put into service for balancing motors to prevent vibration. By this means the rotating part of any electric machine may be balanced in a few minutes whereas a few years ago it required many trials and much time.

Improvements have been made in Single Phase Motors using the capacitor start and capacitor run combinations largely on account of the improved quality and lower price of capacitors. These motors are largely used for domestic refrigerators.

DYSENTERY. See **MEDICINE AND SURGERY.**

EARTHQUAKES. On the average, earthquakes are felt in some part of the world at least 4000 times each year, though fortunately the vast majority of them are either feeble and harmless, or else occur under the sea or in thinly populated regions. In the United States alone, 200 or more are usually reported annually.

On Dec. 25, 1932, a severe earthquake occurred in the Kaotai District, Kansu Province, of China. Within a few hours after the earthquake, eight seismological stations in widely separated parts of the world transmitted the data recorded by their instruments to the scientific world. However, because of the lack of telegraphic and other news facilities in the Kansu Province, direct news of the damage done by the quake did not reach the outside world until late in January, 1933. This earthquake and the floods which followed it caused the deaths of 70,000 people.

Severe earthquake shocks, followed by sea waves caused great damage in the northern part of the Island of Honshu, Japan, and adjacent islands on March 3. About 1500 people were killed. This was apparently a submarine earthquake, whose focus was in the Japan deep. The sea wave was recorded as far away as San Francisco.

An earthquake which did great damage in various towns and cities was felt in southern California on March 10. The epicentre was at sea and the land area affected was about 450 square miles. The earthquake was of about the same intensity as the Santa Barbara quake of 1925. The disastrous consequences of the shock were due mainly to poor construction on bad ground in a somewhat thickly populated district. About \$41,000,000 worth of property was wrecked and 130 people lost their lives. This was the only earthquake in the United States during the year which killed any people.

About 100 people were killed by a severe earthquake on the Island of Kos, Aegean Sea, on Apr. 23, 1933. The west coast of Sumatra was shaken by a quake on June 26, which killed 70 natives near Benkoelen. Three people were killed in an earthquake which struck Tegucigalpa, Honduras, during the night of July 4.

Twenty people were killed and several injured in a sharp earthquake that struck the village of Tchivrii in Turkey on July 20. This shock was also felt, but without damage, at Denizli.

On August 25, a heavy earthquake took place in the region of Chengtu in the Szechwan province of China. Its epicentre was located immediately by seismologists, but similar to the earthquake in the Kansu Province mentioned above, it was five days later before cable reports confirmed the information of seismological sources and announced that about 100 people were killed.

A severe earthquake was felt along the Noto Peninsula of Japan on September 21, being most strongly felt at Nanao. One person was killed and several seriously injured. This shock was per-

ceptible for three minutes at Kanazawa. In the early morning of September 26, an earthquake occurred which damaged many homes in the Abruzzi Mountain region in Italy and caused the death of 16 and injury of about 200 people. This was followed by another shock, less severe, but which caused many houses, already weakened, to collapse, on September 28, and still another on September 29.

A very violent earthquake occurred in Baffin Bay on November 20. Its tremors, traveling for thousands of miles, reported its occurrence through hundreds of seismograph instruments all over the earth. This was the only source of news about this earthquake, for the region is uninhabited, so that there could be no cabled or radioed reports of people killed and the works of man laid in ruins. This quake was extraordinary not only for its violence but also for its location: no major earthquakes had ever before been recorded in the Baffin Bay region. See **SEISMOLOGY.**

EAST PRUSSIA. A Province of the German state of Prussia from which it is geographically separated by the Polish Corridor. Total area, 15,061 square miles; total population, June 16, 1933, 2,356,938. See **GERMANY** and **POLAND** under *History.*

EBERSWALDE CANAL LIFT. See **CANALS.**

ECOLOGY. See **BOTANY.**

ECONOMIC ASSOCIATION, AMERICAN. An organization founded at Saratoga, N. Y., in 1885 to encourage economic research, especially the historical and statistical study of the actual conditions of industrial life, to issue publications on economic subjects, and to encourage perfect freedom of thought and discussion upon current problems from an economic point of view. The membership in 1933 totaled approximately 3500. The annual meeting of the association was held in Philadelphia, Pa., Dec. 27-29, 1933. Among the topics discussed were: "The History of the Recovery"; "Imperfect Competition"; "Public Utilities in the Depression"; "The Transportation Problem"; "Marketing under Recovery Legislation"; "Economics of the Recovery Act"; "Measurement of Unemployment"; "Banking and Monetary Legislation"; "The Rehabilitation of Agriculture"; "Public Finance"; and "Unemployment and Public Works." The official journal is the *American Economic Review*, a quarterly. The officers in 1933 were: President, William Z. Ripley, Harvard University; vice-presidents, Abbott Payson Usher, Harvard University, and Walter W. Stewart, New York City; counsel, John E. Walker, Washington, D. C.; and secretary and treasurer, Frederick S. Deibler, Northwestern University.

ECONOMIC CONFERENCE, WORLD. The World Monetary and Economic Conference met at London, June 12, 1933, and recessed for an indefinite period on July 27. Its object was to secure international agreement and coöperation in financial and economic measures designed to check and banish the world economic depression. The only concrete results of the conference were agreements between certain nations producing large quantities of silver and wheat which were calculated to raise the price of these commodities. Upon the most important issues confronting the assembled delegates—currency stabilization, tariff reduction, price-raising schemes—no agreement proved possible, due in large part to developments in the United States. The signal failure of

the gathering to achieve its major objectives, coupled with distinct evidence of a world economic revival in spite of this failure, increased the trend toward economic nationalism.

PREPARATIONS FOR CONFERENCE. Proposals for an international attack upon the depression failed to receive serious consideration until more than two years after the beginning of the economic crisis. Each nation sought by domestic legislation and action to check price declines, the general stagnation of business, and the steady increase in unemployment. It gradually became evident, however, that the uncorrelated measures of the various countries were intensifying, instead of ameliorating, the depression. The Young Plan Advisory Committee, issued from Basle, Switzerland, on Dec. 23, 1931, an urgent plea for international action. It declared the problem had "assumed a world-wide range" and threatened "a profound change in the economic relations of nations to one another."

On the initiative of Great Britain, the European governments held a conference at Lausanne, Switzerland, from June 16 to July 8, 1932, and provisionally settled the reparations issue (see 1932 YEAR BOOK under *Reparations and War Debts*). Efforts to include war debts and other problems related to the world depression in a general settlement at Lausanne had been frustrated by the refusal of the United States government to participate on that basis. Accordingly the Lausanne Conference provided for the holding of a separate world economic and financial conference. The United States on May 31, 1932, agreed to participate in the World Economic Conference "for the purpose of considering methods to stabilize world commodity prices." It stipulated that war debts, reparation and disarmament should not be discussed.

The Preparatory Commission of Experts met at Geneva from Oct. 31 to Nov. 9, 1932, and from Jan. 9, to 19, 1933, to draft an agenda for the London conference. No date for the conference was fixed, however, until Apr. 29, 1933, when the organizing committee in London convened it for June 12. The decision to call the conference immediately, despite the great difficulties in the way of an agreement revealed in the preliminary discussions of the Preparatory Commission, was due to two factors. Until the third quarter of March there had been a steady tightening of the depression, accentuated by the bank crisis in the United States. The prices of raw materials were less than one-half those of October, 1929. Wholesale commodity prices were about one-third less, in terms of gold. The universal decline in prices, wages, and national incomes, without a corresponding reduction in indebtedness, made it increasingly difficult to meet national and international obligations. The value of world trade was 60 per cent less than in 1929 and was still declining at a more rapid rate than during the first years of the depression. Production and employment statistics reflected a similar decline. The nations turned toward cooperation as a last resort to avoid complete collapse. Secondly, President Roosevelt had taken the initiative in inviting representatives of the various nations to Washington for preliminary discussion of the world economic situation. These conversations opened on April 21 with the arrival of the British Prime Minister, Ramsay MacDonald. Edouard Herriot of France, Prime Minister Bennett of Canada, Finance Minister Jung of Italy and

others followed. The apparent agreement on general policies reported in joint statements issued by President Roosevelt and his visitors encouraged the belief that the London conference would meet with some prospect of success.

The general policies agreed upon were (1) an increase in commodity price levels; (2) moderation of restrictions upon commerce; (3) concerted action by central banks to expand credit; (4) stimulation of private business by government capital expenditures; (5) ultimate stabilization of currencies; and (6) a higher price for silver.

DEVELOPMENTS IN THE UNITED STATES. Before the conference met, however, a business revival was well under way in the United States and in most of the other industrial countries. This lessened the pressure upon the governments to sacrifice their nationalistic economic programmes in the interests of an international revival. Moreover, the exigencies of the domestic economic and political situation in the United States made it increasingly difficult for the Roosevelt Administration to carry through the international policies to which it had previously given its general assent.

In addition to the business upturn, the developments in America which made an agreement impossible at London were: (1) the abandonment of the gold standard on April 19; (2) the inauguration by the government of a comprehensive programme for raising prices, increasing employment, and stimulating general business activity; (3) the disinclination of Congress to grant President Roosevelt authority to negotiate a settlement of the war debts or to reduce the tariff. Technical and other reasons made it inadvisable to stabilize the currency immediately after the gold backing was removed. Moreover a vital part of the Administration's recovery programme called for a rise in prices to approximately the 1926 level. Stabilization would have prevented the contemplated price rise. It would have hindered, if it did not completely frustrate, the recovery programme.

Tariff reduction while the recovery programme was in process of development threatened to have similar adverse results. An influx of cheap foreign goods would act as a brake upon the rise of domestic prices and the increase in domestic production, employment and consumption envisaged under the National Recovery Act. However, this incompatibility between the Administration's domestic and foreign policies apparently was not clearly recognized in Washington until about the time the conference convened.

PRELIMINARY DISCUSSIONS. Preliminary discussions on a number of issues took place in London among diplomatic representatives and experts before the conference met. The American government, through the efforts of Ambassador-at-large Norman Davis, secured the assent of Great Britain, Germany, Belgium, France, Italy, Japan, and Norway on May 12 to a tariff truce for the duration of the conference. Most of the other governments later adhered to this truce. Negotiations for an international wheat restriction agreement were begun by special delegates from the United States, Canada, Australia, and Argentina the week before the conference met, and were continued conjointly with the conference.

Preliminary discussions of the currency stabilization problem were also held in London by

financial experts of the respective delegations, but without result. The American experts—George L. Harrison of the New York Federal Reserve Bank, Prof. O. M. W. Sprague, and James Warburg—approved stabilization in principle but opposed it so long as it might check the rise in commodity prices in the United States. On June 2, the German government announced that the problem of transferring out of Germany the interest and amortization payments on German foreign debts would be placed before the conference. Meanwhile a moratorium on such payments was declared.

The American delegation to the conference was headed by Secretary of State Hull and included James M. Cox of Ohio, vice chairman; Senators Key Pittman of Nevada and James Couzens of Michigan, and Representatives Samuel D. MacReynolds of Tennessee and Ralph Morrison of Texas.

THE CONFERENCE OPENS. The conference was opened by Prime Minister MacDonald, as chairman. The chiefs of the various delegations followed him in making general statements of the attitudes of their governments toward the issues at hand. Although war debts were not listed on the agenda, Mr. MacDonald in his opening address said that this problem "must be dealt with before every obstacle to general recovery has been removed, and it must be taken up without delay by the nations concerned." The semi-annual installment on the war debts of the European governments to the United States came due June 15. With the token payments or outright defaults occurring on that date, the issue was temporarily eliminated from the conference arena. See REPARATIONS AND WAR DEBTS.

The opening addresses were not particularly illuminating or significant. Mr. Hull reiterated his demand for tariff reductions and the moderation of all forms of economic nationalism. Neville Chamberlain, British Chancellor of the Exchequer, said that Great Britain would not return to the gold standard until wholesale prices had risen, the war debt problem disposed of, and excessive tariff barriers lowered. To raise prices he suggested the expansion of central bank credit and a joint programme of public works. The French, with the support of other nations adhering to gold, demanded early stabilization of currencies and a return to the gold standard as early as possible.

On June 15 the Conference appointed commissions for a more detailed study of the various problems before it. The Economic Commission was headed by Dr. Hendrik Colijn, Prime Minister of Holland; the Monetary Commission by James M. Cox, vice chairman of the American delegation.

THE STABILIZATION ISSUE. The agenda of the conference consisted of the following six main topics: (1) Monetary and credit policy; (2) prices; (3) resumption of the movement of capital; (4) restrictions upon international trade; (5) tariff and treaty policy; (6) organization of production and trade. When the conference opened its attention was immediately riveted upon monetary and credit policy, despite efforts of Secretary Hull to deal first with the issue of tariff reductions. The French and other gold delegations desired the immediate stabilization of the dollar and the return of the United States to the gold standard. They feared continuance of the depreciation and fluctuation of

the dollar on international exchanges would force their countries off gold. The British, also, wanted the dollar at least temporarily stabilized to avoid adverse effects upon their own more stable pound.

Three days after the conference convened, it was reported that the governors of the central banks of the United States, France, and Great Britain had reached a provisional agreement for currency stabilization and that it involved the suspension for three months of the inflation legislation authorized by the U. S. Congress. These rumors caused the most severe decline on the New York stock and the commodity markets recorded since October, 1932.

Although President Roosevelt, in his message of May 16, had called for currency stabilization, he let it be known June 17 that the United States was not ready to approve the stabilization scheme of the central bankers. On the same day, Premier Daladier of France announced that France could not consider tariff reductions or any other efforts at economic collaboration until the dollar and the pound were stabilized. The French had previously insisted also upon a prior settlement of the war debt dispute. When Mr. Roosevelt's decision became known, less than a week after the conference met, the French and other gold delegations launched a campaign for immediate adjournment until the United States was ready to stabilize the dollar. They pointed out that without some form of stabilization, no progress on any other issue could be expected.

The American delegates vigorously opposed this argument, asserting that there was nothing to prevent discussion of other problems. On June 17 the Americans introduced four proposals for discussion by the Economic Commission. They called for: (1) A general horizontal cut of 10 per cent in import duties and modification of other import restrictions; (2) extension of the tariff truce following the conference; (3) bilateral tariff reductions based on the most-favored-nation principle; and (4) removal of restrictions upon the movement of foreign exchange. These proposals, which reflected the views of Secretary Hull, were repudiated the following day by Senator Pittman, who said they came from the experts and not the members of the American delegation.

The American delegates clarified their position on June 22 with two statements. One, dealing with monetary stabilization, said that the United States found the measures proposed in this direction "untimely." The other called for the early and complete removal of trade embargoes and quotas and the negotiation of bilateral or multilateral agreements to reduce tariffs. Meanwhile the exchange value of the dollar continued its downward spiral; and attacks upon the Dutch guilder, commencing June 27, increased the fear of the gold standard countries—the Netherlands, France, Belgium, Switzerland, and Italy—that their currencies would be dragged off gold by the dollar's depreciation. While demands for adjournment of the conference increased, the gold bloc obtained Great Britain's support of a move to halt speculation in dollars. With the approval of the American delegation and of Prof. Raymond Moley, Mr. Roosevelt's personal representative at London, the gold countries and Great Britain appealed to the President to join with them in issuing a declaration on monetary policy. The proposed declaration affirmed that the signa-

tories favored the gold standard and intended to return to it as soon as possible. It also pledged each country to assist the others in checking purely speculative currency fluctuations.

President Roosevelt's emphatic rejection of this proposal on July 3 nearly precipitated the complete collapse of the conference. He declared it would be a "catastrophe" if the conference allowed itself to be diverted from its major objectives by "the proposal of a purely artificial and temporary experiment affecting the monetary exchange of a few nations only. . . . The sound internal economic system of a nation is a greater factor in its well-being than the price of its currency in changing terms of the currencies of other nations." The bluntness as well as the content of the President's reply produced both perplexity and anger among the conference delegates and a closer unity among the gold countries, who took active measures to defend the gold standard. Only the tactful diplomacy of Secretary Hull prevented an immediate adjournment. Upon the insistence of the American, Canadian, Australian, British, Japanese, and other non-gold delegations, deliberations were continued. Little progress was made, however, and on July 14 the conference officials decided to adjourn temporarily on July 27. President Roosevelt's policy found its principal supporters in Prime Minister Bennett of Canada and General Smuts of South Africa, who attempted unsuccessfully to induce the British Chancellor of the Exchequer, Neville Chamberlain, to follow the American price-raising policy through depreciating the currency and expanding credit.

TARIFF PROPOSALS. Before the conference adjourned, Secretary Hull introduced (July 21) a resolution on tariffs for consideration during the conference recess. He proposed tariff reductions by bilateral or pluri-lateral negotiations, with reservations covering the emergency situation in the United States. His carefully worked out plan was intended to serve as a basis for a permanent tariff truce when and if the conference reconvened. It remained the general conviction that while currency stabilization was temporarily of predominant importance, the world's economic recovery in the long run was dependent upon the reduction of tariff barriers.

THE SILVER AGREEMENT. The sole concrete achievement of the conference was the agreement signed July 20 among the chief silver-producing and silver-consuming nations, intended to raise the price of the white metal. Under the plan, the governments of India, China, and Spain agreed that for four years they would limit their exports of silver to 40,000,000 fine ounces annually. The United States, Australia, Canada, Mexico, and Peru, the chief producing countries, agreed to export no silver whatever for four years and in addition to absorb in their currencies 35,000,000 ounces of silver annually for the same period. Senator Key Pittman was the chief proponent of the scheme.

THE WHEAT RESTRICTION PLAN. The first session of the World Wheat Conference was held in conjunction with the World Economic Conference, although the subject was not on the agenda of the larger conference. Representatives of 31 nations participated in the discussions. A second session convened August 21 in Canada House, London, and adjourned August 25 upon the signing of a complete plan embracing both wheat producing and consuming countries. The

exporting countries—United States, Canada, Australia, Argentina, Russia, and the Danubian States—agreed to limit their wheat exports for two years. The first four were to restrict their joint exports in 1933-34 to 560,000,000 bushels and to curtail the acreage devoted to production for export by 15 per cent in 1934-35. The Danubian countries undertook to restrict their exports to a maximum of 50,000,000 bushels annually, and the Soviet Union to a maximum to be determined later. In return for these commitments by the producers, the consuming countries agreed to reduce their tariffs on wheat as soon as the price of wheat had been maintained at 63.0 cents gold for four months. The importing countries also agreed to prevent increases in their domestic wheat production. A world carry-over of 950,000,000 bushels of wheat was the principal factor in inducing the nations to accept the restriction plan.

Consult Maxwell S. Stewart, "The Work of the London Economic Conference," *Foreign Policy Reports*, Nov. 8, 1933; H. B. Lees-Smith and William Hard, "The World Economic Conference," *Current History*, September, 1933; "The Silver agreement," *Foreign Affairs*, October, 1933.

ECONOMIC ENTOMOLOGY. See ENTOMOLOGY, ECONOMIC.

ECONOMICS. See BANKS AND BANKING; BUSINESS REVIEW; FINANCIAL REVIEW; LITERATURE, ENGLISH AND AMERICAN; PUBLIC FINANCE, ETC.

ECONOMY ACT. See UNITED STATES under Administration.

ECUADOR, ek'wà-dôr. A South American republic. Capital, Quito.

AREA AND POPULATION. The area of Ecuador is not definitely fixed, due to a boundary dispute with Peru. It was variously estimated at from 275,936 to 337,304 square miles, including the Galapagos or Colon Islands (2868 square miles), situated 600 miles west of Ecuador in the Pacific. The total population in 1931 was estimated at 2,500,000, with whites comprising about 10 per cent of the total; Indians, 38 per cent; mixed, 41 per cent; Negroes, 5 per cent; and others 6 per cent. The movement of population in 1931 was: Births, 99,325; deaths, 47,443; and marriages, 12,898. The population of the chief cities in 1932 were: Quito, about 104,000; Guayaquil, 120,000; Cuenca, 42,000; Riobamba, 21,200.

EDUCATION. Primary education is free and compulsory. In 1933, Ecuador had 1870 public elementary schools, with 133,090 pupils enrolled; 15 secondary schools, with 3403 pupils; and 4 public universities, with 1064 students. Private schools in the same year consisted of 288 elementary schools, with 30,095 pupils; and 3 secondary schools, with 260 pupils. The universities are Central University at Quito, Guayas University at Guayaquil, Azuay University in Cuenca, and the Law College at Loja.

PRODUCTION. About 90 per cent of the population is dependent upon agriculture for a livelihood, but mining is perhaps the chief export industry. The area under cultivation in 1932 was about 11,480,000 acres and the annual gross agricultural production was estimated at about 410,000,000 sucres (sucre equals 20 cents U. S. at par and exchanged at 17.73 cents in 1932). Cacao is the chief crop, although production had been reduced over a number of years by the witchbroom disease. Cacao production in 1931 was 28,318 metric tons. Other leading crops are coffee (18,380,000 pounds, 1931-32), rice (36,591,000

pounds in 1931), cotton (5,624,000 pounds in 1931-32), sugar (23,600 long tons in 1930-31), cereals, vegetables, fruit, etc. Livestock in 1931 included 1,290,000 cattle, 700,000 sheep and goats, 85,000 horses, and 200,000 swine. Wool production (1931) was about 1,450,500 pounds. The forests yield vegetable ivory, rubber, and kapok.

Exports of all mineral products in 1932 were valued at 22,628,085 sucres, including gasoline and crude petroleum. The petroleum output in 1932 was 1,597,000 barrels (1,762,000 barrels in 1931). Gold production in 1932 was 56,147 troy ounces; silver, 114,167 troy ounces. Copper, iron, lead, and coal also are mined. The chief manufacturing industries are the production of Panama hats, textiles, flour, sugar, alcoholic beverages, and chocolate.

COMMERCE. In 1932, imports were valued at 34,710,000 sucres and exports at 49,298,000 sucres, the favorable balance of trade being 14,588,000 sucres. This compared with 1931 imports of 44,076,000 sucres and exports of 56,660,000 sucres; with 1930 imports of 63,981,106 sucres and exports of 80,646,539 sucres. Leading imports in order of value in 1932 were oils, coal, metals, glass, paints, perfumes, toilet articles, drugs, etc., 13,602,217 sucres; cotton, silk, and other textiles, 11,986,174 sucres; live animals, food, and beverages, 6,614,034 sucres; leather and leather products, 4,184,546 sucres. Exports, in order of value, were: Minerals and mineral products, 22,628,085 sucres; cacao, 12,254,544 sucres; Panama hats, 6,446,653 sucres; coffee, 5,930,481 sucres; tagua (ivory) nuts, 3,217,832 sucres. Imports from the United States were valued at \$1,754,000 in 1932 (\$2,934,000 in 1931); and exports to the United States at \$2,386,000 in 1932 (\$3,603,000 in 1931). In 1933 there was an increase in imports, accompanied by a further decline in exports.

FINANCE. Budget estimates for the calendar year 1932 balanced at 49,115,440 sucres. Actual revenues for the year amounted to 34,347,000 sucres, leaving a deficit of 7,815,614 sucres. The foreign debt in 1933 amounted to \$23,951,169 (U. S. gold currency), including the government guaranteed loans of the Guayaquil & Quito Railway Co. and of the Swedish Match Company. The internal debt amounted to 22,347,078 sucres.

The ordinary budget estimates for 1933 balanced at 49,220,000 sucres. In addition, an extraordinary budget called for the expenditure in December, 1932, and in 1933 of 5,530,000 sucres. Preliminary returns for 1933 showed actual receipts of 35,599,875 sucres, or about 2,000,000 more than in 1932.

COMMUNICATIONS. Ecuadorean communications in 1932 consisted of about 702 miles of railway line, divided into 9 systems; 1591 miles of main trunk highways, and 1121 miles of branch roads; air lines linking the coast cities with the other American countries; and several navigable rivers. Preparations for the inauguration of a more extended air mail service were being made in 1933.

GOVERNMENT. The Constitution promulgated Mar. 26, 1929, vested executive power in a president elected for four years by direct suffrage, and legislative power in a congress of two houses. The Senate had 32 members elected for four years by the Provinces and occupational groups; the Chamber of Deputies, 56 members elected for two years by direct vote of literate male and female citizens. President at the beginning of

1933, Juan de Dios Martínez Mera (Liberal), who assumed office Dec. 6, 1932.

HISTORY. President Martínez Mera was removed from office on Oct. 18, 1933, when 22 of the 32 Senators voted to impeach him. Neither the President nor the 10 minority Senators attended the session, which was secret. The impeachment proceedings were witnessed by a small group of army officers, pledged to secrecy. President Martínez Mera was the fourth executive deposed by Congress since 1931. Elected on Oct. 31, 1932, and inaugurated Dec. 5, 1932, Señor Martínez Mera found himself in conflict with Congress from the time that body convened on Aug. 10, 1933. The fight against him was led by factions of his own Liberal party, the Conservatives, and some ambitious army officers. The President refused to surrender his powers to Congress or to heed its demand for his resignation. Congress retaliated by overthrowing the successive Cabinets which the President appointed. Finally, on October 11, the Senate received impeachment charges lodged against the President by the Chamber, the verdict being rendered a week later.

The Senate having declared the office of President vacant, Premier Abelardo Montalvo automatically became Acting President. As provided by the Constitution, within eight days after entering office he called a new Presidential election for the middle of December. The Conservatives, hopeful that the rampant factionalism within the Liberal ranks would enable them to return to power for the first time in decades, nominated José Velasco Ibarra as their candidate. Colon Eloy Alfaro, Ecuadorean Minister to the United States and a son of former President Eloy Alfaro, was nominated by the Liberals and Carlos Zambrano by the Socialists. Velasco Ibarra was proclaimed winner of the election held Dec. 14-15, 1933. A majority of the Liberals refrained from voting.

While Congress was engaged in its partisan and unifying wrangle with the President, negotiations were proceeding between Colombia and Peru at Rio de Janeiro for a settlement of the dispute over territory in the upper Amazon basin, part of which Ecuador claimed (see PERU under *History*). In September, the Ecuadorean government demanded admittance to the Rio de Janeiro conference. The request received a sympathetic hearing in Colombia but was rejected by Peru, which demanded that its dispute with Ecuador be settled by direct negotiation. Ecuador, weakened by internal dissensions, was unable to press its case.

EDUCATIONAL PSYCHOLOGY. See PSYCHOLOGY.

EDUCATION ASSOCIATIONS, WORLD FEDERATION OF. See INTERNATIONALISM.

EDUCATION IN THE UNITED STATES.

CONDITIONS. Educational conditions in the United States have reached a state that is best described as a crisis. In many respects this country must face educational problems more serious than are found in any of the European nations. In such countries as England, France, Germany, Belgium, Denmark, Norway, and Sweden the depression has been in force longer than it has in the United States, yet at no time have the schools in these countries suffered as the schools in the United States are now suffering.

It is difficult for an average citizen to grasp the significance of the difficulties which now beset the schools of the United States. He is inclined

to believe that the alarms sounded by school people are evidences of selfish interests. Meanwhile, educational matters have been allowed to drift. Neither educators nor others have proposed definite policies that might guide in rehabilitating the schools. The one exception to this statement is found in the tendency of the public to provide for the teaching of the traditional fundamentals and to eliminate all other subjects of study.

The problems that the schools face are of two characters. There are the difficulties brought about by economic conditions, and there are the equally serious difficulties caused by confusion regarding the aims and ends that education should serve.

Late in November, the United States Commissioner of Education made public *A Summary of the Effect of the Economic Crisis in Education in the United States*. The report was entitled *The Deepening Crisis in Education*. The information was derived from various sources. It represents, therefore, facts derived from sources other than schools as well as those reported by school officials. Among other things, the summary shows that no less than 2,280,000 American children of school age, who, according to most compulsory education laws, should be in school, are not enrolled. At least 100,000 of these were added this fall because schools were closed and they had no opportunity to attend.

Nearly 2000 rural schools in 24 States failed to open this fall. As far as is known, no city schools have been closed. In some places schools both elementary and secondary have become tuition schools. The report mentions one city of 15,000 population in which a tuition of \$3 per month is charged in the elementary schools and \$5.50 per month in the high school. In that city, at least two hundred children are out of school because their parents cannot pay the required tuition.

Many private and parochial schools have been closed and estimates indicate that 1500 commercial schools and colleges have been closed.

Lack of available funds has caused one in every four cities to shorten school terms. No less than 715 rural schools have no expectation of remaining open more than three months. This shortening of school terms this year comes after reductions in terms during the past three years. The result is that terms in practically every larger American city are now one or two months shorter than they were in those same cities 70 to 100 years ago. Various States report that further reductions in school terms are inevitable under present conditions.

In normal times the schools in the United States were in session an average of 172 days. This is in contrast with 200 days in France; 210 days in England and in Sweden; and 246 days in Germany and in Denmark. Under present conditions, many if not the majority of American children have barely half of the school opportunity that is supplied by many European nations.

Reports from various States present a distressing picture of teachers' salaries. Arizona reduced salaries from 20 to 40 per cent, and further reductions are anticipated. Illinois has reduced salaries 10 per cent and will reduce further. In addition, teachers have suffered loss through the discounting of warrants. In Iowa one-half of the teachers receive \$750 per year or less. Michigan reports that salaries have been and will be reduced as much as 60 per cent unless more aid is

provided. Nebraska schools reduced salaries 40 per cent. Other States report reductions of 20 per cent or more.

In prosperous times the salaries paid to teachers were considered very inadequate. The fact that such a large proportion of the schools are in session easily leads to the notion that at present teachers are well paid. The actual salaries received by teachers are small. One of every four American teachers is now working at a rate of less than \$750 and more than 40,000 of the teachers in those schools will receive less than \$450. In 18 States some of the teachers are paid in warrants which are cashable at discounts ranging from 5 per cent up.

School services have been greatly reduced or eliminated. In a study of 700 typical cities the following conditions were found:

67 reduced art instruction—36 eliminated it.
110 reduced the music programme—29 eliminated it.
81 reduced the physical education work—28 eliminated it.
65 reduced home economics work—19 eliminated it.
58 reduced industrial art instruction—24 eliminated it.
89 reduced health service—22 eliminated it.

Kindergartens have been eliminated in many cities and in some States.

It is estimated that there are at least 200,000 unemployed certificated teachers. When the depression was first felt in the schools the administration brought about economies by increasing the size of classes. In spite of the fact that the enrollment of pupils in city schools has increased there are now some 18,000 fewer teachers employed in cities than in 1931. In one State the enrollment per teacher is 44 children. The average for five States is more than 40.

It would require more than 75,000 teachers to care for the 2,280,000 children of school age who are now not attending.

The schools are under the necessity for caring for more children. There were 728,000 more pupils enrolled in high schools in 1932 than in 1930. In the elementary schools, however, the condition was changed. In these schools there were 115,000 fewer children in 1932 than in 1930. This is the first decrease in enrollment in the history of the country. The abolition of child labor will further increase the number of children who should attend.

The closing of private and parochial schools swells the total of those who should be provided with public school privileges.

The enrollments in the nation's schools increased by more than 1,000,000 between 1930 and 1932, but the funds available for the support of education decreased by fully \$368,000,000. This means that current expenses have been cut by about 20 per cent since 1930.

The per capita cost of current expenses for public education in cities was cut 22 per cent from 1932 to 1933. To accomplish this, boards of education reduced salaries, delayed needed repairs, economized on supplies and textbooks, eliminated important school services, increased the size of classes, and shortened terms.

In the school crisis debts have a major influence. During the period of prosperity communities were easily persuaded to bond themselves for the construction of new buildings. It now develops that many of these places should not have built, or if they did, they should not have constructed such expensive buildings. Already 259 school districts in 29 States have defaulted on their indebtedness

and there are evidences that many other districts must follow their example.

The interest that will be paid during the current school year will amount to about \$150,000,000. Districts that attempt to refinance themselves find that they must pay 6 per cent instead of 4 per cent which was the former rate.

It is estimated that there are outstanding no less than \$40,000,000 in warrants that have been given to teachers in payment of salaries. Also there are large amounts of public school funds in closed banks. In a single State there are \$15,000,000 such frozen school funds.

The causes of the economic crisis which the schools are facing are varied. The most significant cause is found in the fact that the schools have been kept as local enterprises. This means that financial support must come mainly from local taxes. Such taxes depend chiefly upon real estate. The depression has made it difficult to collect such taxes. In some districts as much as 30 to 40 per cent of the taxes have not been collected. In Michigan alone the tax delinquencies were estimated at \$100,000,000 for the past school year. In Missouri the school tax delinquencies amounted to \$13,800,000.

The assessed valuations of property have been greatly reduced. In some districts assessments on real estate have been reduced by one-half. In addition to this many States have passed laws that limit the amount which may be raised by taxes on real estate.

The depression is having an influence upon the type of teachers employed in many sections. In such places people without training and proper equipment are employed because they can be hired for less or because such local people are in need of assistance and this method is taken to relieve them. Thus it happens that with thousands of highly trained people available many places are losing the opportunity to improve the teaching body in their schools.

The difficulties that public education experiences because of confusion regarding aims and purposes are scarcely less serious than those caused by economic conditions. This confusion is due in large part to differing conceptions regarding the purpose that public education is to serve. In the past the main purpose of the school was to preserve that which society had come to regard as significant. In school the child was supposed to be put in possession of inheritances from the past. The nature of the requirements placed upon the school caused it to move a quarter of a century behind society. Those who determined the policies of the school believed that the learner should be concerned with those matters that were established and permanent. They went far enough to bar from the public schools all those questions that were concerned with the immediate changes that were taking place in society. These questions must always be of a controversial nature and it was held that the school must not concern itself with controversial subjects. The combinations in arithmetic, the recognition and interpretation of printed pages, and the formation of the various symbols of writing did not change. So these subjects represented by the so-called "three R's" formed the basis of the school offering.

Outside of the school the conditions surrounding child life were quite unlike those of to-day. The home was so organized that the child had his part in its conduct. He was supplied with "chores" that were in no sense artificial. He learned the

application of that which he acquired in school in actual use outside of school. In a less complex life than is now common, he participated directly or indirectly in considering all of the problems that affected the neighborhood in which he lived. This type of education impressed those who participated in it so strongly that there has been a tendency to continue it. Even to this day the older persons in most communities believe that all the difficulties that the schools experience could be remedied by a return to the practices that obtained in their school days.

For many years there have been individuals who condemned the school for keeping aloof from current problems. The late President Eliot often complained that the schools were twenty-five years behind the times. There has been a tendency to bring newer subjects into the school curriculum. These newer subjects have been introduced over pronounced protests on the part of many. Such subjects have been characterized as "fads and frills" and as such they have been under constant criticism. The fears that the public has had in regard to the matter of bringing schools up to date are indicated in the number of legal enactments regarding what shall and what shall not be taught in publicly supported schools. Such new laws have been particularly common in the past dozen years.

Conditions occasioned by the depression have served to emphasize the differences between those who believe that the school is required to preserve that which society now has, and those who hold that the school must take its part in the changes that are taking place and thus become a reforming agency. Thus far, the more conservative groups have had the greater influence upon practice. They have advocated and secured greater attention to the so-called fundamentals. Their influence has been sufficient to eliminate many of the more modern subjects, which they characterize as "fads and frills."

There is no way to predict the extent to which the modern school will be controlled by a most conservative policy. The more progressive practices have not won the confidence of the public, and what is more important, there are many leaders in education who frankly express doubts concerning the effectiveness of the subject matter and methods advocated by the progressives.

There is no accepted plan or policy for education that receives united support. It happens, therefore, that the public school system finds itself in the midst of its most critical period with no acknowledged leadership and with no definite proposals about which support might be rallied.

The financial problems of the public schools are pressing for solution. In most places the solution is sought in the direction of increased State support. New York State furnishes an illustration of the trend toward State aid to education. In 1919, the total cost of education in New York State was \$92,333,179. Of this the State appropriated \$7,424,440. In 1932, the total cost had risen to \$377,231,000, of which the State paid \$104,292,828. The increase in total expenditures was more than 300 per cent, but the increase in State aid was 844 per cent. The State decreased its appropriation by 10 per cent for the current school year. In July, Governor Lehman appointed a committee to determine whether there could be further economies without injury to the schools. Early in December, the committee made public its report. The majority of the committee held

that the State should return to the full amount allowed by law. A minority held that the appropriation for the coming year should be the same as that appropriated for the current year. One member disagreed and presented a report in which he urged drastic economies.

During the year the report of the National School Survey was made public. This survey was conducted under the guidance of the National Office of Education. The director, Dr. Paul R. Mort, has summarized the principal results of the survey as follows:

1. In most States the economic ability of the local school district determines the programme of child welfare in the district; and in thousands of localities this ability is too low to provide proper care and education for children. There are vast areas, therefore, where schools are ceasing to exist.

2. In most States there existed, even at the peak of prosperity, areas in which educational opportunities were of the most meagre type.

3. A century ago, when the battle to transfer the cost of education from individual parents to the whole local community was won and resulted in that system of free public education which became basic in American life and ideals, the local community was able to bear the burden. Drastic social change, however—especially that which has taken place during the last 25 years—not only has thrown greater responsibility upon public education in the rearing of healthy and law-abiding children but has seen the local community less and less able to bear the cost of this responsibility. Wealth has been concentrated in the great urban centres and in the hands of a relatively small number of persons.

4. A fundamental change required to-day is the transfer of the burden of support of education from local communities to the entire State.

5. The property tax is overburdened. More use must be made of other forms of taxation.

6. It is possible to have education financed by the individual State without removing control of teaching and the curriculum from the local community. It is recommended that the States set up satisfactory minimum programmes of education which can be financed without throwing larger burdens upon any one local community than upon any other.

7. Increased local efficiency in education will come through the further grouping of small, inadequate school districts.

8. No State in the union to-day equalizes the educational tax burden satisfactorily. No State can hope to do so unless it abandons the obsolete principle of throwing the whole tax burden upon local communities.

9. New York, Delaware, Maryland, North Carolina, Missouri, and California are examples of States that approach the ideal more closely than the majority of the States. They lead the nation in providing equal educational opportunities to all school districts within the State.

10. The report of the National Survey of School Finance sets up guides and standards for attainment of equitable indices for distributing school funds in every State. These provide a basis on which every State can take immediate action to stabilize the financing of its public schools.

There are many influential organizations that urge increasing economies in the support of schools. Among these organizations is the United States Chamber of Commerce.

There is an increasing number of people who believe that the only way in which our educational problems can be met is to have the Federal government grant substantial aid. Even now the cities and school districts are able to obtain money from the government for school buildings. Of the amounts so loaned, 30 per cent need not be repaid. School authorities have not been active in accepting this assistance. Apparently, more and newer school buildings are not now as necessary as are the means for conducting such schools as the public desires.

EGYPT. A kingdom of northeastern Africa. Capital, Cairo. Ruler in 1933, King Fuad I.

AREA AND POPULATION. Excluding the Anglo-Egyptian Sudan (q.v.), the possession of which is in dispute between Great Britain and Egypt,

Egypt has an area of 386,000 square miles and a population at the census of 1927 of 14,217,864. The settled land surface is only 13,574 square miles. The estimated population in 1932 was 14,945,000. Births in 1931 numbered 864,631; deaths, 397,706. The chief towns, with their populations in 1927, are: Cairo, 1,064,567; Alexandria, 573,063; Port Said, 104,603; Tanta, 90,016; Mansûra, 63,676; Asyût, 57,136; Faiyûm, 52,863; Zagazig, 52,839; Damanhûr, 51,709. Moslems formed 91.19 per cent of the 1927 population; Christians, 8.34 per cent; Jews, 0.02 per cent.

EDUCATION. In 1927, about 88 per cent of the population over 10 years of age were illiterate. Primary instruction is furnished mainly in native schools called *maktabs*. In 1931-32, there were 1624 *maktabs*, with 158,885 pupils, under government inspection, besides numerous uninspected schools. The State University of El Azhar at Cairo, with its affiliated institutions, enrolled 2332 students in 1931-32. There were 10 higher colleges and various special, technical, and secondary institutions.

PRODUCTION. The cultivable area of Egypt Proper in 1930 was 8,552,000 acres, or 3.5 per cent of the total area, and consisted mainly of irrigated land in the Nile valley. Of the total population, 62 per cent were directly engaged in agriculture and a large proportion of the remainder were indirectly dependent upon it. Cotton occupies some 32 per cent of the cultivated land and is the chief money crop. Production of the chief crops in 1932 (thousands of units, bushels except as indicated) was: Wheat, 52,586; barley, 12,067; corn, 92,949; beans, 16,425; rice (rough), 26,945; onions (pounds), 663,546; sugar cane (metric tons), 2199; raw sugar (metric tons in 1932-33), 161; cotton (pounds in 1932-33), 415,860 (615,196 in 1931-32). Livestock (thousands) in 1932: Cattle, 909; buffaloes, 882; sheep, 1344; swine, 11; camels, 156; asses, 795.

Mineral production, in metric tons in 1931 was: Petroleum, 289,419; phosphate rock, 257,011; manganese iron ore, 101,781. The sea and lake fisheries in 1931 yielded 9850 metric tons of fish and the Nile fisheries 5930 metric tons. Sugar, cigarettes, petroleum products, and articles for local consumption are the principal manufactured products.

COMMERCE. Egyptian foreign trade declined approximately 50 per cent during the period 1925-32, as shown by the accompanying table.

EGYPTIAN IMPORTS AND EXPORTS
[In 1,000 Egyptian pounds, equal to \$4.9431 at par]

Year	Imports for consumption	Exports of Egyptian products	Excess of imports
1920-24 (average)	60,284	59,030	1,204
1925-29 (average)	53,872	51,577	2,295
1930	47,187	31,941	15,241
1931	31,528	28,074	3,454
1932	27,426	26,987	439
1933 *	26,757	29,519	2,762 ^b

* Preliminary. ^b Excess of exports.

Cotton textiles accounted for 12.7 per cent of the value of all imports in 1932, fertilizers, 6 per cent; tobacco and cigars, 5.9 per cent; metal and metal articles, 5.5 per cent; coal, 4.2 per cent. Silk fabrics, constructional timber, woolen fabrics, mineral oils, and paper and books were other leading imports. Cotton and cotton seed exports in 1932 were valued at ££19,203,000, or 71.1 per cent of the total value of exports, exclusive of cotton seed cake, valued at ££799,000, or 3 per

cent of the total exports, and cotton seed oil, valued at £E315,000, or 1.2 per cent. Molasses, sugar, confectionery, beer, cigarettes, gasoline, and oil products were other exports. The United Kingdom supplied 24.0 per cent of the value of all imports in 1932; Italy, 8.9 per cent; Japan, 7.9; France, 7.2; and Germany, 7.0 per cent. Of the exports, the United Kingdom took 38.4 per cent; France, 10.3 per cent; Germany, 9.8 per cent; and Italy, 8.1 per cent.

FINANCE. The national budget for the fiscal year beginning May 1, 1933, as passed by Parliament, provided for expenditures of £E31,979,000 and receipts of £E32,075,000, indicating an apparent surplus of £E96,000. However, the separate budget for Administration of Railways, Telegraphs, and Telephones estimated revenues of £E5,398,000 and expenditures of £E5,717,000, leaving an estimated deficit of £E319,000. Closed accounts for the fiscal year 1931-32 showed total revenues of £E37,770,616 (ordinary revenues, £E37,048,427) and total expenditures of £E36,991,858 (ordinary expenditures, £E31,619,020), the excess of revenues being £E778,758. The budget for 1932-33 estimated total receipts at £E37,492,520 (ordinary, £E37,048,427) and total expenditures at £E37,309,639 (ordinary, £E32,221,988).

The public debt on Apr. 30, 1932, amounted to £89,401,640 (sterling), compared with £89,644,840 on May 1, 1931. The annual debt charge amounted to £E3,507,277. The Egyptian pound's exchange value fluctuated in approximate relation to the pound sterling following the abandonment of the gold standard by Great Britain and Egypt in 1931. It exchanged at an average of \$3.58 in 1932 and \$4.65 in 1931.

COMMUNICATIONS. The State Railway Administration in 1931 operated 3374 miles of railway line (2489 miles of main line) and private concerns operated 874 miles of light agricultural railways. In 1930-31 the railways carried 26,937,000 passengers and 5,498,000 tons of freight, the net receipts totaling £E2,902,569. There were about 205 miles of macadam highways and 3930 miles of graded or drained dirt roads in 1932. Air mail lines connected Cairo with Europe, India, the Sudan and South Africa. In 1931, 8509 steam vessels of 31,428,601 net registered tons entered Egyptian ports and 8499 of 31,426,862 net tons cleared. See SUEZ CANAL.

GOVERNMENT. The Constitution of Oct. 22, 1930, declared Egypt an independent hereditary monarchy, in which the King exercises full executive powers through a responsible Cabinet as well as legislative powers concurrently with Parliament. The King's extensive powers include the right to veto all laws passed by Parliament, the sole right to initiate financial laws, to dissolve the Chamber of Deputies, and to appoint and dismiss Ministers. The King appoints 60 of the 100 members of the Senate, the other 40 being elected by indirect suffrage, as are the 150 members of the House of Deputies. The term of Senators is ten and that of Deputies five years, one-half the Senate being renewed every five years. Islam is the state religion and Arabic the official language. Prime Minister at the beginning of 1933, Ismail Sidky Pasha (Popular party). The Parliament elected June 1, 1931, was boycotted by the Nationalist party (Wafd), which controlled 107 out of 121 Senators and 215 out of 235 Deputies in the previous Parliament. The Wafd also refused to recognize the validity of the new Constitution

(see 1931 YEAR BOOK). Defense of Egypt is reserved to the British government, which maintains an army of occupation of about 10,000 troops in the country. Sir Miles Wedderburn Lampson, British Minister to China, was appointed Aug. 18, 1933, to succeed Sir Percy Lyham Loraine as British High Commissioner for Egypt and the Sudan.

HISTORY

FALL OF SIDKY PASHA. After guiding Egypt's destinies with an iron hand for more than three years, Prime Minister Sidky Pasha resigned with his entire Cabinet on Sept. 21, 1933. There had been a number of clashes between the Prime Minister and King Fuad in connection with the King's interference in the government. In February, 1933, Sidky Pasha was forced by ill health to relinquish his duties temporarily. While Sidky Pasha was recuperating in France, the King extended his control over the Cabinet. The Prime Minister returned to Egypt on September 5 and in a subsequent interview informed the King that he would resign unless Fuad ceased his interferences. The King declined to accept such a condition and Sidky's resignation followed.

The Prime Minister's dominant position had been partially undermined early in the year as a result of his arbitrary methods in handling the people, the press, and Parliament. The so-called Badari case, in which one youth was sentenced to death and another to life imprisonment for the murder of a sub-prefect who had tortured them for opposing the Sidky government, concentrated popular attention upon the government's conduct. Two of the strongest members of the Cabinet—Maher Pasha, Minister of Justice, and Yehia Pasha, Minister of Foreign Affairs—were dropped from the Ministry on January 4 for protesting against the government's attitude in the Badari case. The remainder of the Cabinet consisted largely of nonentities, and the lack of leadership evidenced by them following Sidky's breakdown practically forced the King to intervene.

YEHIA PASHA'S MINISTRY. A new Ministry was formed on September 27 by Abdel Fattah Yehia Pasha, the former Foreign Minister. Selected largely by the King, the new Ministry included six Independents, one Moderate Wafdist, two Ittihadists, and two Shaabists. The three strong figures in the new line-up, besides the Prime Minister, were Finance Minister Hassan Bey Sabry, Minister of Interior Mahmoud Fahmy Keissy, and Minister of Religious Foundations Naguib Gharabli. Yehia Pasha declared that his government's policy would be to concentrate on economic and financial affairs and avoid politics, a course which seemed to be in line with the mood of the Egyptian people. The Cabinet's prospects were not bright, as Sidky Pasha was the President and leader of the Shaab (Popular) party, which controlled more than half of the members of Parliament. When Sidky attempted to assert his authority over the party, however, he discovered that his position had been undermined. Attacked by many of his erstwhile followers and colleagues, he resigned on December 7 from Parliament and from the leadership of the Shaab party, which he had founded in 1930. This action removed one of the outstanding personalities of modern Egypt from the political arena, and insured the support of Yehia Pasha's Ministry by a Parliamentary majority.

OTHER DEVELOPMENTS. One of Egypt's periodic

anti-Christian agitations swept the country commencing toward the end of June, 1933. The pretext for the outbreak was the widely circulated report that an English Christian headmistress of a mission school at Port Said had attempted to convert a Moslem girl to Christianity by coercion. The highest Moslem authorities joined in the agitation, which led to acts of violence against Coptic, Protestant, and Roman Catholic institutions and representatives. To calm the agitation the government requested the English headmistress to leave the country and appropriated £70,000 for the establishment of Moslem orphanages.

Another issue which perturbed the country was the demand made by French, Italian, and British holders of Egyptian bonds for payment of interest in gold. After Egypt followed Great Britain off the gold standard in September, 1931, the government had paid the interest in sterling. Payment in gold would have involved the remittance of a sum 30 per cent larger in terms of Egyptian currency. The dispute was submitted to the courts and in January, 1933, the Mixed Court at Cairo held that the payment must be made in gold. The Egyptian government appealed to the higher court at Alexandria.

The work of raising the Aswan Dam an additional 30 feet, thus more than doubling the storage capacity, was completed in October, 1933. This work, on which more than 6000 men were engaged for three years, cost the Egyptian government £2,600,000, exclusive of the compensation due some 70,000 families of fellaheen whose lands were submerged. The purpose of the government in raising the dam was to enable cultivators to raise two or three crops yearly instead of one, to fructify a larger area, and to permit the extension of rice cultivation.

A £2,500,000 issue of Treasury bonds by the government, bearing $4\frac{1}{2}$ per cent interest, was heavily oversubscribed during the year.

See ARCHÆOLOGY; RECLAMATION.

ELDESLIE DOCK. See PORTS AND HARBORS.

ELECTRICAL ENGINEERS, AMERICAN INSTITUTE OF. A national organization founded in 1884 for the purpose of advancing the theory and practice of electrical engineering and the allied arts and sciences and of maintaining a high professional standing among its members. There are three grades of members: Member, associate, and fellow. The total membership on Oct. 1, 1933, was 15,386.

In 1933 there were 60 sections of the institute located in various cities throughout the United States and 112 student branches in colleges giving courses in electrical engineering. In addition to district, section, and student branch meetings there were held an annual winter convention in New York City, Jan. 23-27, 1933, and an annual summer convention in Chicago, June 26-30. Much of the institute's work is accomplished through its general and technical committees, of which there were 43 in 1933. Its principal publications are the monthly *Electrical Engineering*, the quarterly *Transactions*, the *Standards* of the A.I.E.E., and the *Year Book*.

The officers elected for 1933-34 were: President, J. B. Whitehead; vice-presidents, J. Allen Johnson, E. B. Meyer, K. A. Auty, Stanley Stokes, C. R. Higson, A. M. Wilson, F. M. Craft, R. B. Bonney, R. W. Sorenson, and A. H. Hull; treasurer, W. I. Slichter; secretary, H. H. Henline. Headquarters are in the Engineering Socie-

ties Building, 33 West Thirty-ninth Street, New York City.

ELECTRICAL ILLUMINATION. There were 616 million incandescent lamps sold during the year 1933. This is a greater production not only than in the preceding year but in all previous years except 1929 and 1930. Of the lamps sold 56 per cent were of standard size and 44 per cent were of miniature size.

The Century of Progress Exposition at Chicago was the outstanding event in illumination as illumination was one of the features of the fair. The Fair was opened with the turning on of the lights by an electrical signal set up by the light from the star Arcturus, 40 light-years distant. The light was received through a telescope in the Harvard Observatory, focused upon a light sensitive photo-tube which produced a faint electrical current. This current was amplified by tube amplifiers and transmitted to the exhibition grounds. The illumination of the grounds of the fair attracted much attention and made night the most desirable time to visit the fair. In addition to the utility illumination by incandescent lamps which were arranged with very good taste there were many decorative features, such as pylons, fountains, and lanterns in which gaseous lamps (neon and mercury) were used with delightful effect. Some of the buildings were windowless, the only illumination was electric, day and night, and unusual effects were intentionally produced.

The leaders of the science of illumination set up new values for standards of desirable illumination as reported by the Committee on Illumination of the A. I. E. E. These resulted from a discussion and questionnaire and gave results as follows:

	Foot-candles illumination		
	Work	Social	General utility
Minimum good present practice	15	5	3
Minimum recommended, present	30	10	5
Probable greatest economic advantage	50	15	5
Possible desirable from consideration of eyes only	300	50	30

This indicates that it is considered to be an economic advantage to use about three times the intensity which is now in common practice.

The photo-voltaic cell, sometimes called a photronic cell, has grown in popular favor as a means of measuring illumination in foot-candles. It is now available commercially at reasonable prices and in portable form for direct reading in foot-candles. The electrical output of the cell is directly proportional to the light falling upon the cell (a disk). This output is impressed upon a small electric meter whose scale is calibrated in foot-candles and sometimes with additional information such as "good for course work." These instruments are also made in a pocket size to be used by photographers to estimate the proper time of exposure.

The Sodium Vapor Lamp has progressed to the stage where two practical installations have been made for highway lighting, one at Schenectady, N. Y., and one at Port Jervis, N. Y. Each lamp has a hot cathode taking 20 watts for heating and 6.6 amperes direct current in a series system for the arc. Each lamp consumes about 250 watts and gives 10,000 lumens or 40 lumens per watt as compared to 15-20 lumens per watt for incandescent filament lamps. The lamps give an orange-yellow colored light which is almost monochromatic but

one to which the eye is very sensitive so it gives a maximum of visible light. The light comes from a glow discharge in the sodium vapor which is excited by a hot oxide-coated cathode which ionizes the sodium vapor. A small amount of neon vapor is included to accelerate the starting as even with this it takes about 30 minutes to reach brilliancy after starting the current. The direct current is supplied from a thyatron tube rectifier which takes its power from a 120 volt alternating current network.

A new double filament three-light incandescent lamp was put on the market which can be operated at three degrees of brilliancy by the change of a switch. These lamps require special sockets having connections for three leads and are intended primarily for stores. They operate with one low candle power filament or with one high power filament or with both together. A new 250-watt lamp was introduced which is made in a small enough bulb to be conveniently used in portable lamps for interior lighting. Also a new 2000-watt "Movieflood" lamp for making colored motion pictures. Its peculiarity is that it produces a light whose spectrum includes all the colors so proportioned as to be especially suited to the making of colored photographs and thus gives a better photographic effect than 3000 watts in ordinary lamps. Other interesting novelties are: a Christmas tree lamp containing neon so that when the filament burns out the bulb will glow and indicate the trouble; a new Photoflash lamp giving $17\frac{1}{2}$ million lumens for $\frac{1}{60}$ of a second, more than ever before; a new lamp, giving local doses of ultra-violet light, which consists of an ordinary lamp bulb into which there is set a small circular window of glass so thin that it transmits a very large percentage of the ultra-violet light produced inside by the usual means. The remainder of the glass is almost opaque to the ultra-violet rays.

Among new research or scientific development are: A new meter for measuring accurately the amount of ultra-violet light. A new X-ray tube for a hospital in Chicago, containing a tube fourteen feet long, using 800,000 volts and giving the effect of an amount of radium which would cost \$75,000,000. An X-ray outfit for taking pictures in which the current for operating the tube comes from a charged condenser which may be charged to any desired voltage and then discharged through the tube. The condenser may be charged leisurely, thus requiring low power, and discharged suddenly giving high current and power to the tube. As the taking of a picture requires only a fraction of a second this is very satisfactory.

A new spectroscope which is the largest yet built will give a spectrum so long that the energy in each wave-length may be more easily and accurately determined.

ELECTRICAL INDUSTRIES. There have been no dramatic advances in the electrical industry in the year 1933 but there has been a great activity in the improvement of details leading to increased economy of production and improvement in the control of manufacturing processes to produce a better and more uniform product at a reduced cost. The use of electron tubes in the control of motor operated machinery is an outstanding characteristic of the year. Thus in spot welding of stainless steel and aluminum the time of application of current for each spot is limited to a few cycles (sixtieth of a second) by means

of an electron tube as a switch. Longer applications would permanently stain the surface. In wrapping packages, bread for instance, the article is centred in the reading matter on the wrapper and the paper is cut when a certain spot on the paper comes opposite a photoelectric tube.

In the rolling of sheet steel and tin the carriage must be started and stopped forty times per minute. This is done when a certain spot on the moving carriage comes opposite a photo-tube. The reason for the use of the tubes is that they have such a small time lag in operating that it is negligible in the mechanical movement of physical bodies. Accurate control devices were introduced for pulling sheets from the rolls under a definite and constant tension by means of machines operating as motors pulling to take up the sheet and as generators to let it go back under the same tension. Another device automatically controls the separation of the rolls for each successive pass, setting them up accurately for the thickness desired. A new device replaces laborers and tongs by a motor operated table for receiving sheets after one pass through the rolls, lifts the sheets and by tilting sends them back for another pass. A new steel bar mill was put into operation using a 3000-h.p., 60-cycle, three-phase induction motor operating at 6600 volts. A new radiation pyrometer was introduced which indicates the temperature of metals for temperatures above 1500° F. (815° C).

One of the outstanding steps of the year was the advance in the science and art of noise measurement. Under the auspices of the American Standards Association, tentative standards of noise and methods of measuring noise were set up. Noise is measured by means of a microphone such as is used in telephone and broadcasting service. The alternating current set up in the electric circuit of the transmitter is analyzed and measured and compared with standards. As noise is a vibration of many different frequencies it is very difficult to compare the loudness or intensity of two noises of different qualities. Hence, the noise must be analyzed into its component frequencies and the results interpreted by a specialist. A frequency of 1000 cycles per second has been chosen as a standard of reference and complex noises are compared with this simple tone. The loudness of a complex tone can only be determined by averaging the results obtained in tests by several different observers. A unit of intensity or loudness, the "Decibel" has been adopted and a logarithmic scale of intensity has been proposed such that an increase of three decibels on the scale corresponds to a doubling of the intensity of the sound.

An idea of the working of the scale is given by the following examples:

Lower threshold of hearing	0. decibels
Quiet bedroom	29. "
Ordinary office	49. "
Limit of conversation	89. "

This last condition of 89 decibels represents 1,000,000 times as great an intensity of noise as the quiet bedroom of 29 decibels. We now have a basis for standards of noise intensity, a laboratory means of measuring sound and a portable apparatus for measuring sound.

It is now the practice of manufacturers of electrical apparatus to analyze the noise made by each new type of machine and frequently it happens that on ascertaining which frequency is the

strongest the offending part of the machine may be located and that particular noise be eliminated. The new fan motors are practically noiseless and most modern motors run very quietly.

The electro-chemical industry has been more active than most branches. Electric furnaces of both the induction and resistance types for temperatures of from 2000° F. to 2500° F. have been introduced in considerable number because they are particularly suitable for this temperature range and because the temperature may be so accurately controlled. A superior grade of cast iron is now produced by the electrical furnace. It has a higher tensile strength (100,000 lbs.) and greater uniformity of quality. It is replacing steel for many applications. Lithium, the lightest known metal, is now produced in considerable quantities by electro-chemical means and is used in the metallurgy of iron and copper for purification and is added to aluminum to improve its qualities. Magnesium and beryllium are electro-chemical products now coming into vogue in the construction of aircraft. Iron pipes and rubber articles are now made by electrolytic deposition. Furnace temperatures are now accurately controlled by a new radiation pyrometer which automatically raises and lowers the temperature of the source.

Hot cathode rectifying tubes are now available for as high voltages as 100,000 and give sufficient current so that they are replacing the mechanical rectifier used in precipitation processes such as smoke abatement, dust removal and by-product recovery in accordance with the well-known Cottrell Process.

"Gear Motors" are now becoming quite general for the drive of low speed mechanisms. A high speed, high efficiency motor has been incorporated in its housing a reducing gear by means of which the armature may run 1800 to 3600 r.p.m. and the projecting shaft at very low speeds. The saving in the cost of the high speed motor more than balances the cost of the mechanical gearing and the efficiency is better. Totally enclosed and ventilated motors may be used. Under process of development is a new polyphase a.c. motor operated by hot cathode tubes which gives a high starting torque, adjustable speed throughout the full range and a high power factor. Electric welding has been extended to new fields and large tubular boilers, even for high steam pressures are now put together by electric welding. The worn rails on railway tracks are now repaired by a process of building up with new material by means of a portable welding outfit consisting of a generator, driven by a gasoline engine and the necessary control equipment. The whole outfit is self-propelled, using the same gas engine for power. Improvements in the art of electric welding give assurance that the welds will have a strength from 90 per cent to 99 per cent of the parent metal. A very considerable improvement has been made in the electrical and magnetic qualities of sheet steel for electrical machinery.

The improvement in methods and quality of refrigerators has continued along with a reduction in price and 1,000,000 were sold in 1933. This has contributed to the development of the art of "air conditioning" in which there has been quite an advance, both in method and use. In the domestic line there has been more activity than in any other branch of the electrical industry. Kitchen engineering is now an accepted name for this branch of electrical engineering and covers

scores of devices from ranges, washing machines, ironers down to stirrers and flat irons.

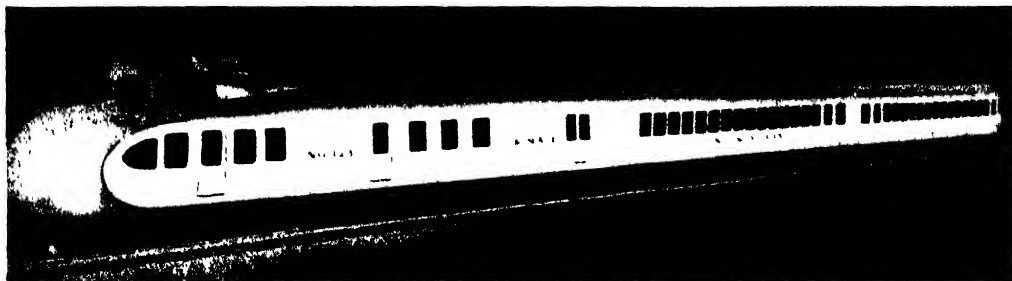
A new Institute of Electrical Appliances was opened at Nela Park, Cleveland, devoted to the display and demonstration of electrical appliances for the home. A complete home is furnished for living and equipped with the most modern electrical conveniences and is open to the public for its information and education.

ELECTRICAL MARINE ENGINEERING.

There was very little activity in electric marine engineering. The steamship *Washington*, a sister ship of the *Manhattan* (see 1932 YEAR BOOK) was the only interesting new vessel. This has all its machinery electrically driven except the propelling machinery. There are 8000 lights and 4000 horse power in motors including 93 fans, 20 motor-driven windlasses, 18 motors for boat hoists, a 290 h.p. on the anchor windlass, and others. These are supplied by four 500-kw. direct current generators driven by steam turbines and a 75-kw. emergency generator driven by a Diesel engine. Considerable development work has been done on alternating current motors for driving the auxiliaries on ship board. There was put into service by the United States Engineers Corps a large suction dredge using a 1200 h.p. motor for the pumps, a 225 h.p. motor for the cutter and other auxiliary motors. These received their power from a set consisting of a steam turbine driving five generators; one 1000-kw., one 200-kw., two 75-kw., and one 15-kw. Some of these generators served only one motor in order to provide independent voltage control by the Ward-Leonard system and give exact regulation of the power and speed of operation.

ELECTRICAL PRECIPITATION. See CHEMISTRY, INDUSTRIAL OR APPLIED.

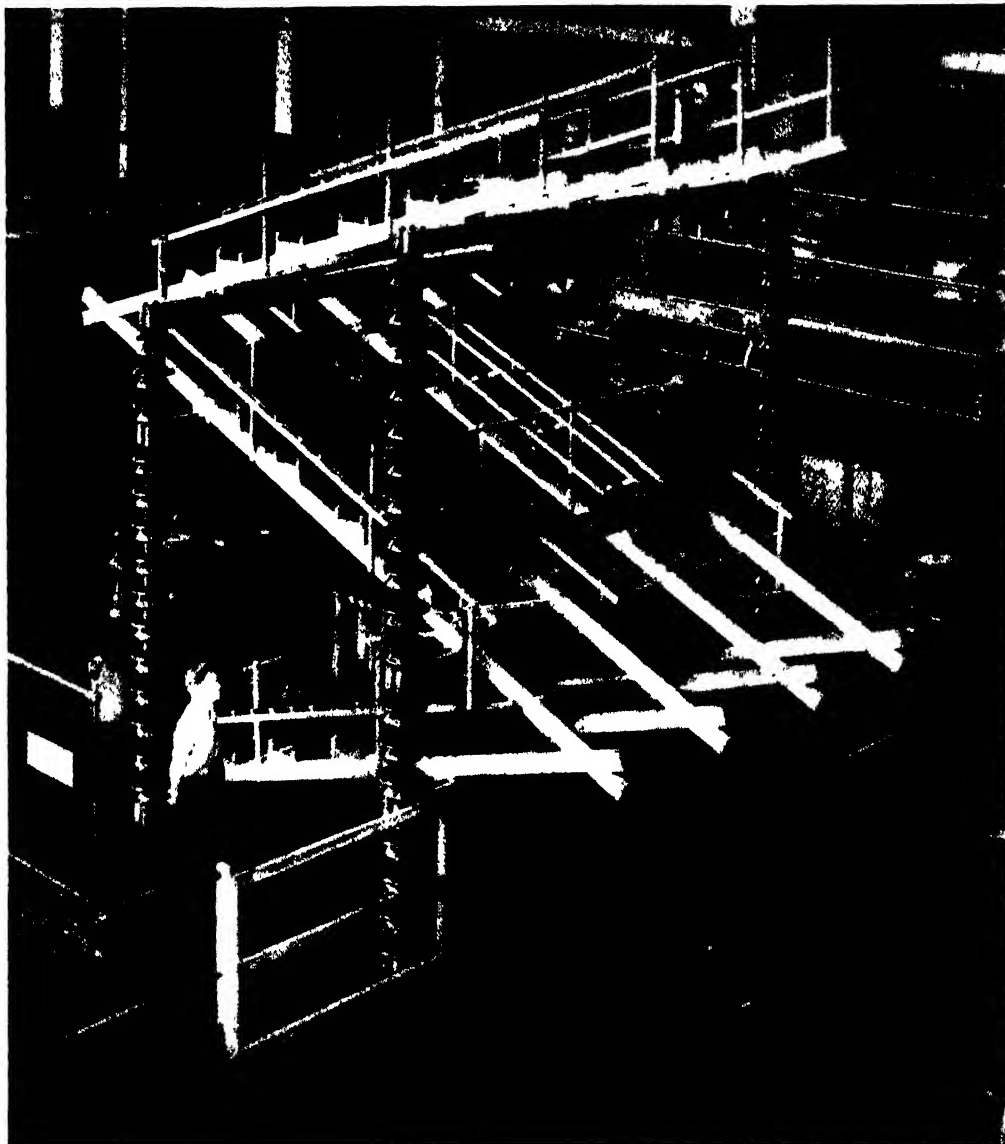
ELECTRIC LIGHT AND POWER INDUSTRY. In the year 1933 the central stations of the country had an output of 80,000,000,000 kw.-hrs. of which 59 per cent was from steam and 41 per cent from water power. The gross income was \$1,917,000,000 showing an average receipt of 2.4 cents per kw.-hr. Domestic service took 11.9 billion kw.-hr. at an average rate of 5.55 cents. Small commercial customers took 11.9 billions and the large commercial customers took 34.4 billions at an average rate of 1.36 cents. Taken as a whole the output was 3 per cent greater than in 1932 and the revenue 3.5 per cent less. There was an addition of 346,000 kw. to the plant capacity making a total of 36,200,000 kw. with a capital investment of \$12,800,000,000. The number of customers remained the same at 24,000,000 and the number of employees 237,000. Increased care reduced the rate of coal consumption from 1.51 lbs. per kw.-hr. in 1932 to 1.48 in 1933. Noteworthy new installations were: the new Port Washington Station in Milwaukee with steam at 1300 lbs. pressure and 850° F. temperature; the addition of two 160,000 kw. units to the Hudson Avenue Station of Brooklyn making it the largest station in the world at 770,000 kw. capacity; the completion of the Beauharnois Hydro Station on the St. Lawrence River with four units of 50,000 kv.-a. each, two for 60 cycles, and two for 25 cycles; the completion of the Safe Harbor Station on the Susquehanna River above Holtwood. This plant contains several 60-cycle generators driven by 42,500 h.p. propeller-type water turbines, the largest propellers of this type. It also contains the largest single-phase generator in the world, 37,500 kv.-a. at 25 cycles. This plant is also of great interest because there is under discussion a plan for pump-



Courtesy of General Electric Company

ELECTRIC TRANSPORTATION

Model of Union Pacific Stream lined Train Designed for 110 Miles per Hour with a Gas-electric Equipment

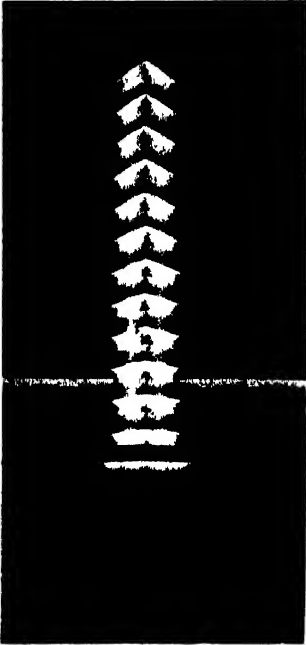


Courtesy of General Electric Company

ELECTRIC TRANSMISSION

An Electric Generator to Produce Artificial Lightning at Two Million Volts

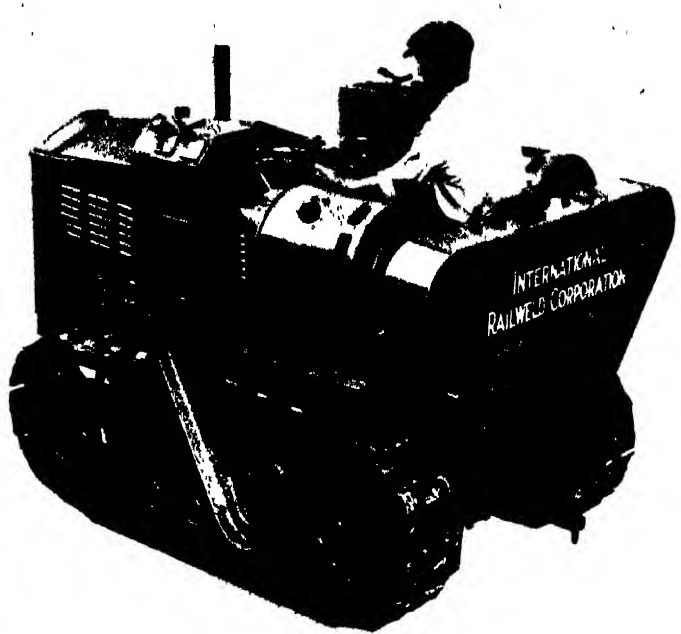
ELECTRICAL ENGINEERING



Courtesy of General Electric Company

ELECTRICAL ILLUMINATION

Illuminated Pylon at Century of Progress Exposition, Chicago, equipped with Mercury-Neon Gaseous Lamps



ELECTRICAL INDUSTRIES

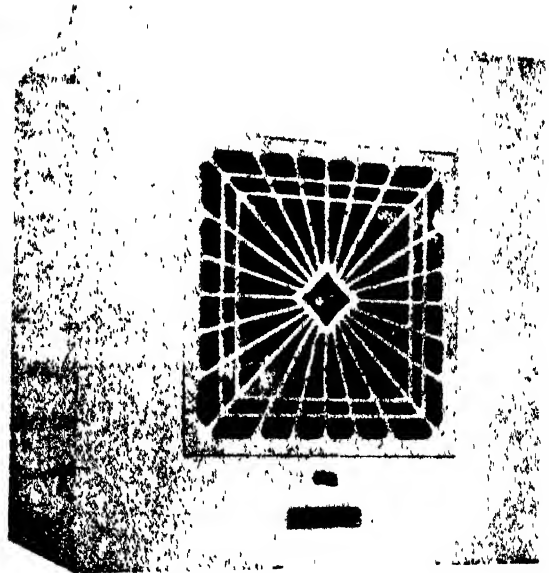
Complete Arc Welding Outfit and Control on a Self-Propelled Tractor



Courtesy of General Electric Company

ELECTRICAL ILLUMINATION

A Luminaire with Sodium Vapor Lamp for Highway Lighting



ELECTRICAL INDUSTRIES

Room Cooler with Noiseless Fan for Wall Mounting

ing water back over the dam by using the regular generators as motors and the water-wheels as pumps. This scheme is justified by the fact that the electrical capacity of the plant requires 12 times as much as the minimum flow of water. Thus, at minimum flow the plant could be operated only two hours per day unless some of the water were pumped back during slack demand.

The record for largest turbo-generator sets was again broken by the 165,000 kw. set for Philadelphia, exceeding the previous record of 160,000.

The trend in central stations has been to installations operating at 650 lbs. pressure and 850° F. temperature. The industry has acquired confidence in boilers, valves, and piping for these conditions.

There have been several interesting examples of rebuilding parts of steam stations in order to increase the efficiency and reduce the fuel costs; such as the Burlington (N. J.) Station in which a new 18,000-kv-a., 3600-r.p.m. set operating at 650 lbs. and 850° F. exhausts at 190 lbs. into three older units each of 12,500 kv-a. The new combination gives 55,000 kw. instead of 37,500 and shows a heat rate reduced from 24,000 to 15,000 B.t.u. per kw.-hr. This new 3600 r.p.m. machine is the largest capacity unit operating at 3600 r.p.m. but a 25,000 kw. at 3600 r.p.m. is now under construction. The voltage rating of alternators has been raised to 36,500 v. in a 31,250 kv-a. machine. The most sensational innovation of the year is the station at Langerbrugge, Belgium, which has a turbo-generator of 31,250 capacity, operating at 3200 lbs. steam and giving 36,000 volts.

In the electrical operation of stations the principal consideration this year has been given to improvement in operating technique and economy with particular attention to inter-connection of stations and control of energy flow. Phase shifting transformers have been introduced, notably the 100,000 kv-a. set in Chicago, by which the exchange of power between two systems may be arbitrarily and accurately controlled by a slight shift of phase between the voltages of the two systems at the point where they are interconnected. Frequency and Time Control is another subject which has received much attention. Because interconnection requires absolutely the same frequency and because the now popular electric clock requires constant frequency, devices have been developed so that the frequency does not vary more than $\frac{1}{40}$ of a cycle (in a 60-cycle system) and the cumulative error will not cause the clocks to be more than 20 seconds off. Some systems keep the error down to 3 seconds.

It is a question as to which station of a system shall control the frequency since if it is done by two stations of a system by manual operation there is liable to be misunderstanding and large surges of power. A new device puts an automatic control in each of several stations. These devices are all electrically interconnected so they all endeavor to correct the frequency at the same time and by the same amount, thus the division of load is not disturbed and the load division between stations may be arbitrarily made as desired by the power dispatcher. There have been additional instances of connecting large electrical systems together. The interconnection between the Niagara Hudson System and the United Electric Light and Power of New York City was completed with 110,000 volts from Amsterdam to Pleasant Valley, 132,000 volts from Pleasant Valley by overhead to Dunwoodie

and 132,000 volts by underground cable from Dunwoodie to Hell Gate Station. Synchronous motors are connected to the line at Pleasant Valley for voltage control. Washington, D. C., has been connected to the transmission system of the Safe Harbor Station by a tap on the 230,000-volt line between Safe Harbor and Baltimore.

There has been added to the Battersea Station of London, England, a third unit of 130,000 h.p. bringing the installed capacity up to 330,000 h.p. which gives it the greatest capacity in Europe. In this station the sum of \$1,250,000 has been spent on smoke prevention.

The scheme of interconnecting all the power stations of England, Scotland, and Wales into one high voltage network known as "The Grid" has been completed.

The Boulder Dam project is proceeding and contracts have been let for four electric generators rated at 82,500 kw. each at 180 r.p.m. and 13,800 volts and one smaller one. The orders were divided among three different manufacturers. The contract for some of the copper for the 270,000-volt transmission line to Los Angeles has also been let.

There continues to be much discussion about the other three power generation schemes of the Federal government, Tennessee Valley, St. Lawrence Waterway, and Columbia River Basin, but nothing definite has been settled as yet about the electrical equipment. The principal result has been the adverse moral effect upon those interested in the securities and management of privately owned public utilities.

The Federal government has offered to finance municipal owned electric systems by giving 30 per cent of the cost and guaranteeing the remainder. This offer has been referred to a popular vote of the citizens of many municipalities. In about one-half of the municipalities the vote was in favor of the proposition and in about one-half the majority was against municipal ownership. Birmingham, Ala., was the largest city to consider the proposition and a majority of its electorate voted against the proposal. See POWER PLANTS.

ELECTRIC TRANSMISSION AND DISTRIBUTION. A committee of the American Institute of Electrical Engineers has recommended a standard method of testing transmission lines to determine their ability to withstand strokes of lightning. By the application of a specified type of impulse voltage wave (time rate of rise, maximum value and rate of decrease) to the line or a sample of insulation and insulators under standard conditions of temperature and humidity, a measure of the strength of the insulation of the line is obtained. Another committee has prepared a set of recommendations for the requirements for the construction of steel towers for transmission lines with special reference to their mechanical reliability, strength against lightning and prevention of vibration. A new lightning generator giving 2,000,000 volts for the commercial impulse testing of transformers has been put on the market. New information on Lightning Arresters is available in the form of a questionnaire and study of methods of installation and performance illustrating present practice and trends leading toward a suggestion for standard practice.

It has been quite authoritatively established that overhead ground wires and thorough grounding of tower footings is the most reliable means of preventing damage by lightning. In this study,

with the aid of new recording devices, lightning voltages as high as 488,000 volts have been actually recorded and currents in steel towers due to lightning of from 5000 to 65,000 amperes. This is less than was previously estimated. As a result of these studies confidence is now felt that an overhead line for 400,000 volts could be built and give reliable operation and underground cable lines for 200,000 volts. At present the highest voltage for overhead lines is 230,000 volts while the Boulder Dam-Los Angeles line is planned for 270,000 volts. For transmission lines of moderate voltages such as 40,000 to 60,000 volts wooden poles are recommended because of the insulating quality of the wood.

For underground cables 132,000 volts is still the record in this country and in the last year there has been no failure in these installations. The same record of successful operation is reported for the 69,000 volt submarine cables under the Delaware River at Wilmington which have been in operation for four years and for the similar cables under the Columbia River near Portland which have been in operation two years. A new installation is that of 14 cables for 27,600 volts under the East River connecting the Brooklyn Edison System with the New York Edison System. Half of these are of the oil-filled type and half of the solid insulation type.

Because of financial conditions generally and the pressure from the public and the commissions for lower rates much attention has been given to the subject of "Costs of Electric Distribution." This item is a large one, varies greatly in different localities and is rather indefinite in its make-up. An Institute of Public Engineering was formed and devoted a meeting to this subject. At this meeting it was testified that this item of cost to domestic customers may vary between two cents and nine cents per kw.-hr. The principal factor affecting it being the density of customers or "customers per mile," and the other factor being the load factor or percentage of time the customers take power. The same subject was attacked by the technicians in an endeavor to reduce this cost by more effective methods. The radial system and the network system are the two methods attracting most attention. In the radial system (older) each group of customers is supplied by its own particular feeder line coming direct from some power source, while in the network system all customers are supplied from the same network of conductors with a multiplicity of feeders connected to the system at several strategic points.

There has been such an improvement in the science and practice of Oil Circuit Breakers that the new ones are vastly superior to the old ones. They are superior in that much less space is required, the time of operation is much reduced (complete interruption in from 3 to 6 cycles of a 60-cycle current) and they now may be reclosed automatically in a very short time, thus reducing the time-out and annoyance to customers. Furthermore, if the trouble still exists when the switch recloses it will open again, close again and repeat several times, and then if the trouble is still there the switch will remain open and give an indication at a distant control desk that it is open. On account of these advances old circuit breakers have been rebuilt and their capacity increased 300 per cent. Some of these circuit breakers operate on the "De-ion" principle and some use the high velocity forced oil jet.

On rural lines the expense of oil circuit break-

ers cannot be justified so "Reclosing Fuses" are used. An overload burns out one fuse and then the circuit is automatically switched to another fuse until a whole battery of fuses is burned out and then replacement is necessary.

Improvements in protective relays for operating oil switches consist in higher speed and improved selectivity of operation and schemes using positive, negative, or zero sequence voltages or currents and the use of communication or carrier current circuits for transmitting the signal from the relay to the device which it operates.

A new device known as a "Pilot" measures volts, amperes, watts, etc., at one place and gives an accurate indication of the results at a point as far distant as 200 miles. This is accomplished by means of a three electrode tube the grid of which is slightly energized by movements of the moving part of the indicating instrument. The amplified current of the output of this tube is carried to the distant receiving instrument.

ELECTRIC TRANSPORTATION. The Pennsylvania Railroad changed to full electrical operation for passenger trains between New York and Philadelphia on Jan. 16, 1933, and on April 9 on through to Wilmington on the south and Paoli on the western or main line division. There were placed in service twenty new single phase motor cars each equipped with two 370 h.p. motors and capable of hauling one trailer. In these motor cars it was possible, by improved design, to get more power without increasing the weight and thus power enough to pull a trailer whereas the former motor cars were designed to operate singly. The new cars have an acceleration of 1 m.p.h. per second and a maximum speed of 70 m.p.h. The Pennsylvania Railroad now has in its electric service 72 locomotives, 382 motor cars, and 1450 miles of track. The new freight locomotives weigh 305,000 lbs. of which 221,000 is on the four driving axles with four single armature motors. There have been installed two outdoor Frequency Changer Substations in Philadelphia taking power at 132,000 volts, 60 cycles, three phase, and giving 11,000 volts, 25 cycles, single phase through transformer stations 7 to 10 miles apart. In the New York Terminal the tracks have been equipped for operating trains with both direct current at 600 volts and alternating current at 11,000 volts. This caused trouble with the signal system which also uses the rails as conductors making three currents in the rails at one time or another during the day. This was overcome satisfactorily by a slight lowering of the frequency (100) of the signal currents. The locomotives also developed some mechanical troubles, reported to have been in the axles. Electric operation was suspended for a short period while this weakness was remedied and then resumed. In December the Federal government granted a loan of \$84,000,000 to the railroad of which \$34,000,000 is allotted to continue the work of electrification, particularly through from Wilmington to Washington.

In New York City operation on the new independent subway was extended to 207th Street and Broadway in Manhattan, to the Bronx via the Grand Concourse and to Brooklyn. New 3000 kw. units of mercury arc rectifiers were also put in service for supplying power. There is now 150,000 kw. capacity of this type of rectifier in service in this country. The Brooklyn Elevated has put in service an experimental articulated train of six cars with twelve 60 h.p. motors capa-

ble of giving an acceleration of 4.7 m.p.h. per second (double that previously used) and a maximum speed of 60 m.p.h. This train is designed to make a high schedule speed with stops every 1900 ft. and will carry over 600 passengers.

The Philadelphia and Reading Railroad opened service on its Chestnut Hill and Norristown branches with single-phase, 11,000-volt trains making 22 miles of additional route electrically operated.

The Union Pacific Railway and the Chicago, Burlington, and Quincy Railway have put into operation new lightweight, streamlined, 3-car articulated trains capable of making 100 m.p.h. with low power consumption due to reduced friction. They are powered by 600 h.p. internal combustion engines driving electric generators and electric motors. Air conditioning is also supplied.

In foreign countries electrification of main line railways with American designed apparatus has progressed in Poland, Belgium, and Holland. Among the trolley roads of U.S.A. there has been a considerable rehabilitation by the installation of new 50 h.p. motors of lighter weight with a new type of motor driven control consisting of brushes moved rapidly on a commutator giving a high rate of acceleration (4 m.p.h. per sec.) in 250 steps, and graduated so as not to jar the passengers. High speed is obtained by shunting the fields of the motors. The speed of the motor armatures is being increased and by this means the weight of the motor is being brought down to 12 lbs. per h.p. of rating. New quick acting but cushioning brakes have been devised using the electric eddy current principle with very simple mechanical brakes used only to hold the car when it has stopped.

Air conditioning is being installed on more and more cars; an axle driven electric generator has been developed so that any individual car of a train (i.e., dining car) may have its own conditioning and refrigerating equipment. This generator will supply sufficient power to do the equivalent cooling of $5\frac{1}{2}$ tons of ice per day. Trolley coaches, using overhead trolleys but no rails, have increased in popularity and are replacing trolley cars on rails (i.e., Indianapolis). Automotive or gas-electric trucks are now built with refrigerating equipment to transport and distribute perishable food. The refrigerating machinery derives its power from the same gas-engine which is used to drive the car.

There was developed a new means of communication between the locomotive and caboose of a long freight train using the track and an auxiliary wire carried on the telegraph poles alongside the track. Currents at 65 kilocycles are induced in the track by inductor coils carried near and just over the rails. These carrier currents are led to the auxiliary wire which is insulated from the rails for signal currents by condensers and thus the carrier currents can pass by joints for signal sections. The oscillating carrier currents are picked up by other inductors at the other end of the train and lead to a typical radio receiver. It is said to operate satisfactorily over a distance of five miles and similar sets located at a station connected to the auxiliary wire may join in the conversation and be used to give orders to the moving train.

ELECTRIFICATION. See RAILWAYS.

ELECTRONICS. See PHYSICS.

ELECTRON TUBES. See ELECTRICAL INDUSTRIES.

ELEMENTARY SCHOOLS. See EDUCATION IN THE UNITED STATES.

ELMIRA COLLEGE. An institution for the higher education of women in Elmira, N. Y., founded in 1852 and operating under its present charter since 1855. The enrollment for the autumn of 1933 was 358. There were 55 members on the faculty. The endowment of the college amounted to \$1,147,248; and the income for the year was \$315,920. There were 41,515 volumes in the library. President, Frederick Lent, Ph.D., D.D., LL.D.

EMERGENCY CONSERVATION WORK. See PARKS, NATIONAL.

EMIGRATION. See IMMIGRATION.

EMORY UNIVERSITY. An institution for higher learning in Atlanta, Ga. Coeducational only in the upper division of the college and in the graduate and professional schools (except the school of medicine), founded in 1836. The enrollment for the autumn of 1933 was 1203, distributed as follows: college of arts and sciences, 638; school of business administration, 91; graduate school, 104; school of theology, 80; school of law, 64; school of medicine, 225; library school, 21. The enrollment for the 1933 summer session was 456. The faculty numbered 261. The endowment amounted to \$5,222,821.89, and the income for the year was \$662,277.07. There were 135,000 volumes in the library. President, Harvey W. Cox, Ph.D., LL.D.

EMPLOYMENT. See UNEMPLOYMENT.

ENCEPHALITIS. See MEDICINE AND SURGERY; VETERINARY MEDICINE.

ENCYCLICALS. See ROMAN CATHOLIC CHURCH.

ENERGY. See CHEMISTRY.

ENGINEERING. See BOILERS; BRIDGES; CANALS; DAMS; DYNAMO ELECTRIC MACHINERY; FIRE PROTECTION; GARBAGE AND REFUSE DISPOSAL; PORTS AND HARBORS; RADIO COMMUNICATION; TUNNELS, ETC.

ENGINES. See INTERNAL COMBUSTION ENGINES.

ENGINES, STEAM. See STEAM TURBINES.

ENGLAND. The largest and most densely populated part of the island of Great Britain. See GREAT BRITAIN.

ENGLAND, CHURCH OF. In England that church which is established and endowed by law as the national church. Its faith is represented in the United States by the Protestant Episcopal Church (q.v.). (For details of church government, see the NEW INTERNATIONAL YEAR BOOK, 1932, page 258.) In 1932 there were 2,417,802 Easter communicants in the 43 English dioceses. Incumbents numbered 12,743 and assistant curacies, 4189. There were baptized during the year 395,326 infants and 10,743 persons of riper years. The total voluntary parochial contributions amounted to £6,309,843.

Progress was made during 1933 toward unity of action between the Anglican Communion in England and Scotland and the Presbyterian Church of England. The Lambeth Conference of 1930 invited the Church of Scotland to enter into full and unrestricted conference with the Church of England and the Episcopal Church of Scotland. Following a conference at Lambeth Palace on April 6 and 7, an interim statement was made to the Consultative Body of the Lambeth Conference and to the General Assembly of the Church of Scotland. The latter body in May approved the statement with an addition by the Rev. Archibald

Fleming, D.D. (St. Columba's, Pont Street, London) designed to make it clear to the Anglican representatives that any agreement on the orders and sacraments of the conferring churches could be based only on the recognition of the equal validity of these and of the equal standing of the accepted communicants and ordained ministers in each church. After a third conference in Edinburgh on November 24 and 25, it was decided to adjourn until February, 1934, when a meeting will be held in London to draw up a joint report.

The movement for coöperation between the Church of England and Free Churches in England also made progress. The Archbishops of Canterbury and York, at the request of the Church Assembly, constituted in 1933 a Church of England Council on Foreign Relations to survey and uphold the contacts and relations of the Church of England especially with the Roman Catholic Communion, the Eastern Orthodox Communion, the Assyrian Church, and the Communion consisting of the Coptic and Assyrian Churches, the Syrian Orthodox (Jacobite) Church, and the Protestant Evangelical Churches of the continent. In May Canon J. A. Douglas (honorary general secretary of the Council), representing the Archbishop of Canterbury, paid an official visit to His Holiness Photius the Second, the Greek Ecumenical Patriarch, at the Phanar in Istanbul and handed him an autograph letter from Dr. Lang. In the autumn there was an interchange of views between this Council and the Church of Finland.

One of the most outstanding features of religious life in 1933 was the celebration of the Centenary of the Oxford Movement. In accordance with plans made by a Committee appointed by the Archbishops of Canterbury and York the observance of the Centenary was begun on Sunday, July 6, with a general Communion throughout the world with prayer for the peace and unity of the Church. The morning service at Canterbury Cathedral, with an address by the Primate, was broadcast by the British Broadcasting Corp. The Archbishop of York preached in the morning at Christ Church, Lancaster Gate, London, and at Westminster Abbey in the afternoon.

The fifth Anglo-Catholic Congress was also held "in commemoration of the centenary of the Catholic revival" with central gatherings and a Pageant of Youth in the Royal Albert Hall, an exhibition of ecclesiastical art at the Imperial Institute, and High Mass celebrated on July 16 by the Bishop of Colombo at the White City Stadium, attended by over 45,000 people. On Friday, July 14, Holy Communion was celebrated in the quadrangle of Keble College, Oxford, followed by a visit to Pusey's grave in Christ Church Cathedral, Oxford, a sermon in Lincoln College Chapel and other observances. On Monday, July 17, after a special service in Winchester Cathedral, there was a pilgrimage to Keble's grave at Hursley.

A great deal was done during 1933 for the provision of new churches, church rooms, and mission halls in the new housing areas throughout England. The Bishop of Sheffield's appeal for 100,000 guineas for Church Extension, launched in October, 1930, was closed on October 31, the amount raised being £113,400. An appeal was launched early in 1933 by the Archbishop of York for similar work in his diocese. A number of new churches were consecrated throughout the country, and the Forty-five Churches Fund for the Diocese of London claimed to have established a record probably unparalleled in Church history

by the consecration of two churches and the foundation-stone laying of three others on five successive Saturdays, beginning October 7.

The year 1933 saw a new departure in the relation of the Church in England to the Church overseas through the publication by the Missionary Council of the Church Assembly of *With One Accord*, the Unified Statement of the Needs of the Church Overseas in the Year 1933; the first of a series of such statements. For the first time a budget was presented to the Church of England for its work overseas, and this asked for an increase of 10 per cent in the gifts of the Church for 1933 over its gifts in 1931. The Church Assembly, at its February session, recommended the Unified Statement for consideration and action to all diocesan conferences and parochial church councils on account of urgent demands for extension, especially in the direction of providing Christian education for the hundreds of thousands who are entering the church, and for the training of leaders.

Among the appointments to the Episcopate were the following: Canon C. S. Woodward as Bishop of Bristol; the Rt. Rev. H. W. K. Mowll as Archbishop of Sydney; the Rt. Rev. J. C. Roper as Archbishop of Ottawa and Metropolitan of Ontario; the Ven. Wilfrid Parker as Bishop of Pretoria; the Ven. W. Burd as Bishop of Saskatchewan; the Ven. A. L. Fleming as first Bishop of the Arctic, a new diocese, the largest created, stretching across most of Northern Canada; the Ven. Harold J. Buxton as Bishop of Gibraltar; the Ven. W. E. Flewett as Bishop of Cork; the Rt. Rev. A. B. L. Karney as Bishop of Southampton; the Ven. C. H. Ridsdale as Bishop of Colchester; and the Ven. G. H. Clayton as Bishop of Johannesburg.

The officers of the church assembly in 1931 were: chairman, the Archbishop of Canterbury; vice-chairman, the Archbishop of York; secretary, Sir Philip W. Baker-Wilbraham; assistant secretary, Guy H. Guillum Scott; chairman of the house of bishops, the Archbishop of Canterbury; chairman of the house of clergy, the Dean of Norwich; chairman of the house of laity, the Earl of Selborne. Headquarters are at 8 Dean's Yard, Westminster, S. W. 1, London.

ENGLISH LITERATURE. See LITERATURE, ENGLISH AND AMERICAN.

ENTOMOLOGY, ECONOMIC. Outstanding events in the field of applied entomology in the year 1933 included the continued devastations of grasshoppers in the Great Plains and Rocky Mountain States, the extensive outbreak of the gipsy moth in northeastern Pennsylvania, the spread of the destructive gladiolus thrips throughout the United States, and the appearance of the pink bollworm in two counties in Georgia and of the Mexican bean beetle in the St. Paul-Minneapolis district of Minnesota. The retirement of Dr. Charles L. Marlatt, Chief of the Federal Bureau of Entomology, on his seventieth birthday after 44 years of service with the Federal government, and the appointment of Mr. Lee A. Strong, Chief of the Federal Bureau of Plant Quarantine, as his successor was of particular importance.

CODLING MOTH. The infestation of the apple by the codling moth or fruit worm throughout much of the eastern and middlewestern fruit areas was the most severe of the last decade. In the Pacific Northwest the injury caused was nearly as great as that of 1932 due in part to the uncertainty as

to the spray programme and the abandonment of an increasing number of orchards.

ORIENTAL FRUIT MOTH. This moth continued to be very abundant in most of the peach growing sections of the eastern United States. In control work conducted with baits terpenyl acetate $\frac{1}{2}$ c.c. per quart in a 10 per cent solution of medium-soft brown sugar was outstanding in effectiveness. The reduction of the injury in three orchards in Georgia baited in 1933 at a cost of not more than \$3.50 per acre was 47, 77, and 78 per cent, respectively. Due to the extensive inter-orchard movement of the moths the benefits from small-scale baiting are not cumulative from year to year. In field experiments with insecticides in Indiana a partial but not commercial control was obtained without injury from the application of nicotine tannate and nicotine sulphate each used with 1 per cent of white oil emulsion. In control work with parasites nine species were introduced from Japan and liberated.

MEXICAN FRUIT FLY. The effectiveness of the intensive measures of suppression applied against the Mexican fruit fly in the Lower Rio Grande Valley of Texas in 1932 was strikingly demonstrated by the marked decrease in the number that appeared in 1933. Despite the extensive inspections made in the early part of the year no larvæ could be found in valley fruit and only six adults were caught in traps, four in Hidalgo and two in Cameron counties.

JAPANESE BEETLE. There was a striking reduction in the Japanese beetle population as compared with 1932, which year was the worst since its discovery in this country in 1916. This was particularly noticeable in the heavily infested sections of Pennsylvania. A severe drought in July, 1932 during the period when eggs were hatching appears to have been the important factor causing the reduction. An extensive section of the more recently infested area in southwestern New Jersey was, however, severely injured. The area of continuous infestation in all States at the end of the season of 1933 increased to approximately 8600 square miles from a total of some 7600 square miles of the preceding year. The effectiveness of the standard Japanese beetle trap was still further improved and its usefulness for the protection of the second crop of red raspberries and blueberries was further demonstrated. The continued spread resulted in restrictions being placed upon parts of Maine and West Virginia and a modification of the boundaries of the regulated areas in Maryland, New York, and Virginia.

EUROPEAN CORN BORER. Following the announcement of the removal of the Federal quarantine to become effective against the European corn borer regulatory action was taken by all but seven of the uninfested States and also by the partially infested State of Indiana against the two-generation infested States. Its notable increase in the western area during the season of 1932 with a corresponding heavy population of larvæ entering hibernation and successfully overwintering indicated a great increase in borers and damage in 1933. However the late spring and rain and cold of the early summer were so unfavorable to early planting that the corn was too small to attract oviposition by the emerging moths. Such oviposition as later took place came at a period of unusually hot dry weather and resulted in the destruction of many of the egg masses, with a corresponding reduction in the

damage done. In the two-generation area in the East there was a very perceptible increase in the infestation. Many small cornfields in the southern New England States suffered a complete loss of marketable ears.

CHINCH BUG. Thriving under droughty conditions the destructive chinch bug increased notably in many of the Central and Eastern States.

HESSIAN FLY. The fall and winter conditions threatened unusual damage by the Hessian fly in the wheat growing areas east of the Rocky Mountains but the drought and heat of the early summer gave effective control and prevented damage by it. The average infestation found in a survey of fields in Ohio was 8.1 per cent as compared with 35.0 per cent in 1932.

MEXICAN BEAN BEETLE. The spread of the Mexican bean beetle was less extensive than in 1932 although it appeared far to the northwest of its known distribution, in the St. Paul-Minneapolis district of Minnesota, where its eradication was attempted. It continued seriously abundant throughout most of its entire range including the New England and Middle Atlantic States. For several years its survival in the Northern States has been progressively higher with increased damage, probably owing to the milder winters which have prevailed. In the South Atlantic and South Central States it was less abundant than in the preceding year. It appeared in Florida for the first time, at Monticello. Heavy infestations occurred in Colorado and New Mexico. It is noteworthy that the pest has made practically no advance southward since its original introduction into northern Alabama in 1919.

PINK BOLLWORM. Control work with the pink bollworm was pressed with vigor in the Texas-New Mexico-Arizona area and in the infested area in Florida. No pink bollworms having been found in the cotton growing area of the Salt River Valley of Arizona surrounding Phoenix since the 1931 crop it was released on December 23 from the restrictions of the quarantine. The pest was also eliminated from seven counties of western Texas adjoining the southeastern portion of New Mexico and these counties were entirely released from quarantine regulations in the spring. On December 23 the finding of the pest in the Staked Plains Region of New Mexico and Texas made it necessary to add two counties in New Mexico and all or parts of seven counties in Texas to the regulated area. Surveys of the Florida outbreak showed this bollworm to be present in a few cotton fields in Alachua and Columbia counties near the Georgia border in addition to the infestation of wild cotton in the southern part of the State, where excellent progress was made toward its eradication. The discovery of a single specimen of this pest in Madison county, Georgia on September 22 and later of specimens in gin trash and in a field at Enigma, involving the counties of Berrien, Cook, and Tift in Georgia, led to the extension of the quarantine to this area effective December 23. The so-called roller method of sterilizing cotton lint to prevent the spread of the pest was developed and applied commercially during the year at an operating cost of one cent per bale.

MEXICAN BOLL WEEVIL. Although unusually large numbers of the boll weevil entered hibernation in the fall of 1932 and there was a large weevil survival the excessive drought and heat in June and July over much of the cotton area effectively checked weevil development. As a result

serious infestation was spotted and limited to areas of more or less localized rains. Studies covering a period of eight years demonstrated that about 65 per cent of boll weevil mortality on cotton dusted with calcium arsenate is due to the accidental ingestion of the poison while crawling on the leaves, stems, or fruit of cotton, emphasizing the importance of uniformly covering all parts of the plants with the arsenical.

THURBERIA WEEVIL. The control work with the thurberia weevil enemy of cotton progressed satisfactorily in the Santa Cruz Valley of southeastern Arizona where due to the difficulty in obtaining water for irrigation the acreage has decreased until in 1933 there were but 800 acres in cultivated cotton. Two counties and parts of three others were held under regulation. The quarantine restricting the shipment of cotton from this area was modified on October 2 to permit the shipment of cottonseed, baled cotton lint, and baled cottonseed hulls when given certain specified treatment.

GRASSHOPPER MENACE. The grasshopper infestation and resulting loss in the northern Great Plains and Rocky Mountain States was the worst in many years. The check resulting from the cold wet spring was overcome by the favorable heat and drought that followed, their activity continuing even into early October. The intensive eradication campaign conducted in Minnesota through several seasons resulted in the damage caused in that State in 1933 to be negligible. Emphasis was placed by the State and Federal Entomologists upon the importance as a means of control of plowing grain and flax stubble in grasshopper infested areas before May 15 to prevent the young hoppers from reaching the surface. A serious outbreak of grasshoppers in the three prairie provinces of Canada resulted in great damage to wheat and other crops over a wide territory.

GIPEY MOTH. The survey which followed the discovery of the infestation of the gipsy moth near Pittston in northeastern Pennsylvania in July, 1932 resulted in the determination that an area of more than 230 square miles is infested, the extreme limits still remaining to be definitely determined. Next to the infestation found in New Jersey in July, 1920 now nearly eradicated, this is the most extensive gipsy moth infestation ever discovered in the United States west of the New England States. In the old infested area in New England defoliation was more extensive than that of 1932, the total defoliated area amounting to 286,395 acres. White pine in Massachusetts suffered severely as did cranberry bogs south of Boston and on Cape Cod. As a result of the limited control work that had been carried on in the barrier zone along the eastern border of New York State and nearby New England thirty infestations were found in southwestern Massachusetts and northwestern Connecticut. In New Jersey one hundred and eleven new egg clusters were found and destroyed during the late winter and early spring in the northernmost part of the previously infested area.

GLADIOLUS THRIIPS. The gladiolus thrips has now become widespread having appeared during the year at many points in California, and continued to damage whole crops. It apparently does not overwinter out-of-doors in the North and much can be accomplished in its control by the application of naphthalene flakes to stored corms or by immersion in semesan. The thrips can be

controlled through storing the corms for three months at a room temperature of from 35° to 40° F. In the field it has been best controlled on growing plants by weekly applications of a Paris green brown sugar spray started early.

DATE SCALE ERADICATION. The work of eradicating the date scale in the Phoenix and Yuma districts of Arizona and in the Coachella and Imperial Valleys of California was continued, date palms on infested properties being dug out and destroyed.

APICULTURE. A study of the range of flight of the honey bee on a windblown prairie area in Wyoming has shown that when there is no source of food intervening it will fly a distance of 8½ miles to gather nectar and pollen although colonies lose weight when placed five miles or more from the nectar supply.

INSECTICIDES AND INSECT CONTROL. A method for the preparation of insecticidal oil emulsions in which casein-ammonia is used as the emulsifying agent was adopted by fruit growers in the Pacific Northwest, and effected considerable economy. In experiments in Michigan propylene dichloride mixture used at the rate of two pounds to 100 cubic feet of space gave a complete kill of the European corn borer naturally established in sections of corn stalks after an exposure for 24 hours at 60° to 78° F. A spray of 8 per cent miscible oil and three pounds of lye to 100 gallons of water applied to empty grain bins gave good results as a cleanup treatment for stored grain sects in Illinois. It was found in work in Georgia that worn out oils drawn from the crank cases of automobiles and tractors gave good control of the San José scale on peach trees, provided the oil was completely emulsified with calcium caseinate and the resulting emulsion fairly stable. Investigations showed that rotenone and derris root lost more than half of their toxicity during ten days' exposure to sunlight. A new insoluble nicotine insecticide that was prepared has a toxicity for the codling moth equal to that of nicotine tannate.

PARASITES AND INSECT CONTROL. Liberations in 1929 and 1930 of 85,000 adults of the tachinid fly parasite *Ohaetawrista javana* introduced from Japan resulted in a parasitism of the oriental moth in New England of 52.43 per cent in 1932-33. The chalcid *Blastothrix sericea* introduced into British Columbia in 1928 to combat *Eulecanium coryli* a scale pest accidentally introduced from Europe which attacks many kinds of trees and shrubs including roses, has resulted in practical control in the section where the original liberation of the parasite was made. The egg parasite *Trichogramma minutum* was reported as attacking the eggs of the velvet caterpillar in Louisiana in August and September as readily as it did the eggs of the sugar-cane borer or the cotton leaf worm and even without colonization was doing much to control the pest. The results of colonization of this egg parasite in sugar-cane fields of that State over a period of six years conducted at an average cost of one dollar per acre in 1932 resulted in an average saving or gain in yield of 3.28 tons per acre in that year, valued at \$29.04.

INSECT TRANSMISSION OF PLANT DISEASES. Investigations have shown that the destructive fungous of the so-called Dutch elm disease introduced into this country from Europe, having been found in Ohio and the environs of New York City, principally in northern New Jersey, is spread by the elm bark beetles *Scolytus scolytus* and

Scolytus multistriatus. Five years of investigation in New York have shown the leaf hopper *Macropsis trimaculatus* to transmit the virus of peach yellows. In Hawaii the pineapple mealy bug was found to be primarily responsible for the widespread collapse of pineapple plants due to what is known as mealy bug wilt. This mealy bug was also found to be the cause of two general types of spotting on pineapple leaves. Aphids were determined to be responsible for the transmission of several additional plant diseases including yellow dwarf disease of cultivated onions in Iowa, cucumber mosaic in Wisconsin and crinkle disease of the strawberry in Oregon.

NECROLOGY. The death of the eminent Japanese scientist Shinkai Inokichi Kuwana, Chief Entomologist for the Ministry of Agriculture and Forestry, occurred at Tokio on July 14. Mr. Fred E. Brooks, well known investigator of fruit insects for the State of West Virginia and the Federal Department of Agriculture died at French Creek, W. Va., on March 9 at the age of 65 years. Dr. Charles R. Phipps research entomologist at the Maine Agricultural Experiment Station died on June 21 at the age of 38 years.

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EQUINE ENCEPHALOMYELITIS. See VETERINARY MEDICINE.

EBITREA, ĕ-rĕ-trĕ-ă. An Italian dominion on the west coast of the Red Sea, with a coast line about 670 miles long reaching from Cape Kasar to Cape Dumeirah. Total area, 45,754 square miles; total population (1931 census), 621,776 including 4565 Italians. Asmara, the capital, had 21,601 inhabitants; Massawah, the chief trade centre, had about 15,000 inhabitants. The natives are chiefly Coptic Christians and Mohammedans. The culture of coffee, cotton, tobacco, flax, bananas, and agave (a fibre plant) has been successfully introduced. Pearl fishing is carried on at Massawah, and gold mines are worked in several localities. The local trade is almost confined to camels, oxen, sheep, goats, and their products.

Imports by land and sea in 1931 were valued at 215,042,393 lire (lira equals \$0.0526 at par); exports, 105,348,027 lire. Steamships entered Massawah in 1931 aggregated 572,742 tons. Railways extended 193 miles. The budget for 1932-33 was estimated to balance at 52,294,281 lire. In 1932 the military force consisted of 98 officers and 3611 other ranks, exclusive of the police force. Governor in 1933, Riccardo Astuto.

ESSAYS. See LITERATURE, ENGLISH AND AMERICAN; FRENCH LITERATURE; GERMAN LITERATURE; ETC.

ESTONIA. An independent republic on the eastern shore of the Baltic, established Feb. 24, 1918. Capital, Tallinn (Reval).

AREA AND POPULATION. With an area of 18,353 square miles, Estonia had a population estimated at 1,124,000 on Jan. 1, 1933. Estonians comprised 87.7 per cent of the total; Germans, 1.7

per cent; Russians and others, 10.6 per cent. The population of the chief cities was (1932); Tallinn, 134,000; Tartu (Dorpat), 72,000; Narva, 25,000; and Pärnu, 21,000. The people are predominantly Lutheran in religion.

EDUCATION. Primary education is free and compulsory. In 1930-31 there were 1261 elementary schools, with 105,414 pupils; 56 supplementary primary schools, with 1988 pupils; 50 secondary schools, with 14,409 pupils; and 57 vocational schools, with 4970 pupils. Tartu (Dorpat) University is a government institution, with 3292 students in 1931.

PRODUCTION. About 70 per cent of the population is engaged in agriculture and dairying. Cultivated land in 1932 totaled 2,549,046 acres, or 23 per cent of the total area, and was divided into some 133,360 holdings. There were 2,337,324 acres of forests, 2,249,686 acres of meadow, and 1,754,174 acres of pasture land. Yields of the chief crops in 1932, with 1931 figures in parentheses, were (in thousands of metric tons): Rye, 180.7 (147.8); winter wheat, 20.2 (18.7); summer wheat, 36.6 (38.6); barley, 101.3 (128.8); oats, 130.1 (164.0); mixed grain, 72.2 (91.9); potatoes, 782.8 (854.5); turnips, 169.7 (167.8); flax fibre, 3.8 (5.9); flax seed, 3.9 (6.4); hay, 1315.7 (1403.4). Livestock in 1932 included 692,310 cattle, 514,420 sheep, 302,890 swine, and 208,240 horses. The chief industries are textiles, paper, cement and oil shale, lumbering, woodworking, and leather. In 1933 the agricultural income was about 40 per cent of that earned in the best pre-depression year. The number of hours worked in large-scale industry declined from 53.3 millions in 1931 to 46.1 millions in 1932; wages paid were 20,100,000 Estonian crowns in 1929 and 13,800,000 crowns in 1932.

COMMERCE. The 1932 exports and imports totaled 42,571,000 crowns and 36,860,000 crowns, respectively, as compared with exports of 71,073,000 crowns and imports of 61,224,000 crowns in 1931. The decline in export values was 40.1 per cent; import values, 39.8 per cent. The chief 1932 export items were (in millions of crowns, worth \$0.268 at par): Butter, 15.5; cellulose, 5.1; meat, 2.5; sawn timber, 2.4; veneer, 2.1. Leading imports were (in millions of crowns): Cotton, 2.5; sugar, 2.1; iron and steel, 1.8; fertilizers, 1.0. Exports in 1932 went mainly to England, Germany, Finland, and France, while Germany, England, the United States, and Soviet Russia, in the order named, were the chief sources of imports. A total of 8581 tourists, including 785 Americans, visited Estonia in the summer of 1933. The decline in foreign trade during the period 1930-32 had severe repercussions on the national economy, as previously about one-third of the national production was exported. In 1933 exports were 45,557,700 and imports 39,029,900 crowns.

FINANCE. Actual returns for the fiscal year ended Mar. 31, 1933, showed governmental revenues of 66,069,000 crowns and expenditures of 66,008,000 crowns, or a surplus of 51,000 crowns. This compared with estimated revenues and expenditures of 82,456,000 crowns and 82,256,000 crowns, respectively. Actual receipts were 19.7 per cent below the estimate. The budget for 1933-34, as passed by Parliament, balanced at 61,955,000 crowns. The foreign debt on Mar. 31, 1933, was as follows: British government, £1,189,233; American government, \$17,203,743; Swedish government, 619,914 crowns; Swedish Match

Co., 7,600,000 crowns; banking and currency reform loan of 1927, £664,300 and \$3,771,500; others, £51,000.

COMMUNICATIONS. Estonian railways had 777 miles of line in 1931. In 1932 the railways carried 1,950,000 tons of freight and 8,100,000 passengers (2,550,000 tons of freight and 8,300,000 passengers in 1931). Gross receipts were 11,000,000 crowns (14,200,000 crowns in 1931). There are some 14,424 miles of highways. Foreign ships entering and clearing the ports in 1932 aggregated 1,590,000 net registered tons (1,963,000 tons in 1931).

GOVERNMENT. The constitution of Dec. 31, 1920, vested executive power in a state head or "State Elder," who also served as prime minister. He was elected by the State Assembly of 100 members, who were elected for three years by popular vote. State Head in 1933, Konstantin Päts, who was reelected Nov. 1, 1932. The composition of the State Assembly elected May 21-23, 1932, was: United Agrarian, 42; National Center, 23; Socialist, 22; National Minorities, 8; Radical Labor party, 3; Non-party, 2. For changes in 1933, see *History*.

HISTORY. Far-reaching amendments to the Constitution were adopted by the Estonian people by a vote of approximately 416,000 to 157,000 in a national referendum on Oct. 14-16, 1933. The principal amendment consolidated the executive power in the hands of a president to be elected by popular vote for a term of five years. The presidency and the premiership, formerly held by the State Head, were made separate offices. The president was invested with power to dissolve the State Assembly and the number of representatives in the assembly was reduced from 100 to 50. The vote reflected the wide-spread opposition to party politics, which had been organized by veterans of the war of 1918-20, authors of the constitutional amendments adopted. The Tõnisson Cabinet and the State Assembly had submitted proposed amendments to the Constitution to a national referendum on June 10. Their measure, providing for the popular election of a president for a term of four years, was voted down by 330,000 to 160,000. The Tõnisson Cabinet resigned the day after the October referendum. It had faced wide-spread opposition among the parties of the Left and of the Right since August 12, when it proclaimed martial law in all provinces, imposed a newspaper censorship, dissolved the Fascist, Socialist, and veterans' societies, and raided the houses of suspected conspirators against the state. There was fear of a Fascist *coup d'état*.

Pending formal inauguration of the new authoritarian régime, a transitional, non-party cabinet was formed by the State Head, Konstantin Päts. On Dec. 5, 1933, the Assembly voted to dissolve all Nazi organizations in Estonia and to suppress their party organs. The arrest of various leaders of the Nazi movement followed.

Another important development was the abandonment of the gold standard by the Estonian government on June 28. This lowered the value of the crown about 35 per cent and placed the country on a competitive basis with the free currency Scandinavian countries. At the same time the government took steps to moderate the expected increase in domestic prices. The 15 per cent foreign-exchange tax and the export premiums payable from the proceeds of this tax were discontinued, but the controls on sales of

foreign exchange were retained. In succeeding months, the wholesale commodity price index rose more rapidly than the cost-of-living index, thus creating a more favorable basis for the production of articles for export. On May 23 the State Assembly passed a law providing for the conversion of farmers' short-term private debts into a long-term debt which was transferred to the Land Bank. The creditors were paid in ten-year 4 per cent debentures. A new trade agreement with Great Britain, signed July 15, 1933, became effective July 22. A similar agreement with France, supplementary to the convention of Mar. 15, 1929, was signed in Paris, Apr. 27, 1933. On May 17 a clearing arrangement between Finland and Estonia, signed the previous day, became effective. On Nov. 15, 1933, the Estonian crown was definitely linked to the pound sterling at a selling rate of 18.35 crowns to the pound.

At the fourth unofficial economic conference of the Baltic states—Estonia, Latvia, and Lithuania—held at Riga, Latvia, Sept. 8-9, 1933, resolutions were adopted with respect to various subjects of mutual economic, financial, and political interest. See *LATVIA* under *History*. On July 3, Estonia joined with six other Eastern European and Asiatic states in signing a pact containing a definition of aggression, proposed by the Soviet Foreign Office. See *UNION OF SOVIET SOCIALIST REPUBLICS* under *History*.

ETHIOPIA (ABYSSINIA). An empire of East Africa. Capital, Addis Ababa. Emperor in 1933, Haile Selassie I.

AREA AND POPULATION. Ethiopia has an estimated area of 347,490 square miles and a population variously estimated at from 5,500,000 to 10,000,000. The Abyssinians proper, the ruling race, are Christians of Hamitic origin. They number less than 3,000,000. The Gallas, comprising two-thirds of the population, and the Somalis and Danakil are other important tribes. The chief cities, with their approximate population, are: Addis Ababa, 60,000; Dire Dawa, 30,000; Harar, 40,000.

PRODUCTION. The chief industries are agriculture and stock raising. Coffee, hides and skins, beans, flour, wax, civet, and ivory are the chief exports. Coffee is cultivated in Harar Province, eastern Ethiopia, but grows wild in the western district. Grain, cotton, sugar cane, dates, and grapes are grown for local consumption. The chief minerals found are iron ore, placer gold, potash, copper, silver, and platinum. There is almost no manufacturing.

COMMERCE. Foreign trade (imports and exports) in 1931 was valued at 1,275,295 pounds sterling. Of this about 80 per cent passed through the port of Djibouti, French Somaliland, via the Franco-Ethiopian railway to Addis Ababa. The imports were mainly cotton yarns and piece goods, rayon, corrugated iron sheets, hardware, cement, sugar, glass, and salt.

FINANCE. Government revenues are estimated in normal times at about \$5,000,000 annually, including \$1,000,000 in cash and the remainder in native produce paid as taxes in lieu of cash. The Maria Theresa silver dollar (thaler) is the only coin in most general use; bars of salt and cartridges are used as currency in sections of the country. The Bank of Abyssinia was taken over by the government in 1931 and replaced by the state Bank of Ethiopia, which has a banking monopoly.

COMMUNICATIONS. The only railway extends

from Addis Ababa to Djibouti, a distance of 488 miles. Under the Emperor Haile Selassie I about 65 miles of macadam highways and 1150 miles of dirt and gravel roads were completed up to 1932; others were under construction. There were some 1615 miles of dirt trails. Telegraph and telephone lines linked the capital with other leading cities.

GOVERNMENT. The constitution proclaimed July 16, 1931, provided for a unified state under the absolute rule of the emperor, who was to be advised by two nominated chambers. Succession to the throne was reserved to the present dynasty. All inhabitants were made equal before the law. Ethiopia joined the League of Nations Sept. 28, 1923.

HISTORY. The Emperor Haile Selassie during 1933 continued his efforts to modernize his backward kingdom. Early in the year he modified the feudal systems in the districts of Mattan and Elf. In the territory of Gojjam, where a rebellion broke out in 1932, the Emperor ordered a large-scale liberation of slaves. According to a report by Lord Noel-Buxton in the *London Times Weekly* (Nov. 30, 1933) the institution of slavery still flourished, despite the Emperor's decrees and efforts to eradicate it. As a result of raids made across the Kenya border by the Galubba tribe in 1932, the Emperor promised the Kenya government to disarm the tribe and punish the raiders. In July, 1933, two representatives of the Emperor, Ras Desta Demtu and Ato Paulos Manamano, arrived in the United States to return the visit of an American delegation to the Emperor's coronation in 1930.

ETHNOGRAPHY. See ANTHROPOLOGY.

EUROPEAN FEDERAL UNION. See UNITED STATES OF EUROPE.

EVANGELICAL CHURCH. A denomination formed by the reunion in 1922 of the Evangelical Association and the United Evangelical Church. (For historical details, see the *NEW INTERNATIONAL ENCYCLOPEDIA*, viii, page 202, and xxii, page 661.) In 1933 it had 25 conferences in the United States, two in Canada, one in Japan, three in Germany, and one in Switzerland, its membership throughout the world totaling 265,719. In the United States and Canada there were 229,814 members, enrolled in 2095 churches. Of the 2579 churches throughout the world 1913 were served by itinerant preachers and 469 by local preachers. The 2627 Sunday schools had an enrollment of 360,840. Working under the general direction of the board of missions were 1159 women's missionary societies, with a membership of 33,960. The total value of all church property in the United States and Canada was \$35,509,503, while the amount of money raised during the year was \$4,200,416.

The chief schools of the denomination are: North Central College and the Evangelical Theological Seminary at Naperville, Ill.; Western Union College at Le Mars, Iowa; Albright College and the School of Theology at Reading, Pa. It maintains also two orphanages and five old people's homes in the United States, as well as several hospitals. Official periodicals are the *Evangelical-Messenger* and *Christliche Botschafter*. A quadrennial general conference was held in Milwaukee, Wis., in 1930. All questions of law in the interval between general conference sessions are decided by the board of bishops, which in 1933 consisted of Bishops L. H. Seager, M. T. Maze, J. F. Dunlap, J. S. Stamm, G. E. Epp, and S. J.

Umbreit. Headquarters are at the Evangelical Press, 1900 Superior Avenue, Cleveland, O., and in Harrisburg, Pa.

EVANGELICAL SYNOD OF NORTH AMERICA, THE. A religious communion strictly evangelical in principle as historically crystallized from the Reformation of the sixteenth century and as embodied in the Reformed and Lutheran doctrinal statements, accepting these statements as far as they agree. When they disagree the Evangelical Synod adheres to the pertinent passages of Holy Scripture and avails itself of the liberty of conscience prevailing in the Evangelical Church. The communion was founded in 1840 at Gravois Settlement, Mo., and was consolidated in 1877 with similar communions. It is organized into 20 districts and has a synodical administration, with legislative powers vested in biennial district conferences and a quadrennial general conference. The congregations are self-governing in strictly local affairs.

The communion in 1932, had 1249 congregations, 1191 pastors, and 263,411 members, also 1167 Sunday schools with an enrollment of 214,490. Money raised by the congregations for all purposes amounted to \$4,571,317, while the total value of church property was \$33,105,699. The home mission board, which reported a total income of \$103,208, employed 109 pastors in 121 fields in the United States. The foreign mission board, which reported a total income of \$135,090, employed 33 missionaries and 333 native helpers in India and 12 missionaries in Honduras.

The denomination supports two educational institutions: Eden Theological Seminary, at Webster Groves, Mo.; and Elmhurst College, at Elmhurst, Ill. It publishes also the following periodicals: the *Evangelical Herald*; the *Tidings*; the *Light Bearer*; and *Der Friedensbote*. The Rev. C. W. Locher, D.D., has been president since 1929. Headquarters of the synodical administration and the administrative boards are at 1720 Chouteau Avenue, St. Louis, Mo.

EWART, JOHN S (KIRVING). A Canadian lawyer and publicist, died in Ottawa, Feb. 21, 1933. Born in Toronto, Aug. 11, 1859, he attended Upper Canada College and after studying law at the Osgood Hall Law School was called to the bar in 1871. He practiced in Toronto until 1882 when he removed to Winnipeg where he was made King's Counsel two years later. In the prolonged political contest over the Manitoba school question during 1890-96 Mr. Ewart represented the demand of the Roman Catholic and French-speaking minority for the repeal of the laws whereby parochial or separate schools and the official use of the French language had been abolished. After 1906 he practiced in Ottawa where most of his cases were confined to those of the highest courts, the Supreme Court of Canada and the Judicial Committee of the Privy Council. In 1910 he was chief counsel for Canada before The Hague Tribunal in reference to the North Atlantic fisheries controversy between the United States and Great Britain, which resulted in American fishermen not being permitted to enter the bays and harbors of Canada and Newfoundland for any purpose than that of shelter and repairing damages. In addition to such legal works as *Manual of Costs*, *Taylor and Ewart's Judicature Act*, and *An Exposition of the Principles of Estoppel by Misrepresentation*, Mr. Ewart published *The Kingdom of Canada and Other Essays* (1908); *Canadian Independence*

(1911); *The Kingdom Papers* (1912); and *The Roots and Causes of the War, 1914-18* (1925).

EXPLORATION. Four years of world economic depression reduced explorations and allied activities to a minimum during 1933. Asia was the field of greatest activity in exploration during the year, and there was a revival of interest in the Antarctic. The expeditions to the Arctic and Antarctic regions are discussed under the title **POLAR RESEARCH**. Anthropological and archaeological investigations are described under their separate headings.

ASIA. Soviet expeditions continued their geological and geographical researches in the little known regions of northern Asia. Another expedition of the Soviet Academy of Sciences returned in the autumn of 1933 from the Pamir-Tadzhikistan region. They explored about 100,000 square kilometers, discovering at Karamazar in northern Tadzhikistan important bismuth and radium deposits. Tin deposits were discovered on the northern Turkestan ridge and gold in the eastern Pamirs. The expedition erected a meteorological station on the Fedchenko glacier at a height of 4300 meters and climbed Stalin peak (24,384 feet), the highest peak in the Pamirs. Another Soviet expedition under the engineer Fedortsov explored the "Tas Kkayakhtakh," so-called "white spot" of Yakutia. They discovered an uncharted mountain range and located deposits of valuable minerals.

An exhaustive study of Central Asia, which threw fresh light on the history of the continent, was ended by Dr. Sven Hedin's Sino-Swedish Expedition in 1933 after six years in the field. Dr. Hedin himself returned to Central Asia toward the end of the year, after reporting on some of his discoveries in the United States. The expedition began its work with a staff of 27, 75 servants, and 300 camels. Splitting up into small units, it explored and charted a large section of Inner Mongolia and Central Asia. At the beginning of 1933 only a few units were still in the field. Early in the year Dr. Erik Norin, geologist, returned to Peiping from Northern Tibet, where he had spent the previous eight months working at an average height of 18,000 feet. He made a special study of the glaciers which during the Ice Age filled a large part of Tibet and the valleys of the Karakorum. Melting, they formed the great inland Tarim Sea, of which only a few "wandering" lakes remain.

Another member of the expedition, Dr. Folke Bergman, found numerous remains of the Han period, including more than 10,000 Han scripts inscribed 2000 years ago on wooden strips. Dr. Birger Bohlin returned to Peiping from Northwest Kansu and Koko Nor. During his three years' study he found numerous animal, fish, insect, and plant fossils formed 20,000,000 years ago in the Mesozoic period. His researches indicated that the uplifting of the great Central Asian plateau occurred in comparatively recent times. A third member to return to Peiping during 1933 was Dr. Nils Hoerner, who reported new discoveries concerning the lost city of Edsina, mentioned as a flourishing city in Marco Polo's annals.

On May 15, 1933, Dr. Norin left Peiping again to search for Dr. Nils Ambolt, geodasy expert of the expedition, who had gone into Chinese Turkestan in 1929 and failed to return. From wild Turki tribesmen of southeastern Turkestan, Dr. Norin learned that Dr. Ambolt was safe and was traveling south through Tibet to India. Dr. Ambolt reached the Indian coast safely in midsummer. On the

latter stages of his trip into Turkestan, Dr. Norin traveled by camel caravan for three weeks without meeting a human being along the northern tip of the Asai Dam, a vast region of desert and salt swamp at an elevation averaging 10,000 feet. He found wild camels, horses, and other animal life fairly plentiful. He had a narrow escape from the Turki tribesmen, who believed him to be a Russian and prepared to execute him in revenge for the activities of White Russians in Chinese employ who had suppressed Turki uprisings. Dr. Norin's return to Peiping early in December, 1933, coincided with that of Gerard Bexell, a paleontologist and last member of the Hedin group to return. Dr. Bexell had spent four years in collecting fossilized plant and animal remains in the Nan Shan range, Koko Nor, and in Kansu Province. He lost all of his personal possessions to bandits, but returned with 70 cases of fossil materials. During its years of work, the expedition studied earth movements and climatic changes, remains of ancient civilizations, rare fossil plants and animals, and the cult of lamaism. In addition it surveyed and mapped a large area.

A somewhat similar study of the geology, zoology, and geography of the Himalaya region in Northern India was carried on during 1933 by an expedition under Dr. Hellmut de Terra, of Yale University. This party, besides mapping 4600 square miles of territory, found evidence that at least part of the earth movements which raised the Himalayas to their great height occurred subsequent to prehistoric man. A lost tribe of the Reindeer Tungus was found in the Amur region and studied by Ethel Lindgren, an American scientist. The distribution of animal life in the western Chinese provinces and Tibet was studied by a group under F. T. Smith of the Field Museum, Chicago. Traces of a country which existed in the Arabian Peninsula during Babylonian times were unearthed by Dr. R. P. Dougherty of Yale University. The Gangotri glacier in the Tehri district of the Himalayas was explored by a group headed by Marco Pallis, of Liverpool.

British expeditions renewed the assault on Mount Everest during the year. The attempt by a large expedition under Hugh Rutledge to climb the peak failed, although climbers twice ascended to within 1000 feet of the 29,141-foot summit. The expedition took more than 100 porters with 14 tons of equipment and a long train of baggage animals 300 miles through rough country to the foot of Mount Everest. They successfully established camps between 18,000 and 27,400 feet, three-fourths of the party working for two weeks above 23,000 feet. Four men climbed to about 28,000 feet, only to be turned back by new snow on the sloping slabs of the couloir below the final pyramid. However the summit of Everest was flown over for the first time on April 3 by two British airplanes, the *Houston-Westland*, manned by the Marquess of Clydesdale and Col. L. V. S. Blacker, and the *Westland-Wallace*, carrying Flight Lieutenant D. F. McIntyre and S. R. Bonnett, photographer. A second flight over the peak was made April 20. Excellent photographs were obtained.

AFRICA. The little-known Auenat region of Cyrenaica was studied and surveyed by an Italian expedition, which mapped some 100,000 square miles. A party of South Africans left Cape Town in a motor caravan to explore the Kaoko Veld region of Southwest Africa, reputed to be the place where elephants betake themselves to die.

The Martin Johnsons continued their explorations in Africa, making use of airplanes. They were joined for a period during the year by F. Trubee Davison, president of the American Museum of Natural History, with his wife and four sons.

SOUTH AMERICA. The search for Col. P. W. Fawcett, the explorer who disappeared in the Brazilian wilderness in 1925, was continued during 1933 by a Swedish expedition. A party under Commander G. M. Dyott explored some of the interior valleys of Ecuador and lived for a while among the communistic Shuaros Indians. Representing the Carnegie Institution of Washington Earl Hanson traveled 20,000 miles in South America, investigating the behavior of the magnetic needle in the equatorial regions. A Brooklyn Museum Expedition under Desmond Holdridge explored and mapped some of the Amazon delta islands. Two American women, Marian Gillespie and Violet Ohlsen, traveled among the Jivaros of Ecuador. Other researches were conducted by Dr. W. A. Archer of the National Museum, Washington, in northwestern Colombia and by Amos Berg, for the Chilean government and the National Geographic Society (United States), in Patagonia.

NORTH AMERICA. A party of nine mountain climbers and geologists from the United States explored the Fairweather Range on the Alaskan coast during the summer. Three members of the party—H. Bradford Washburn Jr., Walter Everett, and Robert H. Bates—ascended to within 500 feet of the summit of Mount Crillon (12,725 feet), the highest coastal peak in the world. All nine members climbed Mount Dagelet and three other unnamed and previously unscled peaks in the range. Making an airplane flight over Yakutat Bay, they photographed the glaciers and peaks of St. Elias range and Mount Logan for the first time. The other members of the group were Charles S. Houston, William S. Child, Adams Carter, Richard P. Goldthwaite, Russel Dowie, and Howard Platts.

An air expedition led by C. J. Hubbard, Jr., explored the interior of Labrador in search of gold, but reported largely negative results. They took numerous aerial photographs of the region. The periodical epidemics among rodents of the Hudson Bay region were studied by Dr. R. G. Green of the University of Minnesota, Mrs. Green, and Dr. J. Allen, pathologist of the Province of Manitoba. The isolated Utah-Arizona border country was explored by a party under A. F. Hall, chief forester of the National Park Service, to determine whether the region should be made a national park. An expedition under R. Stuart Murray and George Witten entered the mountain region of southeastern Honduras to make anthropological and ethnological studies of the Indian tribes. Two other parties were in Honduras during the year. One under Gregory Mason, University of Pennsylvania, studied the apes of that region. The other, including W. D. Strong, Alan Paine, and Norman Haskell, of the Smithsonian Institution, searched for evidences of Mayan culture.

OTHER LANDS. In April an expedition sponsored by the American Museum of Natural History, led by Austin Rand, entered the jungles of New Guinea. In October they reported reaching Mount Albert Edward in the interior, a place never before visited by white men.

OCEANOGRAPHY. Of outstanding interest were the submarine explorations of the Sir John Murray Expedition, under Col. Seymour Sewell, which

sailed from Alexandria, Egypt, in the Egyptian government fishery vessel *Mabahiss* on September 3 and arrived in Bombay, Dec. 8, 1933. Oceanographic investigations were carried out in the Red Sea, the Gulf of Aden, the Arabian Sea southeast of Socotra, the Arabian coastal waters from the Kuria Muria Islands to Ras el Hadd, the Gulf of Oman, and that part of the Arabian Sea north of a line between Ras el Hadd and Bombay. A large area of the ocean bed was surveyed by means of an echo-sounding apparatus, which took soundings at the rate of about 27 a minute. The soundings revealed some 10 submarine ranges running across the Gulf of Aden in a northeasterly-southwesterly direction. Between India and Arabia to the south of the Makran-Baluchistan coast were found two submerged mountain chains and a raised plateau. One mountain range rose in places to a height over 10,000 feet above the general level of the ocean bottom. The expedition discovered two zones—one in the Red Sea and the other in the Gulf of Oman—in which there appeared to be little if any animal life.

Soundings in the Pacific revealed new knowledge of the contour of the ocean floor. Capt. C. B. Mayo, U.S.N., on the oil tanker *Ramapo*, obtained a sounding of 5542 fathoms near the Japanese coast 250 miles southeast of Yokohama. A greater depth has been recorded in only one place, the Emden Deep, of 5900 fathoms. Near Vancouver Island Capt. R. B. Horner, U.S.N., discovered an uncharted peak rising 1000 fathoms to within 60 feet of the surface. Another submarine peak, found 150 miles southwest of Monterey Bay, Calif., was 10 miles long and rose about 7500 feet from the ocean floor. The waters around Puerto Rico and the Virgin Islands were explored by a Smithsonian Institution party under Dr. Paul Bartsch on the yacht *Caroline*. See GEOGRAPHICAL SOCIETY, AMERICAN; GEOGRAPHIC SOCIETY, NATIONAL.

EXTRADITION. See INTERNATIONAL LAW; LAW.

EXTRAGALACTIC SYSTEMS. See ASTRONOMY.

FAILURES. See BANKS AND BANKING; BUSINESS REVIEW.

FAIRCHILD, BLAIR. An American composer, died in Paris, France, Apr. 23, 1933. He was born at Belmont, Mass., June 23, 1877, and was graduated from Harvard University in 1899. Simultaneously with his academic studies at Harvard he took courses in composition under Paine and Spalding and later studied piano with Buonamici in Florence. In 1901 he entered the diplomatic service, being successively an attaché at the American legations in Istanbul and Teheran. Influenced by the Arabic-Persian school of music, he decided to devote himself entirely to composition and in 1903 went to Paris for further study under Widor and Ganaye. Thereafter he resided alternately in Paris and New York City, and during the World War was Paris representative of the American Friends of Musicians in France.

In his compositions Fairchild incorporated many of his Eastern impressions, both as to atmosphere and musical cadence. Outstanding among these was the ballet-pantomime, *Dame Libellule*, in which on its première at the Opéra-Comique in 1921 was said to have been the first work of an American composer produced there. He wrote also the symphonic poems, *East and West*, *Zal*, and *Shah Péridouin*; *Tamineh*, a sketch

after a Persian legend, for orchestra; *Légende* and *Étude Symphonique*, for violin and orchestra; the Bible lyrics, *From the Song of Songs* and *David's Lament*, for soprano solo, chorus, and orchestra; *Six Psalms*, for soloists and chorus a cappella; *In Memoriam*, for mixed chorus a cappella; the song cycle, *Stornelli Toscani*, and such songs on Oriental themes as *A Bagdad Lover*, *Five Greek Sea Prayers*, and *Les Amours de Hafiz*; two novelettes, for string quartet; six esquisses, for violin and piano; a violin sonata; two piano trios; a piano quintet; and two fugues for organ. Among his arrangements were *Twelve Persian Folksongs*.

FALKLAND, fôk'land, **ISLANDS**. A group of British owned islands in the South Atlantic Ocean about 300 miles east of the Strait of Magellan, consisting of East Falkland, with adjacent islands, 2580 square miles; West Falkland, and adjacent islands, 2038 square miles. Total, 4618 square miles. The total area of the dependencies of the Falklands, including sea, is over 3,000,000 square miles. South Georgia, an island about 800 miles southeast of the Falkland group has an area of 1000 square miles and is the only part of the dependencies which is permanently habitable, the inhabitants being engaged in the whaling industry at Grytviken Harbor. Other dependencies are the South Shetlands, South Orkneys, Sandwich group, and Graham Land, together with all unknown seas and lands of the Antarctic Ocean extending as far as the South Pole. Population (census of 1931), 2392, exclusive of the whaling settlement of South Georgia which had 562 inhabitants including one female. Stanley, the capital and chief city, had 1213 inhabitants in 1931.

Sheep raising, whaling, and seal hunting are the principal occupations. A total of 615,766 sheep were pastured on about 2,248,000 acres of land in 1932. Imports in 1932 were valued at \$422,163; exports, \$1,895,420. In 1931 there were 165 vessels aggregating 252,974 tons that entered the harbors. Total revenue (1932), £115,909; total expenditure, £98,463; public debt—nil. A governor administers the colony assisted by an executive council of 3 official and 1 unofficial members, and a legislative council of 4 official and 2 unofficial members. Governor in 1933, Sir James O'Grady.

FAR EASTERN AREA. See SIBERIA.

FARM ACTIVITIES. See AGRICULTURE; AGRICULTURAL EXTENSION WORK; AGRICULTURE, U. S. DEPT. OF; COÖPERATION; DAIRYING; HORTICULTURE; LIVESTOCK, ETC.

FARM BOARD. See UNITED STATES.

FARM CREDIT ADMINISTRATION. See AGRICULTURE.

FARMERS' COÖPERATIVES. See COÖPERATION.

FARM LOANS. See AGRICULTURE.

FARM MORTGAGES. See IDAHO and IOWA under *Political and Other Events*; AGRICULTURE.

FARM RELIEF. See AGRICULTURE.

FARMS, FARMING. See AGRICULTURE; AGRICULTURAL EXTENSION WORK; AGRICULTURE, U. S. DEPT. OF.

FARM VALUES. See AGRICULTURE.

FARNAM, HENRY WALCOTT. An American economist, died Sept. 5, 1933, in New Haven, Conn., where he was born Nov. 6, 1853. He attended Yale University (A.B., 1874; A.M., 1876) and then studied at the Universities of Berlin, Göttingen, and Strassburg, receiving the degree

of R.P.D. (Doctor of Political Science) from the latter in 1878. After spending two years as tutor he was appointed in 1880 professor of economics at Yale College, where over a period of four decades he made his influence felt as one of the most eminent authorities on insurance and other economic problems in the United States. From 1881 to 1903 he held a corresponding chair at the Sheffield Scientific School of Yale University. He then became a collaborator in, and from 1909 to 1916 was chairman of, the department of economics and sociology of the Carnegie Institution of Washington. He was also president of the American Association for Labor Legislation during 1907-10 and of the American Economic Association during 1910-11. Appointed Roosevelt exchange professor at the University of Berlin in 1914, he was prevented from attending on account of the outbreak of the World War. He retired as professor emeritus in 1918.

A pioneer in civil service reform, Dr. Farnam served as chairman of the New Haven Civil Service Board from 1898 to 1899 and as president of the Connecticut Civil Service Association from 1901 to 1923. He was also a prohibition advocate, editing while a member of the Committee of Fifty John Koren's *Economic Aspects of the Liquor Problem* (1899). From 1887 to 1909 he was chairman of the Connecticut Commission of Sculpture. He served as associate editor of the *Yale Review* (1892-1911) and of the *Economic Review* (1911-12) and was a member of the supervising board of the *American Year Book* (1910-30). Among his works were *The Economic Utilization of History* (1913) and *Shakespeare's Economics* (1931) and, in German, *Die innere Französische Gewerbepolitik von Colbert bis Turgot* (1878); *Die Amerikanischen Gewerkschaften* (1879); and *Deutsch-Amerikanische Beziehungen in der Volkswirtschaftslehre* (1908).

FAROE, fär'ô; fär'ô, **ISLANDS**. A group of 21 islands, midway between the Shetland Islands and Iceland, owned by Denmark. Area, 540 square miles; population (1930), 24,200. Thorshavn, the capital, had 3200 inhabitants; Klaksvig, had 1409. Sheep raising and fishing are the principal occupations. Administration is under a prefect named by the King of Denmark. There is a local parliament (Lagting) of 21 elected members, which elects 1 representative to the Danish Landsting (upper chamber). The people elect 1 member to the Danish Folketing (lower chamber). The Faroe Lagting elected in January, 1932 comprised 11 unionists, 8 autonomists, 2 social democrats. Prefect in 1933, H. Ringberg.

FARRINGTON, OLIVER CUMMINGS. An American geologist, died in Chicago, Ill., Nov. 2, 1933. He was born at Brewer, Me., Oct. 9, 1864. On his graduation from the University of Maine in 1881 he taught science for several years in various Maine academies. He received his Ph.D. degree from Yale University in 1891 and two years later was appointed an assistant in the United States National Museum in Washington. In 1894 he was called to the newly-established Field Museum of Natural History in Chicago as curator of geology, building up its collection of gems, gem minerals, and meteorites during the next 40 years to one of the finest in the United States. He led several expeditions for the Field Museum, the most notable being that of 1922-23 to Brazil, whose interior was found to be rich in unworked mines of diamonds, emeralds, and topazes. From 1894 to

1904 he was also lecturer on mineralogy at the University of Chicago.

Dr. Farrington was a collaborator in the arrangement of the mines and mineralogy exhibition at the Paris Exposition of 1900 and a member of the International Jury of Awards at the Louisiana Purchase Exposition of 1904. During 1915-16 he was president of the American Association of Museums. His publications included *Gems and Gem Minerals* (1903) and *Meteorites* (1915).

FARRINGTON, WALLACE RIDER. An American publisher and ex-governor of Hawaii, died in Honolulu, Oct. 6, 1933. He was born at Orono, Me., May 3, 1871. On his graduation from the University of Maine in 1891, he started his newspaper career as a reporter on the Bangor (Me.) *Daily News*. During 1892-93 he was reporter for the *Kennebec Journal* in Augusta, Me., and in 1894 managing editor of the Rockland (Me.) *Daily Star*. In the latter year he went to Honolulu where he became editor of the *Pacific Commercial Advertiser* and president of the Hawaiian Gazette Co. From 1899 to 1912 he was editor of the *Evening Bulletin* and president of the Bulletin Publishing Co., Ltd. On the merger of this paper with the Honolulu *Star* he became vice-president and general business manager of the Honolulu Star-Bulletin, Ltd. At the time of his death he was president of the company.

Appointed governor of Hawaii by President Harding in 1921, Mr. Farrington served in that capacity, through reappointment by President Coolidge, until 1929—the only person to hold that office for two successive terms. During his administration he strove especially for racial amity in the islands. He was also an advocate of better educational opportunities for all the children of Hawaii, serving on the Territorial Board of Education and acting during 1909-11 as chairman of the Territorial School Fund Commission. He was chairman of the board of regents of the College of Hawaii and in 1932 president of the Pan-Pacific Union. As an appendix to Alexander's *History of the Hawaiian Revolution* he wrote *Review of the Revolt of 1895*.

FASCISM. Addressing the National Council of the Italian Fascist party in 1933, Mussolini declared that fascism "has ascended from the national plane to the world plane. . . ." On Oct. 27, 1933, the 11th anniversary of the Fascist march on Rome, he said: "The world of doctrines, against which . . . fascism rose is retreating and capitulating everywhere. In Italy it is now far away and obliterated even in memory." The capitulation to fascism of more than 70,000,000 persons in Germany and Austria during 1933 and its permeation into numerous other countries the world over appeared to confirm Il Duce's statements.

Before fascism's violent assaults, the principles of democracy, individual liberty, and minority rights appeared almost everywhere to be losing ground. The Communist wave, which after the World War seemed about to sweep over Europe and other parts of the world, was likewise placed on the defensive by Fascist movements which owed much of their strength to the Communist menace. The sudden upward surge of fascism during 1933 was attributed by Harold Callendar, writing in the *New York Times*, to "the inability (so far) of governments to solve the great economic problems of our time; to the industrialists' fears of socialism or communism; the desperation of the lower middle classes and farmers; the restlessness of youth, now largely

unemployed; the failure of internationalism in both the economic and the political spheres; the instinctive tendency of the masses to oversimplify all social problems, to distrust thought and scholarship as such and to demand instead action—even, or perhaps particularly, violent action."

EUROPE. Under the impulse of Fascist victories in Germany and Austria, and often aided by high-pressure Nazi propaganda, fascism made rapid strides during the year in many countries of eastern and central Europe. The dissolution of the Fascist Iron Guard association by the Rumanian government was followed by the assassination of Premier I. G. Duca by a member of the organization on December 29. The police arrested 1400 members of the Iron Guard the following day. Hungarian Fascists inaugurated anti-Semitic excesses in Budapest and Debrecen Universities in November, 1933, but the riots were ended by the police. Active Fascist movements developed among German-speaking minorities in Czechoslovakia, Switzerland, Austria, Denmark, Belgium, the Netherlands, the Saar, Danzig, and Memel. The Czechoslovak government banned the Nazi organizations on October 4 and the Dutch and Danish authorities were forced to take similar action.

Half a dozen Nazi organizations sprang up in Switzerland, but their excesses, the demonstrations by German Nazis across the border, and the report of a German military plan for the invasion of Switzerland alienated the Swiss and the Nazis lost out to the Socialists in several municipal elections. Fascism in Belgium found its main strength among the Flemish separatists. They demanded an autonomous Flanders from which Communists, Jews, and the French-speaking Walloons were to be excluded. The Austrian Nazis, swearing allegiance to Hitler and to the Anschluss movement, waged a desperate battle to overthrow Chancellor Dollfuss's newly proclaimed "Catholic fascism." At the end of the year they seemed on the verge of success. Groups allied to the German Nazis captured control of Danzig and Memel but were forced to retain representative forms of government. By a campaign of terrorism and effective propaganda, the Nazis likewise were gaining the upper hand in the Saar.

As in many other non-German countries, the Fascist agitation in Scandinavia was said to be financed and directed in large part from Germany. Under the influence of Hermann Goering, Nazi Premier of Prussia, fascism gained some strength in the southern provinces of Sweden. The movement split into pro-German and anti-German factions on the proposal to hand over the northern section of Sweden to German colonization. Former Defense Minister Vidkun Quisling headed the Norwegian National Union, a Fascist group which secured some 30,000 votes in the October parliamentary elections. The Lapuan (Fascist) movement in Finland, which in 1931 and 1932 seemed ready to overthrow the government, lost ground to the Socialists in the 1933 elections, probably due to the almost complete eradication of communism in previous years and to subsequent Fascist schisms. In the small Baltic states a vigorous Nazi propaganda was maintained. Estonia late in the year adopted a new constitution which embodied many Fascist conceptions of government. The legal abolition of the citizenship of the Jews was sought by the Latvian Nazi organization. The Lithuanian government had for several years been a dictatorship of pronounced Fascist tendencies.

While the other western European states appeared relatively less vulnerable to the Fascist attack, they were by no means immune. The National Guard, a private military organization of Fascist complexion organized in the Irish Free State, made such progress that it was banned by the De Valera government. Gen. Owen O'Duffy, leader of the movement and former chief of the Free State police, was arrested on December 17 on a charge of wearing the blue shirt emblematic of his organization. The only important Fascist movement in Great Britain was that led by Sir Oswald Mosley. His "Black Shirt" organization, moulded on the Italian model, was said to have enrolled several hundred thousand young men. In France the Camelots du Roi, a royalist organization, and several other groups perpetrated anti-Semitic acts of violence and agitated for a "totalitarian state."

THE AMERICAS. In the United States orthodox fascism made little apparent progress during 1933. The Khaki Shirts of America, led by Art J. Smith, announced from their Philadelphia headquarters a plan for a Columbus Day "march on Washington" by 1,500,000 Fascists, for the purpose of establishing President Roosevelt as a dictator. The "march" proved a fiasco. Police raided the organization's offices on October 12, arresting 25 on charges of violating the State Firearms Act, inciting to riot, and disorderly conduct. Smith, arrested four days later, was charged with converting the funds of the organization to his own uses. A more able Fascist propaganda organization was established during the year in New York under the leadership of Lawrence Dennis, a former Foreign Service officer. Meanwhile there was speculation in some quarters whether President Roosevelt's "New Deal" would not prove the precursor of a Fascist state. An investigation into Nazi propaganda in the United States was carried on by Representative Samuel Dickstein of New York. He charged that the German government had appropriated funds for the dissemination of Nazi propaganda in America.

A more pronounced trend toward fascism was noted in several Latin-American countries, where Fascist semi-military groups were organized to defend constitutional or semi-dictatorial régimes against threatened Leftist revolts. In Chile an armed civilian law enforcement organization of some 50,000 members, called the "Milicia Republicana" or "White Guard," made its appearance during the year and did much to strengthen the position of President Alessandri's constitutional government. Its leader was Eulogio Sánchez Erázuriz. Another Fascist group, which adopted the name of the German Nazis or National Socialists, was also organized in Chile. Both groups declared their support of the government and their opposition to communism. In Argentina, the Legion Civica Fascistica, uniformed in gray shirts and Sam Browne belts, enrolled more than 10,000 members to oppose the powerful Radical and Socialist parties. In August a "black shirt" Fascist organization was launched in Peru. It was reported that extensive Nazi propaganda was carried on from the various German legations and consulates in South America (*New York Times*, Jan. 30, 1934).

ASIA. Japan had several Fascist organizations which developed great strength during 1933. For a time it was feared that they would attempt a *coup d'état* against the government, but toward the end of the year their power showed strong

evidence of decline. Chief among these groups was Kenzo Adachi's National People's League, which had 33 of the 466 seats in the Lower Chamber of Parliament. In China a Fascist organization, garbed in green shirts, was organized by Marshal Chiang Kai-shek in support of his Nationalist government and to oppose the spread of communism.

For a more detailed description of Fascist movements in the various countries, see ITALY, GERMANY, AUSTRIA, RUMANIA, CZECHOSLOVAKIA, SWITZERLAND, DENMARK, BELGIUM, the NETHERLANDS, the SAAR, DANZIG, MEMEL, SWEDEN, NORWAY, FINLAND, ESTONIA, LATVIA, LITHUANIA, IRISH FREE STATE, PORTUGAL, YUGOSLAVIA, BULGARIA, ARGENTINA, CHILE, and JAPAN under *History*; COMMUNISM.

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FEDERAL ALCOHOL CONTROL BOARD. See PROHIBITION; UNITED STATES under *Administration*.

FEDERAL CAPITAL TERRITORY, AUSTRALIA. A territory of 940 square miles within the state of New South Wales, containing Canberra the capital of Australia. The population (exclusive of full-blood Australian aborigines) at the June, 1933 census, was 8947. See AUSTRALIA.

FEDERAL COUNCIL OF THE CHURCHES OF CHRIST IN AMERICA. An organization established in 1909 by 28 Protestant denominations to act for them in matters of common interest. At the end of 1933 it included most of the major Protestant denominations of the United States, as follows: Northern Baptist Convention; National Baptist Convention; Free Baptists; Seventh-Day Baptists; General Council of the Congregational and Christian Churches; Disciples of Christ; Evangelical Church; Evangelical Synod of North America; Friends; Methodist Episcopal Church; Methodist Episcopal Church, South; African Methodist Episcopal Church; African Methodist Episcopal Zion Church; Colored Methodist Episcopal Church in America; Methodist Protestant Church; Moravian Church; Presbyterian Church in the United States of America; United Brethren in Christ; United Presbyterian Church of North America; United Lutheran Church in America. Of these, all were full and official members with the exception of the United Lutheran Church, whose relationship was consultative, and the Protestant Episcopal Church, whose national council coöperates in certain specified areas of work.

In June, 1932, the United Church of Canada affiliated with the Federal Council. This was the first time that a denomination outside the United

States entered into official relationship. The total number of local churches included in the Council's constituency, according to the *Yearbook of the Churches*, 1933, was 112,915. Clergymen numbered 135,833, while the total communicant membership (persons 13 years of age or over) was 22,177,622. Coöperating with the Council were such agencies as the Home Missions Council, the Council of Women for Home Missions, the Council of Church Boards of Education, the American Bible Society, the Foreign Missions Conference of North America, and the International Council of Religious Education.

The work of the Council was carried on during 1933 by the following departments under the direction of the executive committee: Evangelism; social service; research and education; race relations; international justice and good will; relations with churches abroad; radio; and field. The official organ is the *Federal Council Bulletin*, a monthly. The department of research and education published a special study on radio broadcasting, while the department of international justice and good will issued a study course for use by young people, entitled *Men Conquer Guns*. The department of relations with churches abroad shared in the Universal Christian Council for Life and Work, held at Novi-Sad, Yugoslavia, in September, 1933.

At the Council's biennial session held in Indianapolis in 1932 the Rev. Albert W. Beaven, president of the Colgate-Rochester Divinity School, was elected president and the Rev. Lewis Seymour Mudge, stated clerk of the Presbyterian Church in the United States of America, vice-president. The general secretary is the Rev. Samuel McCrea Cavert. National offices are at 105 East Twenty-second Street, New York City. Regional offices are maintained in the Woodward Building, Washington, and at 77 West Washington Street, Chicago.

FEDERAL EMERGENCY RELIEF. See WELFARE WORK.

FEDERAL EXPENDITURE. See PUBLIC FINANCE.

FEDERAL FARM BOARD. See AGRICULTURE.

FEDERAL INCOME. See PUBLIC FINANCE.

FEDERAL RADIO COMMISSION. See TELEVISION; RADIO.

FEDERAL RESERVE BOARD. See BANKS AND BANKING.

FEDERAL TAX. See TAXATION.

FEDERATED MALAY STATES. A number of states forming a large part of the Malay Peninsula, under the protection of Great Britain. They are:

State	Sq. mi.	Pop. (1931)	Capital
Perak	7,875	765,989	Taiping
Selangor	8,195	533,197	Kuala Lumpur
Negri Sembilan	2,573	283,799	Seremban
Pahang	14,006	180,111	Pekan
Fed. Malay States	27,649	1,713,096	Kuala Lumpur

The population of the chief towns (1931 census) was: Kuala Lumpur, 111,738; Ipoh, 53,863; Taiping, 31,881; Seremban, 21,650; Klang, 20,913; Kampar, 15,301; Teluk Anson, 14,671. The 1931 population of the Federated Malay States included 443,618 Malays, 150,113 other Malaysians, 711,540 Chinese, 379,996 Indian, 6350 Europeans, and 17,222 others. Port Swettenham is the chief port. In 1931 there were 1249 schools with a total average attendance of 80,295.

PRODUCTION. The principal agricultural products are rubber, coconuts, rice, oil palms, pineapples, and tapioca. The cultivation of rubber and the mining of tin are the chief industries. Timber, gutta-percha, gums, oils, resins, and canes are products of the forests. In 1932 the production of timber, firewood, and charcoal amounted to 4,561,237, 7,348,287, and 763,863 cubic feet solid respectively.

COMMERCE AND FINANCE. Excluding bullion and specie, imports for 1932 were valued at £8,298,886 (£12,390,142 in 1931) and exports (including reexports) at £10,249,316 (£14,604,001 in 1931). Revenue in 1932 amounted to S\$43,817,151; expenditure S\$53,740,139; public debt on Jan. 1, 1933 amounted to S\$96,185,174 (Straits dollar averaged \$0.404 for 1932).

COMMUNICATIONS. Railways, which are government owned or controlled, extended 1089 miles in 1931. There were 2866 miles of surfaced highway and 152 miles of unsurfaced highway in 1932; also 1644 miles of bridle roads and paths. Shipping entered and cleared at Port Swettenham during 1932 aggregated 5,925,736 tons.

GOVERNMENT. The states are governed by the Federal Council in matters common to the four states. State councils legislate in individual state matters. The Federal Council consists of the Governor of the Straits Settlements (who is *ex-officio* High Commissioner) as President, 13 government officials, and 12 unofficial members who are nominated by the High Commissioner with the approval of the King of England. There is a native ruler, assisted by a British Resident, in each of the four states. High Commissioner in 1933, Sir Cecil Clementi. See BRITISH MALAYA.

FEISAL. King of Iraq, died at Berne, Switzerland, Sept. 8, 1933. He was born at Taif, Arabia, May 20, 1885, the third son of Hussein Ibn Ali (1856-1931), first King of the Hejaz and descendant of Fatima, daughter of the Prophet Mohammed. After being reared as a Bedouin he was taken at the age of seven to Constantinople where he was educated in private schools and served in the Ottoman Army, rising to the rank of general. He took a leading part, with his brothers Ali and Abdullah, in the Young Turk movement which led to the deposition of the Sultan, Abdul Hamid II, in 1909. During 1911-13 he commanded an Arab contingent in the operations of the Turks against the Idrisi, a religious sect which threatened to overthrow the emirate of the Hejaz, to which his father had been appointed with the title of Grand Sherif of Mecca. In 1914 he was elected to the Turkish Parliament as deputy for Jidda, identifying himself thereafter with the Arab Nationalist party which envisaged an Arab empire freed after 600 years from Turkish control.

During the early part of the World War Feisal was stationed at Damascus under the surveillance of the Turkish governor of Syria, but in 1916 he escaped to the Hejaz and assumed command of the rebels at Medina. The moving spirit behind this revolt was Col. T. E. Lawrence of the British Military Intelligence who assisted Feisal, after his initial defeat, in uniting the desert tribes into an effective army. After moving northward along the Red Sea coast for 500 miles, conquering the territory through guerrilla tactics, Feisal established his headquarters at Akaba where his army served as protection for the right wing of the Egyptian Expeditionary

Force under Allenby, enabling it to occupy Jerusalem on Dec. 9, 1917. The Arab and British armies then advanced side by side from their respective bases, entering Damascus on Oct. 3, 1918, amid the general rejoicing of the Arab population. The story of this colorful campaign was told by Colonel Lawrence in *Revolt in the Desert* (1927).

After the Armistice Feisal set up in eastern Syria a provisional military administration, and, with Colonel Lawrence, represented the Arabian cause at the Paris Peace Conference. In March, 1920, he was proclaimed King of Syria by a Syrian National Congress, but as he was unable to curb the attacks against the French mandatory power he was deposed in July by General Gouraud who had defeated the Arabs outside of Damascus. The British government, however, was willing to satisfy to a certain extent Feisal's ambition for the establishment of an Arab state and in 1921 placed him on the throne of Iraq and his brother Abdullah on that of Transjordan. Although a constitutional monarchy was established in 1923, Iraq was administered under a British mandate until its admission to the League of Nations in 1932.

In August, 1933, while on a holiday in Europe, Feisal was recalled to Iraq on account of a rebellion of the Assyrian minority. He subsequently returned to Switzerland to take a cure, but worry over his country's unsettled condition contributed to his sudden death. He was succeeded as king by his son Ghazi.

FELLOWSHIPS. See UNIVERSITIES AND COLLEGES.

FELS PLANETARIUM. See ASTRONOMY.

FENCING. Spurred on by the interest shown in the Olympics, fencing in 1933 reached its highest peak, as a sport, particularly in the United States. With more active participants than ever before and with the national outdoor championships staged as one of the attractions of the Chicago Century of Progress Exhibition, several new tournaments were introduced, including a national outdoor sabre tournament, several outdoor competitions for women, and the women's intercollegiate event.

Joseph L. Levis, representing the Boston Athletic Association, who placed second in the foils, in the 1932 Olympics, higher than any of his mates, retained his national foils title and in addition to taking this most coveted title also won the outdoor championship at Chicago. He turned back Hugh Alessandrini, of the Fencers Club, New York, and Frank S. Righeimer, Jr., of Chicago, indoors, and outdoors bested Righeimer and Miguel A. de Capriles, of the University Fencers Club, who finished second and third.

Dr. John R. Huffman, of the New York Athletic Club, also repeated as champion, retaining his national indoor sabre title, but placed second to Norman C. Armitage of the Fencers Club in the outdoor competition. Huffman, however, led the New York A. C. team to the national team title. The epee crown was won by Lieut. Gustave M. Heiss, of the U. S. Army, and Righeimer won outdoors. Heiss led the Fencers Club to the national epee team title.

New York University became the first New York institution to dominate the intercollegiate championships, held in Philadelphia. New York University took three of the team titles, foils, sabre, and three-weapon, and placed its captain, Jose R. de Capriles, as individual epee champion.

Charles Abuasheritz of Yale University captured the sabre award.

The fencing-through champion Miss Dorothy Locke, of the Salle d'Armes Vince, took the women's national indoor championship, but was topped outdoors when Miss Helene Mayer, former German and Olympic champion, who applied for United States citizenship after the 1932 Olympics, and who lives now in Los Angeles, won. Miss Locke was second. The Salle d'Armes Vince team of Miss Locke, Miss Marion Lloyd, former champion, and Miss Muriel Guggolz, won the team title. The New York University fencers also had their own way in the women's ranks, winning the team honors and the individual crown when Miss Frances Siegel won.

FERTILIZERS. The total consumption of fertilizers for the year in the United States again was considerably below normal. According to the National Fertilizer Association heavy losses were sustained by many fertilizer companies during the year. In the early part of the year fertilizers were sold at prices less than the cost of the materials of manufacture. However, the fall tonnage reflected a renewed interest on the part of farmers due to better farm products prices. It was estimated by the National Fertilizer Association that farm products prices advanced to 70 per cent of prewar and fertilizer prices to 77 per cent of prewar which was considered a favorable relationship. According to the Bureau of Chemistry and Soils the expenditures for fertilizers during the past two years decreased less than expenditures for labor, feed, or farm equipment. This was considered to indicate in general the basic importance and absolute necessity of fertilizers in maintaining soil productivity, quality of farm products, and low production costs. The tag sales in 12 Southern States for the first 11 months of the year were 16 per cent larger than for the same months of the previous year. Sales for the same 11 months period in five midwestern States were 14 per cent larger than for the first 11 months of the previous year. The October tag sales especially reflected this increase. According to the United States Department of Commerce, fertilizer consumption in Germany, where it is used more extensively than in any country of similar size or larger in the world, increased nearly 10 per cent during the year. Consumption of all fertilizers was not only well maintained, but the increase therein was notable for the first time since the beginning of the depression, especially with reference to superphosphate. The demand for superphosphate was favored by the scarcity of basic slag caused by the inactivity of the steel industry. The improved consumption was due in large degree to the measures instituted by the Reich government in connection with the fertilizer syndicates for overcoming credit difficulties resulting from the adverse financial situation of German farmers. These included the creation of a special credit guarantee fund and the granting of prior liens upon farm crops for payments due on account of fertilizer sales designed to protect fertilizer sellers against credit losses. A further factor in the fertilizer trade expansion was the growing realization by farmers that, even in the face of a depressed market for agricultural products the application of fertilizers was profitable. Official figures on Italian fertilizer consumption during the year also showed important gains in the use of all fertilizers. The production of superphosphate in Italy during the

first quarter of the year registered a gain of 62 per cent over the output for the same period of the preceding year. Phosphate exports from Tunis in northern Africa were considerably in excess of production during the first five months of the year and showed a gain of 31 per cent over the previous year. Morocco phosphate deliveries increased markedly during the first half of the year. Domestic production of superphosphate declined during the year in Great Britain as did also the imports and consumption. Spanish potash exports increased markedly during the year and phosphate rock production in Algeria, the third largest North African source of supply, netted a gain of 54,000 metric tons for the first seven months of the year over the corresponding months of the preceding year. Potash consumption was relatively well maintained in Great Britain during the year.

Owing to the continued acuteness of the competition in international trade in fertilizers and the increased necessity for retrenchment, several of the larger producers of fertilizer materials both in the United States and in foreign countries renewed reorganization and consolidation activities and several fertilizer producing nations took additional governmental action to rehabilitate and protect their industries. The Spanish Nitrogen Commission proposed that the state promote nitrogen production in sufficient quantities to supply the entire domestic demand. Under this proposal imports would be subject to control and permits would be assured only upon presentation of evidence that a proportionate quantity of national products had been previously acquired. Sales prices for imports would include a tax to compensate domestic producers. The plan also contemplated a maximum sales price equivalent to 25 per cent over the average prices prevailing in the interior of Germany, France, and Italy. If the plan should become effective the price of nitrogen to farmers would increase 65 per cent.

Reorganization of the Chilean nitrate industry was proposed in a bill submitted to the Congress by the Chilean President. This would establish a monopoly for the sale of nitrate and iodine through a single sales corporation which would acquire all stocks existing on July 1, 1933, and the subsequent output of the nitrate industry. The sales corporation would have a directorate of 12, of whom three would be appointed by the President and the remainder would be elected by the majority of producing enterprises. Stocks of nitrate now held abroad would be acquired by the sales corporation for the sum of obligations which such stocks now guarantee, the payment of which would be assumed by the corporation. The price of nitrate and iodine produced after July 1, 1933, would be its industrial cost at nitrate ports, exclusive of depreciation of machinery, the depletion of lands, and the interest and service on debts. To this cost would be added \$1.50 United States currency per metric ton subordinated to the prior service of the bonded indebtedness of the corporation. The selling corporation would fix the selling prices and the sales quotas of producers. During the year the nitrate and iodine industry was required to pay to the government the sum of 140 million pesos. After July 1, 1933, the net profits of the selling corporation would be distributed 25 per cent to the government and 75 per cent to the producers. An executive decree, dated July 31, 1933, canceled all concessions obtained from the Chilean government for the ex-

ploitation of Chilean guano deposits. This action was considered to be in line with the government's plans to establish a guano monopoly under the control of the state in order to exploit the deposits more scientifically and supply cheaper fertilizers for domestic consumption.

A price agreement, reached by the Chilean and Belgian nitrogen producers at a meeting held in August, 1933, stipulated that the price of Chilean nitrate on the Belgian market will be maintained at 12.5 francs per 100 kg. more than the official prices of Belgian ammonium sulphate.

In Japan the Department of Commerce and Industry proposed, according to the U. S. Department of Commerce, to exercise control over fertilizer materials prices and to regulate exports for the purpose of safeguarding Japanese markets abroad. Although the production of ammonium sulphate within the Japanese Empire almost trebled during the past four years the domestic supply could not meet the demand during the year and the government undertook fundamental measures to cope with the constant shortage resulting from the decrease of imports due to adverse foreign exchange and the controlled marketing policies of domestic producers. Prices fell after the government suspended the fertilizer import license system during December, 1932, but not in proportion to the decline in farm products prices. As a temporary measure the government planned to subsidize foreign imports to the extent of 20 yen per ton.

The Italian government announced the formation of a nitrogen committee under the Ministry of Corporations. The functions of the committee were outlined as (1) to ascertain periodically domestic consumptive needs for nitrogenous products; (2) to check periodically available supplies of nitrogenous products of domestic manufacture; (3) to regulate imports of foreign nitrogenous products by means of import licenses and by authorizing business firms or other bodies to buy and sell such products on terms to be established by the Committee; (4) to authorize warehousing of stocks of imported nitrogenous products; and (5) to adopt whatever measures may prove necessary to assure supplies of nitrogenous products for Italian agriculture and industry.

After more than five months of intensive work by the Fertilizer Recovery Committee of the National Fertilizer Association, the Code of Fair Competition for the fertilizer industry of the United States was approved by the National Recovery Administration and signed by the President of the United States on Oct. 31, 1933. The purpose of the Code is "to aid in eliminating from the fertilizer industry destructive and unfair methods of competition, waste, and improper practices, to place the industry upon a sounder basis, and better enable it to serve labor and agriculture by bringing about higher wages, shorter working hours, better living conditions for employees, fair prices, and high quality products for the farmer, and reasonable profit for the producers of fertilizer and to the industry generally." To further the policies of the Code a fertilizer recovery committee was designated to cooperate with the National Recovery Administration as a planning and fair practice agency for the fertilizer industry. This committee consists of not less than 12 representatives of the fertilizer industry. Three members without vote may be appointed by the President of the United States. The Code establishes minimum wage rates for fertilizer

factories by zones and also hours of labor for various conditions of production. The National Fertilizer Association pointed out that operation of fertilizer plants under the Code will add more than \$4,000,000 per year to the total payroll of the fertilizer industry. However, since labor costs represent a relatively small percentage of the cost of a ton of fertilizer the increased cost to farmers will be moderate. The Code fully recognizes the rights of farmers' cooperative organizations in their production, in their purchases of fertilizer from manufacturers, and in their sales to members, including the distribution of patronage dividends. A voluntary plan also is provided for reducing the number of grades offered for sale, through cooperation with official agricultural workers. Provision is made for conferences between control officials, agronomists, and fertilizer manufacturers in each State or zone for the purpose of deciding what grades should be offered for sale. After the list of grades is decided upon the sale or offer for sale of any additional grades is considered a violation of the Code. Unfair methods of secret rebating and other unfair business practices in the industry are prohibited by the Code. For purposes of administration the United States is divided into 12 trade zones, in each of which a fair practice and planning committee is to be set up.

The development of better methods of fertilizer production continued, and the fertilizer industry was taking advantage of these developments in spite of continued general world overproduction and low consumption. The new concentrated materials especially were being adopted. The research programme of the Bureau of Chemistry and Soils was concentrated largely on the development of promising new processes, the improvement of old methods, the investigation of promising raw materials and the determination of the properties and utility of new products suggested for fertilizer use. The Tennessee Valley Authority began the design, construction, and operation of smelters for phosphorus and potash, a research programme on the nature and behavior of fertilizers, a programme of research and development in the manufacture of fertilizers, and the maintenance and operation of Nitrate Plant No. 2 at Muscle Shoals. The position of the United States continued to improve with reference to its supply of raw materials, maintaining its independence in phosphate supplies and reaching a position in regard to nitrogen making it independent of foreign monopoly, according to the Bureau of Chemistry and Soils. The country was about 80 per cent sufficient in its domestic potash supply.

Following two years of decline, world production and consumption of nitrogen showed an upward trend during the year, according to early estimates. European countries continued to increase their facilities for the production of nitrogen. The agricultural consumption of chemical nitrogen in Germany continued to shift from the ammonia to the nitrate forms, including ammonium sulphate-nitrate. The consumption of ammonium sulphate declined to about one-third of its high level, whereas nitrate consumption trebled. To meet this demand a calcium nitrate plant was built at Merseberg and several other plants began the production of synthetic sodium nitrate. The German nitrogen industry reached a capacity to produce over one million tons annually of pure nitrogen. Ammonium sulphate consumption in Great Britain for the first six months

of the year made a new high record, representing an increase of 67 per cent, and facilities for meeting this demand were being increased. Nitro-chalk also was becoming a popular top dressing and its use and facilities for its production increased. Production of ammonium sulphate by 23 companies in Japan was slightly below the level of the previous year, but the prices secured were more favorable.

Progress continued in the development of synthetic fertilizers, especially in the United States, with reference to the fixation of atmospheric nitrogen. There were eight plants operating in the United States with an annual nitrogen capacity of some 275,000 tons according to the Bureau of Chemistry and Soils. Due to the independence of foreign nitrogen monopolies thereby gained the Bureau estimated that the saving to farmers in the cost of nitrogen in fertilizers amounted to \$125,000,000 during the period 1924-32. However, the imports of nitrogenous fertilizer materials into the United States during the first nine months of the year showed an upward trend in practically all classes, indicating a growing market.

The work of accumulating information regarding the catalysts and catalytic reactions involved in atmospheric nitrogen fixation continued. An important conclusion from the year's work was that the rate at which ammonia is formed on a catalyst depends on the rate at which nitrogen is absorbed by or reacts with the surface atoms of the iron catalyst.

Additional information was revealed concerning the physical constants of gases and fertilizer salts. In connection with the gas purification process which precedes the catalytic conversion to ammonia and byproducts the Bureau of Chemistry and Soils determined the solubility of hydrogen in water over a temperature range of from 0° to 100° C. and up to 1000 atmospheres pressure. Similar measurements were made on nitrogen from 25° to 100°. Mathematical treatment gave added importance to these compressibility data by developing precise methods for calculating quantities such as high pressure specific heats, entropies, and coefficients of expansion for both measured ranges and higher temperatures and pressures.

On the synthesis of urea from ammonia and carbon dioxide further information was obtained. This process was put into commercial operation at one plant in the country and the product was being employed in the preparation of mixed fertilizers. As a result of this process, urea is now obtainable for fertilizer purposes for about 4 cents a pound, according to the Bureau of Chemistry and Soils, whereas previously it was far too expensive for such use. Laboratory investigations by the Bureau on the conversion products obtained in the synthesis of urea furnished data indicating the conditions necessary for the separation of urea from the unconverted ammonia, carbon dioxide and other products. The relatively low vapor pressures of the mixtures with excess ammonia present and the low freezing point indicated the possibility of transporting the liquid for use in the preparation of mixed fertilizers. A solution of this character modified by the addition of water, thus further reducing the vapor pressure and freezing point, was being produced commercially for the direct ammoniation of superphosphates. The process for the treatment of peat with ammonia to form a product with a nitrogen content in some cases as high

as 20 per cent, part water soluble and part water insoluble, was developed during the year. The nitrogen content of the product increased with increased temperature of heating. A maximum nitrogen content was obtained with peat containing about 10 per cent of moisture. The product obtained possesses general physical characteristics which indicate its value as a conditioner of mixed fertilizers. The abundance and cheapness of both peat and ammonia give promise of its commercial production at a price comparable to that of organic nitrogen carriers. In connection with the fixation of nitrogen in the soil by natural agencies, information continued to accumulate regarding the properties of the nitrogen fixing enzyme present in *Azotobacter*. It was shown to be active only at a pH above about 6.0. The knowledge of the stimulating action of humates on nitrogen fixing bacteria was enlarged and new and improved methods were devised for the preparation of synthetic and natural humates containing various metals. Information accumulated on the direct combination of nitrogen and organic compounds indicating that nitrogen in an activated form combines with certain types of substances to yield a variety of highly nitrogenous bases.

The status of domestic potash materials gave promise that a serious shortage is unlikely to occur, although the United States continued to be dependent largely upon imports. Particular attention was devoted during the year to the provision of cheap potash for the Middle West and Northwest from the abundant volcanic lavas of Wyoming. Methods were under development providing means for the combination of potash and phosphates as potassium phosphate in a form which carries a low distribution charge because of its high plant food concentration. Substantial improvements were made in the processes of extracting potash from the more abundant potash materials by the application of various commercial acids. The potentialities of smelting methods applied to a mutually fluxing mixture of potash and phosphate rock were greatly enhanced by the substitution of local coals for coke heretofore considered essential to the process. Advances continued in the technology of potash recovery as a by-product of cement manufacture. It was estimated by the Bureau of Chemistry and Soils that the potash now allowed to go to waste in this industry amounts to approximately 85,000 tons of K_2O annually in normal years.

The world production and consumption of superphosphates appeared on the increase during the year. The German superphosphate industry increased its production during the year, reaching an estimated capacity of 600,000 tons. This was aided by an increased import duty of 1.5 marks per 100 kg. An extensive study of the occurrence, production, reserves, and chemical composition of phosphate rock in the United States was completed and published by the Bureau of Chemistry and Soils. Efforts were continued in the United States to develop methods for more economically converting phosphate-bearing minerals into suitable available fertilizer materials with the conservation of important by-products. The treatment of phosphate rock with phosphoric acid seemed to offer the best means of utilizing phosphoric acid produced by acid decomposition and furnace processes. The best conversion of the phosphate rock into available forms was obtained with acid containing approximately 50 to 65 per

cent H_3PO_4 . It was possible to eliminate the fluorine from phosphate rock completely by heating the rock at approximately $1400^\circ C$. in an atmosphere of steam in the presence of small quantities of silica. Removal of the fluorine resulted in the conversion of the phosphate into available forms. Improvement in blast furnace methods of phosphate smelting during the year consisted of an increase in the temperature of the hot blast of about $500^\circ F$., which resulted in a saving of fuel and reduced the cost of phosphoric acid. The Tennessee Valley Authority announced on Oct. 12, 1933, the expectation to have plans completed within three months for a phosphoric acid blast furnace to make phosphatic fertilizer on a commercial scale.

The Department of Agriculture and the State Agricultural Experiment Stations continued the experimental testing and comparison on prominent soil types of new concentrated fertilizers with fertilizers of ordinary strength. Considerable improvement occurred in the quality and mechanical properties of fertilizers, particularly those of higher analysis. In this connection the addition of dolomite to a fertilizer mixture was found to reduce its acid forming tendency and decrease its solubility. The development of the mechanical placement of fertilizers continued.

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FESTIVALS, AMERICAN AND EUROPEAN. See MUSIC.

FIELD ATHLETICS. See ATHLETICS, TRACK AND FIELD.

FIELD HOCKEY. See **HOCKEY.**

FIGUEROA, JUAN ARMADA Y LOSADA, MARQUES DE. See **SPANISH LITERATURE.**

FIGURE SKATING. See **SKATING.**

FIJI, fē'jē, ISLANDS. An archipelago of about 250 islands (80 inhabited), forming a British Crown colony, about 1100 miles north of New Zealand. The two largest islands are Viti Levu (4053 square miles) and Vanua Levu (2130 square miles). Rotuma (area 14 square miles; population about 2200), an island lying about 220 miles north of the main Fiji group, is also included in the colony. Total area, 7083 square miles; population on Jan. 1, 1932 was estimated at 185,573 including 93,414 Fijians, 76,722 Indians, 5058 Europeans, 1441 Chinese, and 8938 others. Suva, the capital, on the south coast of the island of Viti Levu, had 12,982 inhabitants in 1921, including 1741 Europeans. Government assisted schools (154) had an attendance of 12,048 students in 1931.

Bananas, coconuts, maize, sugar cane, tobacco, rice, pineapples, cotton, and timber are the main products. In 1932, imports were valued at £857,346; exports, £1,698,964, including sugar (raw) 131,302 tons valued at £1,289,239, copra totaling 15,076 tons valued at £170,240, and 340,968 bunches of bananas valued at £67,235. Total tonnage entered and cleared the ports in 1931 aggregated 1,263,772 tons. There are 300 miles of railway, including a narrow gauge railway of 120 miles from Tavua to Sigatoka. Fiji has direct cable communication with Canada, Australia, and New Zealand; and also direct wireless communication with Australia.

Government revenue was £547,461; expenditure, £528,604; public debt, £1,091,404; for 1931. The Governor, appointed by the King of England, administers the colony assisted by an executive council and by a legislative council consisting of partly nominated and partly elected European, Indian, and native members. The Governor is also High Commissioner for the British islands of the Western Pacific. Governor in 1933, Sir A. G. M. Fletcher.

FILMS. See **MOTION PICTURES.**

FINANCE. See **FINANCIAL REVIEW**; **PUBLIC FINANCE**, and sections under *Finance* in Countries and States.

FINANCIAL REVIEW. Significant alterations of far-reaching influence in their effect on private—as on public—finance were characteristic of the year 1933. The preceding twelve months had brought the community to low point of discouragement; and values generally to the bottom of their cyclical movement. At the opening of 1933, therefore, the question whether it would be possible to bring the downward movement to a close, and to initiate some upward trend was a general, if not universal, preoccupation in the American financial community. Everywhere, there was a willingness to submit to drastic measures, if only for the sake of trying an experiment, and "getting something done." It was in such a situation that the new national administration took office; and almost at once was forced to face the state of things caused by the closing of practically the entire body of banks of the United States.

The restoration of payments on the part of the banks gave to the public a fictitious confidence that something was actually being sought, or was contemplated, for their relief; and this tended, during the latter part of the month of

March, to bring about a distinct tendency for the better on the New York market, and to some extent, in the other stock markets of the United States. The better trading thus established was accompanied by larger manufacturing activity, due, in no small measure, to the exhaustion of stocks of goods throughout the country, and thus, during the late spring and early summer, there was a business boom which, in the financial field, took form partly as a larger volume of trading, and partly as a higher range of prices for stocks.

The summer boom did not last long, but was halted by the middle of August, and predictions that this recession would soon pass with the resumption of business activity after Labor Day were not verified. Recession, both in production, consumer-buying and securities-issuing and trading continued throughout the remainder of the calendar year. This reaction was variously described, and was the more regrettable because in foreign countries, and particularly in Great Britain, there appeared to be a distinct turn for the better which indicated to some observers as much as a 25 per cent recovery from the low point of the depression.

The fact that the United States, after seeming about to join the van of the recovery, had sunk back again was ascribed very generally to the adoption of the control of industry embodied in what was called the National Recovery Act adopted by Congress in May, 1933 and aiming at strict regulation of hours, wages, and trade practices. Unquestionably, the effect of this Act was to cause considerable unsettlement and uncertainty in business, and thus to bring to a standstill the beginnings of greater activity which had made their appearance as the result of the flush of hope which the community had felt with regard to national policies under the new national administration.

Whatever may have been the truth, the recession threatened to reduce both conditions in the financial market, and the volume of employment of labor, to the old level of business, and such a result was averted mainly by the adoption on the part of the government, of measures designed to bring about the distribution of immense sums of money either for public works, needless public buildings, subsidies to farmers or direct relief to needy persons. The consequences of this policy were of course to develop an immense deficit on the part of the United States Treasury, to establish an artificial and unwholesome industrial condition, and to tend to make many persons and businesses dependent upon government largesse. Nevertheless, the policy must be admitted as having tended to create at least a statistically better condition of affairs, and thus to have enabled business and finance to exhibit a better superficial appearance than they would otherwise have been able to show.

The adoption during May, of the so-called Securities Act on the part of Congress, with a view to repressing some of the grossest of the abuses from which the public had suffered during the era of dishonesty prior to 1929, however, neutralized, so far as the financial community was concerned, some of the influences otherwise likely to have made themselves felt; and, during the past six months of the year, was responsible for practically terminating the business of issuing new securities. That branch of financial business accordingly, as distinct from speculation and trading, reached low point during the year

1933; and much of the business previously transacted in the New York market returned to London, whence it had been attracted during the preceding decade.

The changes thus initiated partly through government financial policy, and partly through legislation, were consequently of the most far reaching nature so far as the ultimate development of the markets of the United States is concerned. It is, as yet, too soon to appraise with accuracy, their final results, though there can be little doubt of the nature of the trend of Stock Exchange activity. Transactions of the New York Stock Exchange for the twelve months included 604,816,452 shares of transfers of stocks as against 425,235,294 for 1932, and 526,921,426 for 1931. Total bond sales were \$3,217,566,000 as against \$2,973,725,895 in 1932 and \$3,075,347,100 the year previous. Although at times, there were trading days of great activity the business was fairly well distributed and on few occasions were there abnormal volumes of transfers. Trading as already incidentally noted, tended, to some extent, to be seasonally concentrated, but there was little overconcentration otherwise. Taking the year as a whole, there were some 75 three million share days, 52 with four millions, 34 with five millions or over, and 1 with nine million.

It was still true that a great deal of business on the exchange was of a nature that grew out of the difficulties of financial institutions. Embarrassed banks and trust companies closed at the time of the bank holiday, or in process of reorganization thereafter, found it expedient to dispose of their holdings with a view to bettering their position, and not a few from time to time, found it practically unavoidable thus to relieve themselves. On the other hand, much selling took place on behalf of foreigners who, distrusting the future monetary policy of the United States, endeavored to transfer their funds to foreign countries, as well as a good deal of selling of like sort for the account of Americans who, in similar wise, endeavored to find a supposed safety for their accumulations. The earnings of stock exchange firms were materially better than in 1932 owing to the few months of midsummer prosperity, but in many cases were far from being satisfactory.

Seats did not average so low as in the preceding year, but low point for 1933 was \$90,000 and the price did not improve as had been expected, the best value paid for the twelve-month being \$250,000. More consolidations and failures took place, and there was a distinct tendency toward shrinkage in the personnel of the brokerage community. Not a few concerns cut their staffs by serious percentages and the number of branches again underwent reduction. During mid-year there was some gain. The number of offices open at the close of the year was 1215 as against a total of 1171 at the opening of 1933.

The trend of prices on the Exchange was, generally speaking, consonant with the tendency of business change. From January to about the end of March, a period of doubt and recession coincided with the last weeks of the Hoover administration, and reflected the doubts regarding the policies of the new management, which were partly resolved by what was considered a courageous way of meeting the opening difficulties of the early weeks of March, when the banks were closed throughout the nation. Stock averages, which, at the opening of January, were 56.33 stood

at 45 three months later while bonds had indicated no tendencies of a convincing sort toward recovery.

The improvement of business-demand, and the enlargement of manufacturing partly, it seemed, for the purpose of anticipating the restrictions upon manufacturing hours and wages later to be established, gave a renewal of courage to trades, and a considerable increase of speculative demand ensued. This was intensified by the fact that the administration early committed itself to what was termed inflation, abandoned the gold standard and accepted the idea of debasement of the dollar in foreign exchange through the imposition of strict control of transfers in foreign trade and an absolute prohibition of exportation of gold. All this tended to stimulate the notion that debasement of the currency would be reflected in advances of stock prices.

It should, normally, have had a reverse effect upon bond values, but in fact the combined prices of triple "A" bonds never varied more than a few points either way. The higher values of stocks, which attained considerable proportions during midsummer, speedily fell off during the late weeks of the season and again during the autumn, so that stocks closed the year at an average of 86.02 with bonds at 73.03. The result was discouraging to the inflationist school of thought, as it proved impossible to trace a direct connection between stocks and bonds on the one hand, and inflation policies on the other.

The banking situation was favorable to stock operations during the year, and many institutions did their best to improve values by making credit as cheap as possible. The National Administration plainly favored, if it did not support, an attitude on the part of Reserve banks which was at least complaisant toward speculation, notwithstanding the threats constantly uttered against the Stock Exchange and its members.

Nevertheless, the advance of loans on securities, and particularly of brokers' loans, was slow, and at no time more than moderate. Total such loans in reporting Member banks had stood at \$3,751,000,000 at the opening of January, and at the end of December was only \$3,620,000,000. Brokers' loans, for the same periods stood at \$394,000,000 and \$801,000,000 respectively.

The advances of the Reconstruction Finance Corporation were moreover continued on an extensive basis, with new appropriations from Congress during the year, the result being to keep not a few enterprises from financial embarrassment. At no time, did there appear to be any lack of stock exchange credit or any high charge for it, so that from this side the year was favorable to a broadening of operations. It was, however, evident, throughout, that the general public was still reluctant to engage in open market operations, believing as it did that it had not been fairly treated during the new era period of manipulation prior to 1929, and clearly feeling that conditions were still deeply unfavorable to the general public, owing to the doubtful character of the business situation.

The year must therefore be regarded, so far as stock exchange trading is concerned, as having been still a period of clearing-up and adjustment, rather than a time during which new positions or constructive policies were under advisement. In such circumstances profits of brokers, especially that part of their income usually derived

from the advancement of substantial sums to margin-traders was greatly reduced.

STOCK EXCHANGE AND INVESTMENT BANKING INVESTIGATION. During the year 1932, the Senate Banking Committee had undertaken some hearings intended, at first, to ascertain reasons for "short selling," and the depreciation of stock values on the New York Exchange. After the beginning of 1933, these hearings broadened considerably, and took shape as an investigation into bank manipulation, pool operations by bankers, and, to a smaller extent, transactions by corporation heads, who operated in the market on the strength of "inside" knowledge. Much time was devoted to the methods which had been employed by brokers and bankers in marking off their income tax liabilities. The outcome was a series of revelations regarding market operations by conspicuous figures which, although not particularly novel to the well-informed, advertised widely the methods that had been pursued by not a few of the more prominent men in Wall Street.

Most of what was done appeared to have the color of legality, and the single prosecution for income tax invasion that was undertaken by the government, resulted in an acquittal. However, the effect of the inquiry undoubtedly was to stimulate legislation. Among the more important results in this field, was the adoption of the so-called Securities Act, which prescribed heavy penalties for misstatement on the part of issuers of securities, and subjected the entire business of underwriting to unusual restrictions. At the same time, the Banking Act of 1933 (urged for some two years preceding as the so-called "Glass bill") was pressed forward to adoption on the strength of the disclosures developed in the investigation. The Banking Act of 1933 contained important limitations and restrictions upon the lending of Federal Reserve funds or the overengagement of member bank resources in stock exchange operations.

A final outcome of the operations of the committee in question was the naming of a commission by the Department of Commerce under instructions from the President (it was understood), charged with the mission of inquiring into what changes if any, ought to be prescribed by law in the methods actually pursued by the Stock Exchange in establishing the rules governing trading on the part of its members. The vague, and at times, alarmist, reports of the deliberations of the committee, and the forecasts of its probable investigations, while not, up to the close of the year, authenticated in any respect,

nevertheless, had an unfavorable influence upon the tone of the market, and tended to cause doubt and uncertainty on the part of many stock exchange houses who unavoidably tended to think of their business as unstable, and on the verge of attack in some unknown way at the hands of the Federal Government.

Then, too, the atmosphere of scandal and criticism which enveloped the entire financial community during much of the year, naturally reacted strongly against the restoration of any healthy or normal tone in the day-to-day trading. It was still uncertain, at the close of the year, just what concrete results would actually be produced by these investigations and by the legislation of the year in so far as directed against the exchange and its members, but there was still wanting concrete evidence of benefit.

NEW ISSUES. It was in the field of new issues that the year 1933 seemed to bring the most disastrous reaction. The Securities Act, as we have seen, had brought a feeling of apprehension and well-warranted doubt on the part of bankers, and underwriters, which doubtless had a powerful effect against any real rejuvenation of the market. What was more influential probably, however, was the fact that business conditions remained so unsettled, due to the interference of the government under its National Recovery Programme that the offering of new issues with any assurance of favorable reception, was open to the greatest doubt. Accordingly, the new issue business, already at low ebb during the final months of the Hoover régime, tended still lower from and after the first months of 1933, and touched the lowest level yet attained toward the close of the year.

Even the satisfactory flotation of refunding issues, on behalf of unquestionably solvent concerns was exceptionally difficult. Government financing tended more and more to occupy the attention of the banking and financial communities; and, due to the indisposition of the Treasury to undertake any thorough refunding programme, most such issues were made on a short-term basis, and were dumped directly into the banks. The result was to cut off a good deal of private financing that would otherwise have been needful, the various concerns getting their supplies for the Treasury through the Reconstruction Finance Corporation, while the Treasury sold government notes and bonds to supply the need. Thus, much ordinarily private financing passed into the hands of Reserve banks as Treasury issues.

MOVEMENT OF GOLD. The year 1933 was an un-

SUMMARY OF NEW FINANCING
[Long-term; i. e. 1 year or more. In millions of dollars]

Year	Total domestic and foreign	Total domestic *	Domestic, new issues			Foreign, new issues	Refunding issues, domestic and foreign
			State and municipal	Bonds, notes	Corporate Stocks		
1923	4,437	4,016	1,048	1,976	659	421	682
1924	5,557	4,588	1,380	2,200	829	969	759
1925	6,201	5,125	1,352	2,452	1,158	1,076	925
1926	6,314	5,189	1,344	2,667	1,087	1,125	1,046
1927	7,556	6,219	1,475	3,183	1,474	1,337	2,220
1928	8,040	6,789	1,879	2,385	2,961	1,251	1,858
1929	10,091	9,420	1,418	2,078	5,924	671	1,422
1930	6,909	6,004	1,434	2,980	1,503	905	711
1931	3,099	2,860	1,285	1,240	311	229	949
1932	1,324	1,390	683	1,313	11	66	...
1933	581	641	352	521	60	60	...

* Includes issues of Federal land banks and Federal in intermediate credit banks, not shown separately.

Sources.—For domestic issues: Commercial and Financial Chronicle; for foreign issues (issues publicly offered) annual totals are as finally reported by Department of Commerce, while monthly figures are as compiled currently and are subject to revision.

precedented period in the history of the gold stock of the United States. For a twelvemonth the outflow and inflow of the metal had been portentous, yet at the opening of 1933 the country and the Federal Reserve system stood possessed of nearly the largest stock of gold ever held by them, respectively. Aggregate ownership of gold by the nation was fully 40 per cent of the entire monetary gold stock of the world, at the same time that the banking portfolios of the country were becoming gradually frozen. There had, moreover, sprung up a popular agitation against the gold standard, which was especially severe in the farming districts.

The new administration was strongly urged before it took office, by organizations both of business men, and of farmers, to assume a position hostile to gold, and this it undertook to do. When the bank holiday became a necessity, it was promptly extended to the Reserve banks which were authorized to refuse gold payment on their obligations and to maintain this irredeemability, even after the other banks had been nominally opened. This decision was moreover, promptly followed by the Act of June 2, which repudiated gold obligations of the United States, forbade the use of the gold clause in contracts, and made all forms of currency legal tender. It was a remarkable adoption of the idea of repudiation and abandonment of solvency as previously known. It had been preceded by a definite embargo on gold, so that movements into the country were greatly reduced, and those out of the country disappeared except so far as taken from previously earmarked funds.

Inward movement such as remained, became, to no small extent payments made for the purpose of refining, and hence subject to withdrawal, since foreign countries knowing that they could not withdraw goods freely, naturally sought to find other means of settling obligations in the United States. The habit of depositing gold and other funds in New York banks as a place of safe-keeping which had been greatly developed before 1929, and had only moderately been interfered with after that date, now became completely obsolete, and such funds began once more to flow toward London, as in past years.

Foreign countries ceased to pay debts in gold, although some of them, despite the repudiation of our own gold obligations, continued to settle their obligations in the United States at the gold equivalent of the face of the debts they had undertaken. This, for instance, was true of the French railways.

Germany and other large debtors, on the other hand, found it increasingly difficult to provide dollar exchange, and ceased to pay in gold or gold equivalent.

Practically all foreign debtors including Great Britain, which had kept up the installments on her governmental war debt, began to default, or to adopt a policy of making merely nominal settlements as a "token" of indebtedness. Others in which we possessed large corporate indebtedness, due us as in the case of various South American states, and sundry of the European nations including Germany, began to impose foreign exchange "controls," or in not a few cases, to declare moratoria or to default, without further explanation. These factors all influenced the movement of gold, and reduced the sums imported.

INTERNATIONAL BALANCE. Very great changes

CHANGES IN MONETARY GOLD STOCK
[From Federal Reserve Bulletin. In millions of dollars]

	Gold stock at end of month	Increase in stock during month	Analysis of changes Net gold import	Net release from earmark ^a	Domestic production, etc. ^b
1933					
Jan.	4,553	40.0	128 5	— 91.5 ^c	3.0
Feb.	4,380	—178.4	17.8 ^d	—178.3	—12.9
Mar.	4,282	— 97.2	— 22.1 ^d	—100.1	25.0
Apr.	4,312	29.5	— 10.0	33.7	5.7
May	4,315	3.6	— 21.1	22.1	2.6
June	4,318	2.2	— 3.2	3.5	1.9
July	4,320	2.7	— 33.9	34.5	2.1
Aug.	4,328	7.5	— 80.4	79.5	8.4
Sept.	4,324	— 3.8	— 56.7	49.3	3.6
Oct.	4,323	— 0.7	— 32.4	26.9	4.8
Nov.	4,323	.	— 1.1	0.6	0.4
Dec.	4,323	— 0.5	— 9.1	11.8	3.1
Total		—190.4	—173.7	— 58.0	41.4

^a Gold released from earmark at Federal Reserve banks less gold placed under earmark. ^b For explanation of this figure, which is derived from preceding columns, see *Bulletin* for July, p. 423. ^c Allowance has been made for gold earmarked at the Bank of England for account of the Federal Reserve Bank of New York. ^d Differs from Department of Commerce figure since \$8,900,000 declared for export on February 2nd was not actually taken from the Federal Reserve Bank of New York until March 1.

in the international trade of the United States had been developed during the years since the panic of 1929. These were partly the result of the commercial tactics of foreign countries, partly of the excessive tariff rates levied by the United States itself, partly the outcome of current monetary and banking conditions. They had caused a severe downward movement of goods imports, while on the other side, the cessation of foreign lending on a large scale, which was due to a feeling on the part of American investors that they were already too heavily committed abroad, led at the same time to a discontinuance of large portions of the export trade.

Revival of this trade upon some reasonably sound basis was accordingly a feature of the campaign of 1932, and the early months of the new administration brought many promises and forecasts of reciprocity treaties and other trade agreements. The London Economic Conference which had been set for June 12, 1933, was regarded as the date at which definite action would be taken for the purpose of assuring a better trade and tariff relationship between the United States and other nations. Meantime however, a new policy—that of commercial nationalism—had been adopted by the government of the United States, and when the London Conference reached the point at which it was prepared to take tentative action looking to some agreement, the disappointing news that the Washington authorities had concluded not to consent to monetary stabilization (which was regarded and had been announced at Washington during the spring months as a necessary prerequisite to any trade improvement) practically deferred to an indefinite future any real measures looking to commercial adjustment.

A "tariff truce" which had been concluded with Great Britain just before the London sessions, was revoked during the autumn, by the British authorities, and the close of the year found the nation further off, probably, from any definite trade accommodation than had ever before been the case. Meantime, export business had fallen to a low ebb at mid-year. The growing depreciation of the currency early in the autumn, and

throughout the latter months of the year, however, gave the temporary fillip to trade which is usually administered under such conditions. As a result, there was improvement in the statistical showing.

Moreover, the movement of capital abroad, at the instance of American owners anxious to place their funds in greater safety, took the form, in many cases, of purchases of staple goods which were shipped to foreign ports, there to be sold and placed in warehouse pending the sale for cash, which could then be placed on balance with British and other banks. This factor, coinciding with the currency depreciation, had a powerful influence in altering the apparent balance during the later months of the year, and giving a false appearance of recovery which was not merited by the actual conditions. The background of this situation, which formed the basis for developments in 1933 is afforded by the international balance sheet for 1932, which is shown in the following table.

UNITED STATES BALANCE OF INTERNATIONAL PAYMENTS IN 1932

[In millions of dollars]

Item	1931 (revised)			1932		
	Credits (ex- ports)	Debits (im- ports)	Balance	Credits (ex- ports)	Debits (im- ports)	Balance
Merchandise	2,424	2,090	+ 334	1,612	1,323	+ 289
Merchandise adjustments *	57	107	- 50	105	147	- 42
Freight and shipping	117	189	- 72	73	118	- 45
Tourist expenditures	112	568	- 456	71	446	- 375
Immigrant remittances	10	173	- 163	6	138	- 132
Charitable, educational, and other contributions .....	..	89	- 89	..	31	- 31
Interest, dividends, commissions, etc.	662	126	+ 536	461	68	+ 393
War-debt receipts	113	..	+ 113	99	..	+ 99
Government transactions, excluding war-debt receipts ...	34	134	- 100	31	101	- 70
Miscellaneous invisible items	73	16	+ 57	78	33	+ 45
Total current items *	3,602	3,442	+ 160	2,536	2,405	+ 131
Gold movements (including earmarking)	930	754	+ 176	860	871	- 11
Currency movements (net) .....	..	10	- 10	..	80	- 80
Total gold and currency movements	930	764	+ 166	860	951	- 91
Short-term capital movements * .....	..	..	- 709	..	..	- 371
Long-term capital movements *	1,520	1,302	+ 218	862	645	+ 217
Total capital movements .....	..	..	- 491	..	..	- 154
Unestimated items, errors, omissions, etc. * .....	..	..	+ 165	..	..	+ 114

* This item consists roughly of 3 parts: (1) exports and imports of goods for which data are available but not recorded in the official trade figures (e.g. ships, bunker fuel sold in the United States, silver, etc.); (2) goods whose export or import is wholly or partly omitted from official trade data (e.g. unrecorded parcel-post shipments, goods smuggled into the country, etc.); (3) corrections of certain recorded trade figures to allow for possible overvaluation (in case of goods sent on consignment) or undervaluation (in case of imports subject to ad valorem duties), uncollectible accounts, etc.

* These figures include several small items which are, strictly speaking, of a capital, rather than current, nature; for example, receipts of principal on war debt account, and unestimated portions of several items in Government transactions such as payments by the Alien Property Custodian. On the other hand, gold exports and imports, which ordinarily may be considered as current outgo or income, are classified separately because of the "noncurrent" nature of a great part of the gold exports during 1932.

* This figure represents the net change in the country's short-term position during the year. Data on gross movements are not available and would serve no particular purpose. The net change in 1932 is determined by deducting the year's decline in United States balances held abroad from the decline in foreign balances held here.

* This item takes account of all security movements between the United States and foreign countries and includes international sales and purchases of long-term issues, new underwriting, sales and purchases of properties not represented by security issues, and security transfers resulting from redemption and sinking fund operations.

* An unestimated part of this item is accounted for by the year's net change in outstanding commercial accounts abroad—presumably a net collection in 1932—of American exporters. The remainder, it must be assumed, is the net result of errors and possible omissions or duplications.

The export and import movement of the nation by months is presented in the table on page 265.

FOREIGN EXCHANGE. The extraordinary demoralization of the foreign exchange markets, which had been characteristic during 1932 had reached what seemed to be "peak" point, with the advent of the new national administration in the spring of 1933. Throughout the world, the appearance of moratoria on foreign transfers, foreign exchange controls, appropriation of all

exchange originating domestically, and in some cases the assumption by central governments of responsibility for colonial or other debts, had caused a confusion of currency values and an inability to collect, or bring home funds, admittedly due to individuals and corporations, but for the time being in foreign hands, was an outstanding factor which strengthened the demand for a settlement of international currency controversies and conditions at the London Conference.

Action on the part of the United States in abandoning the gold standard and placing an embargo on gold followed by the repudiation of gold obligations through act of Congress brought the position of the United States to an acute point before the middle of 1933, and greatly added to the confusion in foreign exchange. Inasmuch, as practically all countries save France, Holland, and Switzerland had now left the gold standard, most of the exchanges of the world were carried on between irredeemable paper currencies and

quotations assumed the erratic and unaccountable trends which in such conditions have always been manifest. The situation, during the second half of the year, began to assume difficult aspects, which suggested a possible necessity on the part of France for abandonment of the gold standard with the other gold standard countries probably following her example.

Great Britain had, early in the year, adopted a fairly definite policy of attempting to control

MERCHANDISE EXPORTS AND IMPORTS
[In millions of dollars]

Month	Merchandise exports					Merchandise imports					Excess of exports				
	1929	1930	1931	1932	1933	1929	1930	1931	1932	1933	1929	1930	1931	1932	1933
Jan. . . .	488	411	250	150	121	369	811	183	186	96	119	100	66	15	25
Feb. . . .	442	349	224	154	102	369	282	175	131	84	72	67	49	23	13
Mar. . . .	490	370	286	155	108	384	300	210	131	95	106	69	26	24	13
Apr. . . .	425	332	215	135	105	411	308	186	127	88	15	24	29	9	17
May	385	320	204	132	114	400	285	180	112	107	15	35	24	20	7
June	393	295	187	114	120	353	250	173	110	122	40	44	14	4	—
July	403	267	181	107	144	353	221	174	79	143	50	46	6	27	1
Aug. . . .	381	298	165	109	131	369	218	107	91	155	11	79	—	17	—23
Sept. . . .	437	312	180	132	160	351	226	170	98	147	86	86	10	34	13
Oct. . . .	529	327	205	153	194	391	247	169	105	151	137	80	36	48	43
Nov. . . .	442	289	194	139	184	338	204	149	104	129	104	85	44	34	56
Dec. . . .	427	275	184	132	192*	310	209	154	97	133*	117	66	30	35	59*
Year . . .	5,241	3,843	2,424	1,611	1,675*	4,399	3,061	2,091	1,323	1,449*	842	782	334	288	226*

* Preliminary.

the currencies of all countries which either possessed as their own, or were in the habit of using, British sterling as the foundation of their exchanges into a joint "sterling bloc" whose exchanges ought to move in harmony. A so-called "currency war" was threatened when the United States in October announced an intention of fixing the price of gold for itself each day and attempting to make this price effective through purchase operations in the London market. Although the amounts of gold so bought were carefully kept secret, they are well understood to have been only nominal and the chief effect of the policy was apparently that of depreciating the dollar in terms of sterling and francs still further.

As the French government fell further into arrears, with its incomes, the danger of budget difficulties, possibly resulting in gold standard abandonment, followed by further devaluation of the franc made its appearance as an eminent possibility. The complex forces thus acting upon the franc and the pound sterling sometimes offset those proceeding from the dollar variations and sometimes tended to intensify them. In the absence of information as to the sums expended, and policies definitely followed by the Bank of England and the Federal Reserve system in attempting to control foreign exchange, explanations of exchange movements are still obviously theoretical. The main currents of exchange are afforded in the table on page 266.

COMMODITY PRICES. The electoral contest of 1932 had been made to centre in the United States about the question of commodity prices and the best methods of raising them and the new administration had undertaken the definite task of restoring the price level of 1926—as frequently and positively stated by President Roosevelt in addresses to the public during the summer of 1933. Much of what was done in a monetary way was accordingly conceived with the distinct idea of acting upon the price level. The abandonment of gold was accompanied by action in Congress authorizing the President to reduce the weight of the gold dollar to an extent not greater than 50 per cent, while at the same time permission for the coinage of silver at a ratio to be named by the executive was granted, and at the same time provision was made for the issue of three billion dollars of "greenbacks," or legal tender notes.

While, up to the close of the year, none of these grants of power had been employed there was constant promise or threat of inflation, and continuous attempt to bring about artificial

increase both by monetary means and by the application of policies of reducing acreage, destroying crops, and killing animals—the products in large measure to be thrown away or distributed as charity. Notwithstanding these attempts to raise prices, the outcome was singularly unsuccessful, partly due, it would seem, to poor distribution of purchasing power, partly to inept management of the forces in operation, and partly the result of misunderstanding of currency theories and erroneous expectations of their working out.

Accordingly, the course of prices followed an uneven route, and sometimes appeared likely to register decided advance, while at others recession impended or actually took place. The net outcome was a moderate advance in wholesale quotations of possibly 15 per cent—considerably less than was witnessed in some foreign countries where no inflation methods had been resorted to. The truth was that many articles had already touched bottom in world trade, and were about ready to move upward, at least moderately.

One factor which needs to be considered in studying American prices for 1933 is the circumstance that some of the administration's policies quite notably operated to defeat others, as was the case, for instance, with the opposite effects of its inflation methods and its raising of costs under the National Recovery Plan. This opposition of policies at times was so pronounced as to give rise to widespread comment, even among those who were engaged in the management of the economic policies of the government. The end of the year found the price trend still uncertain and confused, with no definite certainty of its early destination. The net gain in the Bureau of Labor index for the year was an advance of 15 per cent as compared with a drop of four points the year before. Wheat prices stood (for No. 2 Red) at \$1.02½ in New York as against \$0.92½ a year earlier, while corn was 63½ cents against 40 cents in 1932. Cotton was .1030 cents against .0610 for middling upland at the end of 1932, while family beef closing at around \$11.50 showed a loss of about \$1.50 from twelve months earlier. Pork which had been \$14.28 at the beginning, rose to \$17.00 at the close, of 1933.

MONEY RATES. Efforts to maintain "cheap money" at reserve banks and thus to influence the general adoption of cheap money policies continued during 1933, following the programme of the preceding year, and at no time did the official rate show much correspondence with real or true rates. The latter were in fact high, and in many cases—as for instance, for loans on domestic dwellings—nearly unobtainable, even at

RANGE OF FOREIGN EXCHANGE RATES BY WEEKS IN 1933

Week ended:	London		Paris		Berlin		Sweden		Denmark		Belgium		Holland	
	High	Low	High	Low	High	Low	High	Low	High	Low	High	Low	High	Low
January 7	3.34½c	3.33%	3.91½c	3.90½	23.81c	23.76c	18.25	18.17½	17.38½	17.26½	13.86%	13.84½	30.23	40.17½
February 4	3.40	3.38%	3.90%	3.90½c	23.79	23.77	18.42	18.39	15.60½	15.17½	13.91%	13.90%	40.20	40.18%
March 4	3.47	3.40½c	3.95½	3.94½	23.95	23.93	18.49½	18.15½	15.49½	15.26½	14.10½	14.06%	40.61½	40.46½
April 1	3.43%	3.41%	3.93	3.92%	23.87	23.80	18.16½	18.09	15.34½	15.25½	13.95%	13.93	40.35½	40.28½
May 6	4.05	3.88	4.75	4.57½	28.35	27.30	20.90	20.15	17.90	17.30	16.70	16.30	48.05	46.85
June 3	4.02	3.97½	4.74½	4.65½	27.85	27.53	20.60	20.45	17.88	17.75	16.55	16.45	48.25	47.60
July 1	4.43	4.20%	5.13½	4.85%	31.12½	29.30	22.60	21.80	19.60	18.90	18.00	17.36	51.75	48.95
August 5	4.61	4.42	5.42	5.19	33.12½	31.69	23.42	22.90	20.25	19.85	19.10	18.65	55.25	54.00
September 2	4.58½	4.49½	5.70	5.54	34.50	33.70	23.55	23.25	20.35	20.10	20.20	19.80	58.35	57.10
October 7	4.80½	4.72%	6.11	5.90½	37.25	36.13	24.70	24.20	21.40	20.95	21.65	21.05	62.70	61.00
November 4	4.86½	4.72	6.11	5.82½	37.25	35.65	25.03	24.45	21.75	21.25	21.70	21.00	62.75	60.55
December 2	5.25½	5.06½	6.36	6.00½	38.25	36.70	26.85	26.35	23.25	22.77	22.05	21.60	63.60	62.50
Year's range	5.52	3.38%	6.71½	3.90½	41.22	23.25	27.95	18.04½	24.35	15.17½	23.45	13.84½	67.60	40.08

Week ended:	Italy		Spain		Austria		Czechoslovakia (dollars)		Shanghai (dollars)		India		Japan	
	High	Low	High	Low	High	Low	High	Low	High	Low	High	Low	High	Low
January 7	5.11%	5.11%	7.18½	8.15½	14.07	14.07	2.96½	2.96½	20.25	19.75	25.31%	25.18%	20.68%	20.50
February 4	5.11%	5.10%	8.20	8.19	14.10	14.10	2.96½	2.96½	20.62½	28.50	25.70	25.70	21.13½	21.06½
March 4	5.12	5.11%	8.43½	8.33	14.10	14.10	2.98%	2.97	21.50	21.12½	26.20	25.81%	21.00	20.37½
April 1	5.13	5.12%	8.45½	8.44½	14.20	14.20	2.98	2.98	21.25	21.12½	25.87½	25.75	21.43%	21.25
May 6	6.24	6.06½	10.24	10.00	15.50	15.00	3.70	3.62	26.00	25.25	30.37½	29.37½	24.37½	23.87½
June 3	6.22	6.14%	10.23	10.12	16.00	15.25	3.59	3.57	25.62½	25.12½	30.37½	30.12½	24.75	24.50
July 1	6.80	6.54%	10.80	10.43	14.75	14.25	3.91	3.74	27.50	26.12½	33.00	32.00	27.50	26.50
August 5	7.18	7.03½	11.46	11.17	15.75	15.50	4.10	4.03	28.62½	27.87½	34.12½	33.62½	27.75	26.75
September 2	7.64	7.43%	12.10	11.83	16.25	16.12½	4.33	4.24	28.87½	28.62½	34.37½	34.12½	27.06½	26.75
October 7	8.15%	7.94	13.00	12.68	17.62½	17.37½	4.63	4.52	31.12½	30.50	36.12½	35.37½	28.25	27.75
November 4	8.16%	7.90%	13.01	12.58	17.60	17.25	4.63	4.45	32.25	31.25	36.62½	35.87½	29.20	28.70
December 2	8.34	8.16%	12.88	12.69	18.00	17.75	4.72	4.63	34.25	33.37½	39.25	38.25	31.00	30.50
Year's range	8.85	5.10%	13.57	8.15½	19.25	14.00	4.94	2.96½	34.37½	17.95	40.62½	25.18%	31.75	20.18%

the time when Reserve banks were quoting 2½ per cent. The low rates thus nominally kept up did not help the business man, nor did they stimulate the offering of commercial paper for discount, but such paper notably declined in volume during the year. Rates were further cut as compared with the beginning of the year, by several of the Reserve banks, and at the close of the period had reached a level of 2 and 2½ per cent according to location.

The Reconstruction Finance Corporation, in line with the general anxiety to demonstrate the existence of low rates likewise cut its rates finally to 4½ per cent. Acceptance rates continued low and tending downward. At the end of the year, most open market rates were close to an all time low, and the government was finding it possible to borrow as low as a fraction of 1 per cent on its short paper, while the two and one-quarter one-year Treasury notes issued at the end of the year, to an amount of \$950,000,000 were generally regarded as about ½ to 1 per cent above their true market rate. The Banking Act of 1933, adopted on June 16, had prohibited the payment of interest by banks on demand deposits, and had subjected the interest on time deposits to regulation by the Federal Reserve Board which at once named 3 per cent as the prevailing official rate for such deposits.

Investment returns remained extraordinarily variable. The spring and summer months saw many bonds especially of the second and lower grades, previously quoted at merely nominal figures restored to a price level somewhat corresponding to their original real values, though in many cases still almost unprecedentedly low. High grade bonds continued to yield a low return because of the artificial demand for them created by the continued lack of confidence on the part of the public in other bonds. Banks were still reluctant to invest in a type of security from which they had already suffered so heavily and institutions which were in process of liquidation found themselves practically under the necessity of dumping many securities with bad results so far as quoted price was concerned so that the indicated yield of such issues moved higher and often maintained abnormal levels.

Receiverships were less numerous and in the case of some companies, there was a recovery of balance-sheet position which promised favorable things for bonds, but the latter usually responded only sluggishly, with the result that, in many instances, the actual incomes received by buyers were out of all reasonable proportion to the facts as to probability of continued payment. This disorganization of the investment market which was hardly relieved during the year, left the study of yields as a matter largely of speculation, and often of conjecture, owing to the large number of doubtful issues left open regarding investments, taxation, trade, and real income of corporations.

FINANCIAL SITUATION. See RAILWAYS.

FINE ARTS. See ART MUSEUMS; LITERATURE, ENGLISH AND AMERICAN; PAINTING; SCULPTURE.

FINLAND. A republic of Northern Europe, whose independence was proclaimed Dec. 6, 1917. Capital, Helsinki (Helsingfors).

AREA AND POPULATION. With a land area of 132,589 square miles (18,397 square miles of water), Finland had an estimated population on Dec. 31, 1931, of 3,697,505, compared with 3,403,487 on Dec. 31, 1921. The urban population

in 1931 totaled 707,159, or 19.13 per cent of the total. The movement of population in 1931 was: Living births, 71,866; deaths, 48,968; marriages, 23,856. Emigration in 1932 was 1161 (741 in 1931). The chief cities, with their populations at the beginning of 1932, are: Helsinki (Helsingfors), 260,838; Turku (Åbo), 67,722; Viipuri (Viborg), 59,321; Tampere (Tammerfors), 57,349. Of the 1930 population, 3,022,257 spoke Finnish and 342,916 Swedish. Both are official languages; Swedish names are given above in parentheses. Lutherans at the end of 1931 numbered 3,536,551.

EDUCATION. In 1930, illiterates comprised only 0.9 per cent of the population over 15 years of age. In 1931 there were 5217 primary schools, with 219,756 pupils, and 4608 lower elementary schools, with 108,456 pupils, in the country districts and 1396 higher elementary schools, with 42,874 pupils, in the towns. Secondary schools comprised 133 lyceums, with 39,941 pupils; 80 middle schools, with 9541 pupils; and 57 high schools for adults, with 2869 pupils. The universities at Helsinki (Finnish) and Turku (1 Finnish and 1 Swedish), enrolled 6688 students in 1932. There were in addition various teachers' training colleges, and vocational and professional institutions.

PRODUCTION. The 1930 census showed 59.6 per cent of the population engaged in agriculture and 16.8 per cent in industry, as compared with 65 and 15 per cent, respectively, in 1920. In 1929, there were 285,448 farms, with 5,411,000 acres, covering 6.5 per cent of the total land area, while forests covered 62,500,000 acres, or 73.4 per cent. The forests, chiefly pine and spruce, are the chief source of industrial wealth; 40 per cent of the forest land is state owned. Woodworking, paper, food and drink, machinery and shipbuilding, textiles, leather, clay and stone, light, and power are the chief industries, in order of value of production. The production of chemical woodpulp in 1932 was 870,000 tons (714,000 in 1931); mechanical woodpulp, 176,000 tons (212,000); paper, 335,000 tons (320,000). The gross value of industrial production declined from 13,710,000,000 marks in 1928 to 9,264,000,000 marks in 1931, but rose in 1932 to about 9,800,000,000 marks. As compared with 1931, the output of exporting industries increased about 7 per cent in 1932, while its value was raised by about 10 per cent. The boom in the export industries continued during 1933, Finland being one of the few relatively prosperous countries in a world of economic depression.

The chief crops in 1932, with 1931 figures in parentheses, were (in metric tons): Wheat, 34,300 (30,500); rye, 346,500 (315,200); barley, 174,500 (165,600); oats, 661,000 (669,700); potatoes, 1,005,600 (977,900); and hay, 2,992,400 (2,904,300). Agricultural output, 1932, was estimated at 5,000,000,000 marks (\$77,500,000 at average exchange rate); 1931, 4,400,000,000 marks.

COMMERCE. After declining from 7,001,400,000 Finnish marks in 1929 to 3,464,700,000 marks in 1931, imports rose in 1932 to 3,502,300,000 marks. Exports fell from 6,429,700,000 marks in 1929 to 4,456,700,000 marks in 1931 and then rose to 4,631,500,000 marks in 1932. The favorable trade balance was 1,129,200,000 marks in 1932 (992,000,000 in 1931). The Finnish mark equals \$0.0252 at par and exchanged at an average of \$0.0239 in 1931 and \$0.0154 in 1932. The leading

1932 exports were: Pulp and paper, 2,056,852,219 marks (1,828,009,335 in 1931); timber, 1,657,234,026 marks (1,771,941,183); animal foods, 517,074,855 marks (514,841,930). Imports in order of value were metals and manufactures of metal, colonial produce and spices, cereals, textiles, minerals and earth, chemicals, oils and fats, machinery, and spinning materials. Great Britain was Finland's chief customer in 1932, taking exports to the value of 2,156,369,595 marks (1,991,010,362 marks in 1931); the United States, Germany, and France followed in order. Germany in 1932 supplied imports to the value of 1,002,547,652 marks (1,207,402,676 marks in 1931), followed by Great Britain, Sweden, and the United States.

FINANCE. Closed accounts for 1931 showed gross revenues of 3,975,135,000 marks and gross expenditures of 4,245,600,000 marks. Actual net revenues in 1932 totaled 2,925,100,000 marks and expenditures 3,001,700,000 marks, the deficit being 76,600,000 marks, of which 42,100,000 marks was met out of the balance from previous years. The budget estimates for 1933 were: Revenue, 2,877,362,000 marks and expenditure, 2,877,336,000 marks; for 1934, preliminary government estimates were: Revenue, 3,035,600,000 marks and expenditure, 2,996,600,000 marks.

The public debt on Dec. 31, 1932, totaled 3,471,900,000 marks (foreign funded debt, 2,431,700,000; foreign floating debt, 350,900,000 marks; internal funded loans, 505,300,000 marks; internal short-term credits, 184,000,000 marks).

COMMUNICATIONS. Railways on Jan. 1, 1932, extended 3377 miles, of which all except 158 miles belonged to the state. In 1931, the state railways carried 19,624,000 passengers and 8,522,000 tons of freight; total revenues were 693,454,000 marks; expenditure 608,980,000 marks. Public highways in 1931 aggregated 31,792 miles (main roads, 16,513 miles). An important medium of transportation is the network of lakes and canals, forming 2500 miles of navigable waterways. The merchant marine on Jan. 1, 1933, included 4378 vessels of 538,315 net registered tons. Entrances in the foreign trade in 1932 numbered 8408 vessels, of 5,983,124 tons; clearances, 8519 vessels, of 6,102,135 tons.

GOVERNMENT. Executive power is vested in a president elected for six years by 300 electors, who are chosen by direct election in the same manner as members of the Diet. Legislative power rests with the unicameral Diet and the President. The President appoints the Cabinet Ministers and executive decisions are taken in the Council of State formed by the 10 Ministers, who are responsible to the Diet. Members of the Diet are elected for three years by a direct vote of all citizens over 24. President in 1933, Pehr Evind Svinhufvud, elected Feb. 16, 1931. The Cabinet formed Dec. 15, 1932, from a coalition of the bourgeois parties (Agrarians, Unionists, Progressive, and Swedish parties) was headed by Premier Toivo Mikael Kivimäki (Progressive). For changes in 1933, see *History*.

HISTORY

THE DIET ELECTIONS. The triennial election to the Finnish Diet, held July 1 and 3, 1933, was in effect a referendum upon Fascism, which during 1931 and 1932 had grown increasingly aggressive. Two armed Fascist revolts against the government were quelled in 1932 (see 1931 and 1932 YEAR BOOKS). Confident of making decisive gains,

numerous Fascist groups entered candidates in the elections. They suffered a decisive defeat, while the Social Democrats and other Left groups registered striking increases in their parliamentary representation. The two Fascist groups modeled on Hitler's Nazis received a combined vote of 3893 out of 1,100,000 ballots cast. The Lapuan Black Shirts, who united with the Conservative party, fared no better. The combined Lapuan-Conservative vote was 186,824, compared with the Conservative vote of 203,958 in 1930. Of the other Fascist groups, only one—the People's (Crisis) party—secured parliamentary representation. Polling 8549 votes, it seated two Deputies in the Diet. On the other hand the Social Democratic vote rose to 412,759 from 385,820 in 1930 and the Progressives, another Left group, captured 82,476 votes against 65,830 in 1930. The vote of the Agrarian party was 249,086 (308,280 in 1930); Swedish party, 115,385 (122,589 in 1930). The standing of the parties in the new Diet, which convened Sept. 1, 1933, was: Social Democrats, 78 (66 in former Diet); Agrarians, 53 (60); Swedish party, 21 (21); National Union (Conservatives and Lapuan National Patriots), 32 (42); Progressive party, 11 (10); Small Farmers' party, 3 (1); People's party, 2 (0).

COMMUNISTS SPY SCARE. Earlier in the year (May) the Diet had acted to check the growth of Fascist organizations by passing legislation prohibiting political parties from organizing military auxiliaries. The Lapuan and other Fascist movements in Finland had arisen largely as a reaction against aggressive Communist propaganda. The Lapuans succeeded in outlawing the Communist party and driving the movement underground. That communism was not entirely eradicated was indicated during the 1933 elections by the 2000 votes cast for candidates who were nominally non-partisan but actually Communists. In October, the Finnish police uncovered a fairly extensive espionage system, whose members included Marvin Jacobson, a former Detroit school teacher; Mrs. Mary Louise Martin, an alleged Latvian citizen who had lived in the United States; and others. The police charged that the ring had been established by the Soviet government and that it had operated in Finland for three and one-half years through Soviet military attachés.

THE ECONOMIC UPSWING. One factor in the decline of the Fascist movement in Finland was the distinct economic upswing which became evident during 1933. Finland's foreign trade rose about 50 per cent above the 1932 level, although none of the neighboring Scandinavian countries achieved similar results. There was some decrease in unemployment, the total registered in August, 1933, being 15,269, as against 16,966 in August, 1932.

A treaty which was expected to promote foreign trade was signed with Great Britain on Sept. 27, 1933. The United Kingdom granted Finland most-favored-nation treatment, the maintenance of the duty of 10 per cent ad valorem on birch and plywood, a reduction in the duty on wooden sewing thread reels from 20 per cent to 15 per cent ad valorem, and an equitable share in any agricultural import quotas which might be imposed. The British guaranteed that they would import 198,000 hundredweight (of 112 pounds) of butter from Finland annually, regardless of future restrictions. In return Finland agreed to

import at least 75 per cent of its annual coal requirements from the United Kingdom, instead of 29 per cent, as well as certain quantities of flour, creosote, jute, and salt. It promised to admit British coal and coke duty free; to reduce the Finnish tariff on British textiles, herring, tin plate, and many other articles, and to maintain existing duties on another long list of imports from Great Britain. The treaty was to run three years. It was received with mixed feelings in Finland, the fear being expressed that due to the most-favored-nation clause it opened the Finnish market to the cutthroat competition of all the great industrial nations. The British made vigorous efforts to extend their market in Finland during "British Week," held in Helsinki in September. A new commercial agreement with France, designed to aid exports of pulp, paper and boards, was signed early in 1933. Germany, piqued at the Anglo-Finnish treaty, notified Finland on October 24 that it would not renew its trade agreement, which expired Dec. 31, 1933.

Finland was the only nation which paid in full the war-debt installments due to the United States government during 1933. The sum of \$148,592 was paid June 15, 1933, and \$229,623 on Dec. 15, 1933.

FIRE INSURANCE. See **INSURANCE.**

FIRE PROTECTION. The 1933 fire loss is estimated at \$316,897,733 by the National Board of Fire Underwriters, a reduction of 28 per cent from the similar estimate for 1932. This is the lowest loss figure recorded for the post war period, and compares with a peak of \$561,980,751 for 1926.

The loss by months for the past three years is as follows:

COMPARATIVE MONTHLY LOSS ESTIMATES

	1931	1932	1933
January	\$44,090,449	\$39,224,788	\$35,547,565
February ..	41,776,051	39,824,622	36,661,481
March	44,074,362	49,189,124	35,321,248
April	41,423,764	43,822,233	27,825,970
May	37,835,273	39,270,524	24,338,714
June	33,368,378	34,338,670	21,578,609
July	33,024,594	32,982,434	20,004,049
August	31,917,630	31,425,931	23,626,505
September ..	33,202,986	30,972,318	20,447,571
October	35,501,580	30,734,458	21,465,382
November ..	35,287,641	31,167,708	22,454,200
December	40,514,868	39,190,506	27,626,439

Total 12 mos. 452,017,026 442,143,311 316,897,733

Adjusted loss figures 451,643,866 400,859,554

The following table gives the annual fire loss by years since 1916.

1916	\$258,377,952	1925	\$559,418,184
1917	289,535,050	1926	561,980,751
1918	353,878,876	1927	472,938,969
1919	320,540,399	1928	464,607,102
1920	447,886,677	1929	459,445,778
1921	495,406,012	1930	501,980,624
1922	506,541,001	1931	451,643,866
1923	535,872,782	1932	400,859,554
1924	549,062,124	1933 (Est.) ..	316,897,733

Various authorities attribute the 1933 decrease in the national fire losses to different causes. The reduction in burnable material in mercantile and manufacturing occupancies, both in units and dollar value, has undoubtedly been a major factor. It is noteworthy, however, that the initial drop was coincident with the declaration of the bank moratorium and the adoption of the 60-day rule by the insurance companies. The effect of the bank

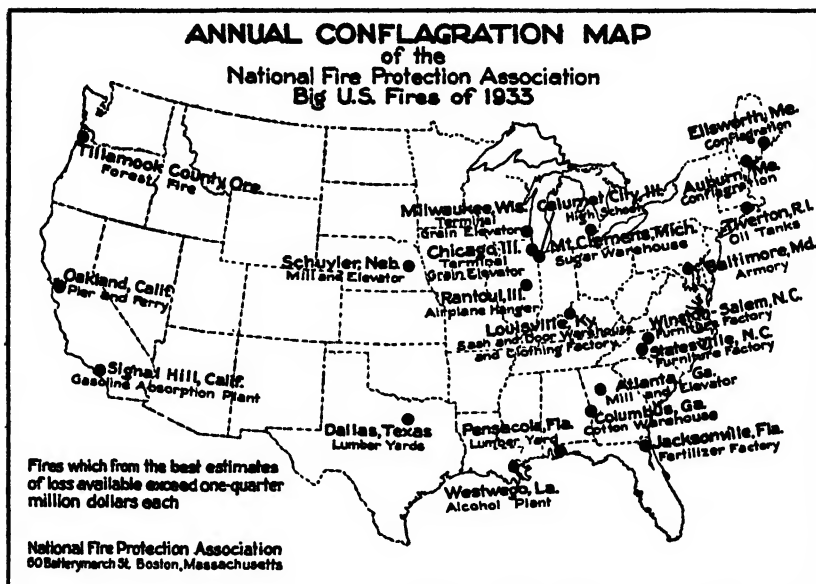
moratorium was to create skepticism as to the solvency of all financial institutions, insurance companies as well as banks, and made it temporarily impossible for the companies to pay losses. The decision to withhold payment of losses for 60 days discouraged incendiarism and made honest property owners unusually careful to avoid having fires.

Other factors in the lower loss for 1933 may be the better coördination of fire prevention activities, more favorable weather conditions, the upturn in business since March and the general drive against arson, resulting in a higher percentage of arson convictions. This drive came opportunely, at a time when the rising tide of incendiarism had reached the dwelling house, a classification normally least affected by arson. Just what per cent of the fire loss of the country is due to arson is a matter of conjecture, but the experience of the past year seems to substantiate the opinion that incendiarism, deliberate or unconscious, is responsible for a very substantial part of the total fire loss.

LARGE LOSS FIRES 1933. The National Fire Protection Association reports 22 fires involving an individual loss estimated at \$250,000 or more, just half the number reported for the previous year. Two conflagrations occurred in Maine communities in May. On May 7 a part of the business and residential sections of Ellsworth, Maine was destroyed. Most of the 127 buildings burned were of frame construction and 97 had wooden shingle roofs, the principal factor in the spread of the conflagration. The destruction of 250 buildings in Auburn, Maine, on May 15 was also due largely to wooden shingle roofs. The most serious forest fire of recent years occurred in Tillamook County, Oregon, from August 14 to 26 inclusive. Approximately 267,000 acres of forest area were burned over and it is estimated that ten billion feet of high grade virgin timber were destroyed. The direct property loss to the owners of the timber is estimated between \$10,000,000 and \$20,000,000 based on present discounted values. Indirect losses, including taxes, freight charges, and labor, which would have benefited had the timber been liquidated in a normal way during the next fifteen or twenty years, will amount to many times the direct fire loss.

The accompanying map shows the location of the large loss fires and the character of property involved. The chief factors responsible for the large loss in these 22 fires are shown by the following table. In most instances more than a single factor was involved.

	No. of fires
Inferior construction	14
Headway of fire when discovered	11
Ineffective fire fighting	8
Failure of private fire protection	8
Inefficient fire fighting (including bursting of hose)	3
Fire department delayed in getting to work ..	2
Unfavorable weather conditions	9
Highly combustible contents or excessive amounts of burnable materials	7
Lack of adequate public or private protection ..	5
Sprinkler equipment shut off	4
Inadequate water supplies	4
Point of origin difficult of access	3
Large quantities of flammable liquids	3
Delayed alarm	3
Explosions aided rapid spread of fire	2
Wooden shingle roofs	2
Delayed fire department response	2
Lack of exposure protection	1
Contents especially susceptible to water damage ..	1
Forest inaccessible and in tinder-like condition ..	1



PUBLIC AND PRIVATE FIRE PROTECTION. The general trend toward the reduction of fire department personnel and economy in equipment noted in 1932 continued in 1933, but did not go far enough to have any material effect on fire losses. There were few, if any, significant extensions of private fire protection during the year, but projects inaugurated for the relief of unemployment, financed by Federal funds, promise a valuable contribution toward fire safety. These include the protection of public buildings by automatic sprinklers, replacement of old public buildings by modern fire-resistive structures, the clearing of fire breaks and trails in forests, and other projects.

RURAL FIRES. The decrease in fire losses in urban areas during the past few years has not extended to farms and rural communities, where organized fire prevention and fire protection effort involves much greater difficulties. To meet this situation the National Fire Protection Association in 1933 organized a Volunteer Firemen's Section designed to disseminate fundamental fire prevention information through the medium of the ten thousand or more volunteer fire departments in the smaller communities in the United States, and to improve fire fighting technique. The response to this move has been enthusiastic.

MARINE FIRES. A series of fires at sea, culminating in the destruction of the French liner *Atlantique*, has stimulated the interest of ship owners and operators, naval architects and builders, and the marine underwriters, and has forced the realization that modern marine construction has lagged behind shore practice in respect to fire safety. Opinion on this subject was crystallized during 1933 with the preparation by the Marine Committee of the National Fire Protection Association of a standard for fire-resistive construction of vessels, and a subsequent project for expanding the Committee into a Marine Section of the N.F.P.A. as a general forum for the discussion of marine fire problems and a medium for putting into effect improved standards of marine fire safety.

FISK UNIVERSITY. A coeducational institution for colored people in Nashville, Tenn., founded in 1866. It consists of a liberal arts college, a music school, and a graduate department. The total enrollment of 350 for the autumn of 1933 included 144 men and 206 women. The faculty numbered 41, and there were 14 administrative officers and assistants. The productive endowment for 1932-1933 was \$1,510,000 and the total income was \$278,078.51. The library contained approximately 45,100 volumes. President, Thomas Elsa Jones, Ph.D.

FIVE-YEAR PLAN. See UNION OF SOVIET SOCIALIST REPUBLICS.

FLAX. The flaxseed production in 1933 of 13 countries reporting to the International Institute of Agriculture, estimated at 26,681,000 bushels, was 18.6 per cent below the yield of 32,780,000 bushels in 1932 and 34 per cent below the average annual yield for the five years 1927-1931. The crops of the leading producing countries not including the United States were reported as follows: India 16,120,000 bushels, Lithuania 829,000 bushels, and Canada 679,000 bushels. The Canadian crop was only 27.8 per cent of the preceding year's production and 18.8 per cent of the average annual yield for the five-year period mentioned. Argentina, the world's leading flaxseed producing country, reported a yield of 52,305,000 bushels for the crop year 1932-1933 of the southern hemisphere as compared with an annual average of 75,694,000 bushels for the five-year period reported. Preliminary estimates placed the yield of the 1933-1934 harvest season of 50,000,000 bushels. The Soviet Republics reported an average annual yield of 25,081,000 bushels for the four years 1927-1930 and an average annual acreage of 5,238,000 acres for the five years 1927-1931.

Preliminary estimates by the Department of Agriculture placed the flaxseed production of the United States in 1933 at 6,785,000 bushels, the smallest production since 1919 and as compared with 11,671,000 bushels in 1932 and 20,011,000 bushels, the average annual yield for the five years 1926-1930. The area devoted to the crop

in 1933 was 1,283,000 acres, or only 65 per cent of the area in 1932 and 43 per cent of the average annual acreage for the five-year period last mentioned. The 1933 average yield per acre, 5.3 bushels and one of the lowest on record, was the result largely of long continued drought in North Dakota, South Dakota, and Minnesota. Among the ten States reporting flaxseed production Minnesota ranked first with a yield of 4,365,000 bushels and North Dakota second with 1,677,000 bushels. These two States produced 89 per cent of the country's crop. Kansas ranking third produced 223,000 bushels and Iowa, fourth, 175,000 bushels.

During the fiscal year ended June 30, 1933 the United States exported 101,000 long tons of linseed oil cake, 7000 long tons of linseed oil cake meal, and 781,000 pounds of linseed oil, and imported 6,213,000 bushels of flaxseed, 36,000 pounds of linseed oil, and 20,071,000 pounds of linseed oil cake and oil cake meal.

The International Institute of Agriculture reported the total yield of flax fibre in 1933 in seven European countries and Egypt at 62 per cent above their production in 1932 but very much below the annual average for the five years 1927-1931. Lithuania, the leading country, reported a yield of 39,656,000 pounds and Latvia, ranking next, of 28,263,000 pounds. A yield of 1,212,546,000 pounds was recorded for the Soviet Republics in 1932 and an average annual production of 844,797,000 pounds for the five-year period. Experiments with fibre flax by the United States Department of Agriculture and the agricultural experiment stations indicated that a good quality of fibre can be produced in the United States.

FLEMISH AUTONOMY MOVEMENT. See BELGIUM.

FLETCHER, SIR WALTER MORLEY. A British physician, died in London, June 7, 1933. Born in Liverpool, July 21, 1873, he was educated at Trinity College, Cambridge, where from 1900 to 1914 he was senior tutor and lecturer in natural sciences. He served also as senior demonstrator in physiology at Cambridge University during 1903-05 and as proctor during 1904-05 and from 1899 to 1914 was president of the Cambridge University Pitt Club. In 1914 he was appointed secretary of the Medical Research Committee and at the time of his death was serving as secretary of its successor, the Medical Research Council, recognized in almost every branch of medicine as the leading organization of its kind in the world. Sir Walter personally sponsored its study of vitamins and of viruses and advocated the new use of insulin to diminish the risk of shock after a surgical operation. During 1928-29 he was chairman of the Committee on the Organization of Medical Research under the government of India. He was also a member of the Army Pathology and Air Force Medical Advisory Committees, the Pensions Ministry Disability Committee, and the Health Advisory Committee.

From 1919 to 1922 Sir Walter served as a member of the Royal Commission on Oxford and Cambridge Universities and in 1915 was Croonian lecturer for the Royal Society, of which he was a Fellow. He was also a Fellow of the Royal College of Physicians and of Trinity College, Cambridge. In 1918 he was created a Knight Commander of the Order of the British Empire and in 1929 a Companion of the Bath. His papers appeared in the *Journal of Physiology* and other scientific periodicals.

FLOOD CONTROL. MISSISSIPPI RIVER. Before noting the present status of Mississippi Flood Control work it might be well to recall just what the 1928 flood-control project, drawn up after the record breaking flood of 1927, contemplated. The main points of this plan are:

1. The raising of the levees line about 3 feet above the previously adopted or 1914 grade line, along the whole length of about 1000 miles of river from Cairo to New Orleans.
2. The construction of an emergency spillway at Bonnet Carre, just above New Orleans, to discharge flood-flow into the upper arm of Lake Pontchartrain (an arm of the Gulf of Mexico).
3. The construction of three wide floodways outside the normal leveed width of the river's high water channel, one just below Cairo to lower the flood crests at Cairo, a second from the mouth of the Arkansas southerly through the western half of the Tensas Basin (Bouef Floodway) to carry the excess floodflow which the leveed river could not accommodate, and a third along the course of the Atchafalaya River to carry water from the Red River and from the Bouef Floodway directly to the Gulf, leaving only part of the total discharge to go past Baton Rouge and New Orleans.
4. Stabilization of the river channel was to be carried out.

The critical levee work on the main river is nearly completed. About 385 miles of levee remain to be raised, and of this 148 miles is opposite back-water areas. More than half of the remainder is north of Helena (in the Memphis district). These latter levees were to have been completed in 1933 if the funds could be obtained. The Missouri and Bonnet Carre floodways are completed. The Atchafalaya guide levees have been started. Work has been started in the Tensas Basin. River stabilization is still an important problem.

A significant happening of the year was the artificial cutoff in one of the Greenville Bends. These four loops had previously been maintained for 50 years by revetment work and dike construction. The advisability of this cutoff had previously been established in Vicksburg tests.

RIO GRANDE. A positive step in solving the difficult problem of flood control in the stretch of the Rio Grande extending from El Paso, Tex., 155 miles to Box Canyon below Fort Quitman, Tex., was taken by the signing on February 1 by representatives of Mexico and the United States of a convention based on a report of the International Boundary Commission created by the two nations.

The situation called for international action. The Rio Grande, rising in Colorado, flows almost directly south through New Mexico to El Paso, Tex., with Juarez, Mexico, across the river. At El Paso the river swings eastward and thence marks the boundary between Mexico and the United States.

Above El Paso the river valley lands are developed for irrigation, water being taken by means of diversion dams at several points along the river. In 1916 the Elephant Butte Dam was built about 150 miles above El Paso to store floodwaters for regulating the dry weather flow for irrigation. Below El Paso the river valley, which is wider than it is above El Paso, is developed for irrigation on both the Mexican and the American sides. It is in this section that the great problem of flood control and land drainage has arisen.

Through the El Paso-Juarez Valley the river has a serpentine course. Floods from the runoff area lying between Elephant Butte and El Paso-Juarez are of annual occurrence. The Mexican Department of Communications and Public Works and the City and County of El Paso have expended in the last few years more than \$750,000 to pro-

tect the city of El Paso-Juarez and the valley lands from floods. These works consist largely of levees built along the banks of the meandering channel, and they require constant strengthening and repair on account of the raising of the riverbed. A more substantial and effective plan must be adopted to secure permanent and efficient protection.

The plan of Rio Grande flood control proposed by the International Boundary Commission consists of a detention dam at Caballo on the upper river above El Paso-Juarez and a rectified channel for 155 miles of the river below those cities. Briefly, the engineering features involve: (1) the reduction of river length in the El Paso-Juarez Valley from 155 miles to 88 miles; (2) the provision between levees along this 88 miles of a floodway 590 ft. wide having a capacity of 11,000 sec.-ft.; and (3) increasing the slope from 1.82 ft. per mile to 3.28 ft. per mile. The total cost of the work will be about \$7,365,500.

MODEL STUDY. Observation on natural rivers has proved a slow and almost hopeless road for one who desires to discover the laws through which rivers may be regulated. Hydraulic laboratories to study such problems have been developed in Germany especially, but also in France, Italy, Great Britain, and the United States. They have proved that a well equipped laboratory can solve many problems and yield profits many times over the investment.

In 1929, for instance, the Mississippi River Commission decided to apply laboratory experimentation to its river problems. It built the Waterways Experiment Station at Vicksburg and began intensive river model experiments in 1930. Scientific methods were applied to river problems such as cutoffs, transportation of sediment, in suspension and along the bottom, and protection of railway embankments with results of much practical worth.

The process of developing model similitude is of some intricacy. The essential problems of model design are: (1) selection of type, (2) selection of model limits, and (3) selection of model scale values. Models may be reduced or full scale, distorted or undistorted scale, and fixed bed or movable bed. Definition is obvious except perhaps of distorted and undistorted models. Physically, the distinction is simple. An undistorted model is one in which all linear dimensions are on the same reduced scale; the model has exact geometrical similarity to the object in nature (river channel or harbor) that is being modeled for the test. In a distorted model the geometrical similarity is abandoned by making the vertical and the horizontal scales different. The purpose of this distortion is to get similarity of performance between model and prototype.

It is impossible in a small model of a river or a harbor to simulate in model scale all the natural conditions. Certain forces acting and properties of materials acted upon cannot be reduced to model scale. These properties include density and viscosity of the liquid and the size, shape, cohesion, and density of the bed and bank materials. The external forces include gravity, friction, and surface tension. It is obviously impossible to decrease or modify these forces and properties to model scale ratios. In order that they may not become disproportionate, they are kept in harmonious relationship by geometrically distorting the model by increasing the vertical scale, i.e. geometrical similitude sacrificed to secure simi-

tude of effect. Vertical distortions of 8 and 10 to 1 have been found most convenient.

BIBLIOGRAPHY. The monumental volume, *Hydraulic Laboratory Practice* published in 1929, contains many examples of the river and harbor studies now undertaken by means of models.

FLOODS. Heavy rains in December, 1932 and January, 1933 caused many rivers in the South Atlantic, Gulf, and the Ohio Valley States to pass the flood stage. Some streams, notably the Tallahatchie and Yazoo Rivers in Mississippi, remained in flood for long periods. In general the floods during January and February were not important but the floods in the Alabama, Wabash, White, St. Francis, and Ouachita rivers at this time were severe.

In the four months of March to June, inclusive, floods were unusually numerous and severe in the Mississippi and Columbia river systems, but in other parts of the United States no important floods occurred. Also no significant flood occurred in the Missouri basin during this time, and the absence of high water in the Missouri materially lessened the severity of the floods in the lower Mississippi.

Heavy rains in the upper Mississippi basin, beginning in late March, caused three floods, each of short duration, in the upper Mississippi River and two prolonged floods in the Illinois, as well as floods in the smaller streams. In southern Wisconsin and Northern Iowa rapidly melting snow at the beginning of these rains caused some unusually rapid rises in the streams there.

The first flood in the Illinois River was the highest since the great 1927 flood in the upper reaches but was not so severe in the lower reaches of the river. The second flood was even more severe than the first.

Important floods occurred in all of the northern tributaries of the Ohio, but only minor floods occurred in the southern tributaries. Among the northern tributaries of the Ohio the Wabash had the most severe floods. During the three months of March, April, and May five flood crests passed down the Wabash. One of these five crests, that of May, was the most destructive flood in this river since January, 1930.

In the Ohio River three flood crests took place. The first extended from Pittsburgh, Pa., to Cairo, Ill., from March 15 to April 4. The second from Dam No. 47 (near Newburgh, Ind.) to Cairo, from April 22 to April 24. The third from Portsmouth, Ohio, to Cairo, Ill., from May 14 to May 24. The second of these crests was the least important.

The flood of March was more destructive than any since the very disastrous flood of 1913. However points on the Ohio River above Parkersburg, W. Va., have had higher stages than the March, 1933 crests since 1913 as also has Paducah, Ky. For the reach from Parkersburg to Paducah the March, 1933 flood was the highest for 20 years.

This March flood occurred very suddenly. On the morning of March 12 fair weather prevailed over the Ohio Valley and the weather map of that day did not indicate any especially heavy rains for the Ohio Valley. The river was at or below the average stage for this time of the year. Moreover the precipitation for the past three months had not been heavy and the ground was not overly moist for this season. In less than 24 hours rains set in which lasted for nearly three days. The rains were heaviest around Pittsburgh and on March 18 it appeared that the

flood stage would not be reached below Huntington, W. Va. However a second and more severe storm with heaviest rains around Cincinnati caused the river to rise very rapidly to the highest stages of the season.

Although the March, 1933 flood was the most destructive flood since 1913 and in spite of the fact that it came on with great suddenness the total damage was not excessive. The total damage for the March, 1933 flood was about \$2,000,000 as compared with about \$154,000,000 for the 1913 flood. The small damage of the March, 1933 flood was mainly because the 1933 flood did not attain the height which the 1913 flood did, but was also partly the result of flood protection works and increased efficiency of flood warnings.

Very heavy rains fell over southern Ohio and northern Kentucky on May 13 and 14. This narrow strip of heavy rainfall caused the Ohio to reach flood stage immediately thereafter although several of the tributaries did not reach flood stage. While this flood was much lower than the March flood it is noteworthy because the crest stage at Cincinnati was the highest during the summer half of the year (May 1 to November 30) since the August, 1875 flood.

In the lower Mississippi basin severe floods occurred in the Black and St. Francis rivers both in April and May. The St. Francis flood of April caused four breaks in the levees, while that of May caused 19 breaks. The crest stage of the May flood was the highest of record in the upper reach of the St. Francis River. Considerably higher water would have occurred in the lower reach of this river had there been no breaks in the levees.

The flood in the Tallahatchie-Yazoo rivers lasted for six months and reached high stages. The crest at Swan Lake, Miss., was exceeded only by the 1932 flood crest while the crest at Greenwood, Miss., was exceeded by the floods of 1882, 1927, and 1932.

There were two rises in the lower Mississippi River. The first lasted from March 26 to about the middle of May, and was principally the result of the first rise in the Ohio River. The second lasted from the middle of May to June 19 and was principally the result of the third rise in the Ohio River and the nearly simultaneous overflows in the upper Mississippi and Illinois Rivers. The lower Mississippi River did not pass below the flood stage at all points between these rises. No crevasse occurred in the levees of the lower Mississippi River.

A prolonged flood occurred in the Atchafalaya River in Louisiana. The chief interest of floods here is the changes which they cause in the river channel. During the last 50 years the channel capacity has steadily increased except that there was a moderate decrease in channel capacity in the upper reach following the 1927 flood. The behavior of the 1933 flood would indicate that the lower reach is still increasing its channel capacity.

The Columbia River reached its highest stage since 1894 during a long flood which ended late in July. This flood was the result of melting snow. The winter of 1932-33 was unusually cold over the Columbia basin, and while the precipitation was not much above the normal, practically all of it was in the form of snow and very little of the snow melted until the coming of spring. Temperatures remained below normal until the middle of May when an unusually warm spell of weather set in. Following this warm weather

record breaking rains fell in the Willamette Valley, causing higher stages in the Willamette and its tributaries than had ever been recorded in June. Then heavy rains fell in northern Idaho, causing a rapid rise in the Clearwater. Then a second spell of warm weather set in bringing temperatures above 100°. The Columbia river reached its crest late in June.

The damage at Portland, Ore., was not very great because of the protection afforded by the harbor wall and pumping system. Basements in the principal west-side business district, which heretofore had been generally flooded in high-water periods, were kept dry in this flood.

Unusually heavy rains in Oregon and Washington during December caused severe floods in the streams there. Over most of these States the month was the wettest December on record. While the Columbia did not reach nearly so high a stage as during the previous June, in general the small streams reached considerably higher stages and the total damage caused by the December floods was about six times as great as the total damage caused by the June floods. The reason of this disparity was that the June floods occurred only in the Columbia River, which has extensive flood protection works, while in December floods occurred in the minor streams as well and these do not have any extensive flood protection works.

UNITED STATES FLOOD LOSSES IN 1933

Drainage ^a	Reported losses ^b	Lives
Great Lakes	\$ 74,250	0
Atlantic Slope	5,585,923	2
Gulf (except Mississippi) ..	1,500,061	0
Mississippi (except Ohio) ..	10,257,003	6
Ohio	6,174,178	1
Pacific Slope	11,730,995	14
Total	\$35,322,410	23

^a There were no losses reported in other Drainage Areas.

^b Probably about 75 per cent of actual.

Floods naturally fall into two classes. One type is the local flood which is caused by very heavy rains over a small locality. If the locality is not densely populated little damage is done but if thickly settled great damage is sometimes caused by a local flood. The other type is the flood in a large stream caused by heavy rains over very extensive areas. Among local floods in 1933 may be mentioned one in Bear Creek Valley on July 7 and one in Cherry Creek Valley on August 3, both near Denver, Colo. The latter flood caused Castlewood Dam, 32 miles above Denver, to break. In this flood two persons were drowned, hundreds of acres of fertile farm lands were ruined. Many head of livestock were lost and many bridges, six within the city limits of Denver, were destroyed. Basements of hundreds of houses in the lower portion were flooded, and water completely filled the subway of the Union Station and reached a depth of one and a half feet in the main waiting room. The total damage approximated \$1,000,000.

Heavy rains in southern Mississippi, Louisiana, and eastern Texas occurred on July 15-16 and still heavier rains on July 23-26. These rains caused very high stages in the Sabine River (the highest of record in the upper part) as well as much flooding in the creeks and small streams. The damage was greatest in and around Shreveport, La. These heavy rains flowed off very slowly because the levees are built to keep water from flowing from the river to the adjacent land. In

this case the Red River was low but the flood water on the surrounding land could not readily reach the river because of the levees.

Local floods occurred in Wichita and Scott Counties of Kansas on August 4-5.

A tropical hurricane passed over the Middle Atlantic States on August 23-24 and the resulting rains caused rises in all the rivers of these States, the Delaware, Schuylkill and Susquehanna passing the flood stage. The Delaware and Schuylkill rivers reached very high stages and caused much damage. Much flooding occurred in the creeks of the Middle Atlantic States during these rains.

Unusually heavy rains over the Big Sioux River Valley in Iowa and South Dakota on September 1 caused a flood.

The Rio Grande River was above flood stage during the greater part of September but very little damage resulted. See FLOOD PROTECTION.

FLORIDA. POPULATION. The population of the State on Apr. 1, 1930, according to the Fifteenth census, was 1,468,211; in 1920, it was 968,470; in 1933 (Federal estimate), 1,554,000. Jacksonville had (1930) 129,549 inhabitants; Miami, 110,637; Tampa, 101,161; Tallahassee, the capital, 10,700.

AGRICULTURE. The following table shows the acreage, production, and value of the principal crops for 1933 and 1932:

Crop	Year	Acreage	Prod. Bu.	Value
Oranges	1933	15,100,000 *	\$18,875,000	
	1932	16,200,000 *	20,736,000	
Grapefruit ..	1933	9,800,000 *	8,702,000	
	1932	11,800,000 *	8,558,000	
Corn	1933 673,000	5,384,000	3,392,000	
	1932 687,000	5,840,000	2,219,000	
Potatoes	1933 18,000	2,232,000	1,897,000	
	1932 23,000	1,541,000	1,842,000	
Peanuts	1933 252,000	131,040,000 *	2,883,000	
	1932 273,000	113,295,000 *	1,360,000	
Sweet potatoes	1933 21,000	1,470,000	882,000	
	1932 25,000	1,500,000	660,000	
Cotton	1933 96,000	27,000 *	1,215,000	
	1932 102,000	17,000 *	484,000	

* Boxes. ♢ Pounds. ° Bales.

MINERAL PRODUCTION. Further severe curtailment occurred in the production of phosphate rock, the State's main mineral industry. The shipments fell to 1,486,573 long tons (1932), from 2,061,466 (1931); their value, to \$4,652,275, from \$7,202,086.

FINANCE. State expenditures in the year ended June 30, 1932, as reported by the U. S. Department of Commerce, were: for maintaining and operating governmental departments \$19,391,079 (of which \$6,339,554 was for local education); for interest on debt, \$4072; for permanent improvements, \$6,365,048; total, \$25,760,199 (of which \$9,048,751 was for highways, \$3,048,760 being for maintenance and \$5,999,991 for construction). Revenues were \$25,904,554. Of these, property and special taxes furnished 15.8 per cent; departmental earnings and compensation to the State for officers' services, 8.9; sale of licenses, 63.4 (in which was included a gasoline sale tax that produced \$8,875,022). Funded debt outstanding on June 30, 1932, totaled \$500,000, which did not include a contingent debt of \$11,692,686, the immediate liability of the Everglades drainage district. On an assessed valuation of \$520,453,958 the State levied in the year ad-valorem taxes of \$2,681,357.

EDUCATION. There were enrolled in the public schools of the State, in the academic year 1932-

33, 374,915 pupils. Of these, 324,013 were in common schools or elementary grades, and 50,092 were in high schools. The reported enrollment in the high schools was considerably less than that for the year before, but that for the common schools and elementary grades increased by a somewhat greater total, and the total enrollment was consequently slightly higher. The expenditures of the year for public-school education (current only) totaled \$10,649,499, which was nearly \$3,000,000 less than the total reported for the year previous. The salaries of teachers, by the year, averaged \$676.78. The averages for white and those for colored teachers differed, that for whites being \$812.40 and that for the colored, \$352.01.

CHARITIES AND CORRECTIONS. Central authority over the State's institutions of care and custody, under the system in force in 1933, was exercised by a Board of Commissioners of State Institutions. This body was composed of seven *ex-officio* members: the Governor, as chairman, and the Attorney-General, Secretary of State, Comptroller, Treasurer, Superintendent of Public Instruction, and Commissioner of Agriculture. It had an executive secretary (J. P. Newell). The five institutions under the supervision of the board were: Florida State Hospital for the Insane, at Chattahoochee (population at the end of 1933, about 3750); Florida Industrial School for Boys, Marianna (about 400); Florida Industrial School for Girls, Ocala (about 91); Florida State Penitentiary, Raiford (about 1622, exclusive of some 1365 convicts in road camps); Florida Farm Colony for the Feeble-Minded and Epileptics, Gainesville (about 492).

LEGISLATION. A regular 60-day session of the Legislature opened on April 4. Provision was made for the popular election of 67 delegates to a State convention which was to act for the State with regard to the proposed repeal of the Federal Eighteenth Amendment. The sale of 3.2 per cent beer was legalized, and a system of local option as to the control of liquor was enacted, subject to popular approval by vote, to replace the existing State prohibition law. Taxpayers of certain localities were allowed to present bonds of the respective localities in discharge of delinquent taxes. A decrease of about \$2,000,000 a year was effected in State appropriations. The 7-cent tax on gasoline was continued for two years. Death was made the penalty for kidnapping except when the jury finding guilty should recommend mercy, in which case life imprisonment was prescribed. The practice of nepotism in appointments to public office was prohibited; residence of two years within the State was made a necessary qualification for public employment, that of teachers in the public schools included. A strict system for the certification of eggs, in labels and advertising, and for their inspection by the commissioner of agriculture, was provided.

POLITICAL AND OTHER EVENTS. Miami was the scene on February 15 of an attempt to assassinate President Roosevelt. While in an automobile passing through a crowd on his return from a fishing trip, he narrowly escaped being hit by several shots fired from a pistol by a crank of radical ideas named Zingara. Mayor Anton Cermak (q.v.) of Chicago, who was close to Mr. Roosevelt, was mortally wounded. Zingara was seized, prosecuted for murder by the State, convicted, and executed.

At the height of the banking panic the banks of the State were closed on March 4 by the Governor's proclamation of a legal holiday. On October 10 there were elected by a light popular vote, in the approximate proportion of 4 to 1, delegates favorable to repeal, who met in State convention on November 27 and voted the State's adoption of the superseding amendment proposed by Congress for the repeal of the Eighteenth Amendment. A Federal three-judge court, in a case relating to payments in St. Lucie County, ruled that the State statute known as the Futch law, permitting taxpayers to present the depreciated bonds of their respective communities at par in payment of taxes was unconstitutional. The Federal Supreme Court in a decision of March 13 invalidated as unconstitutional a State law taxing chain stores that increased the rate of the tax in proportion to the number of counties in which a chain of stores operated.

OFFICERS. The chief officers of the State, serving in 1933, were: Governor, David Sholtz; Secretary of State, R. A. Gray; Attorney General, Cary D. Landis; Comptroller, J. M. Lee; State Treasurer, W. V. Knott; Superintendent of Public Instruction, W. S. Cawthon; Commissioner of Agriculture, Nathan Mayo.

Judiciary. Supreme Court: Chief Justice, Fred H. Davis; Associate Justices, Rivers Buford, W. H. Ellis, James B. Whitfield, Armstead Brown, Glenn Terrell.

FLORIDA, UNIVERSITY OF. A State institution of higher education for men in Gainesville, Fla., founded in 1905. In the autumn of 1933 the registration totaled 2242; distributed as follows: Arts and Sciences, 618; Business Administration, 500; Engineering, 346; Education, 212; Agriculture, 167; Law, 224; Graduate, 123; Architecture and Allied Arts, 60. The registration for the summer session of 1933 was 498 men and 588 women. The general faculty numbered 158. The cost of operating and maintenance was \$2,134,944; the annual endowment was \$315,488. The library contained 90,000 volumes. A new \$350,000 laboratory-demonstration school building to be used in connection with the College of Education will be completed early in 1934. It will house a school of twelve grades and a nursery and kindergarten—about five hundred pupils in all. President, John James Tigert, LL.D.

FLORIDA STATE COLLEGE FOR WOMEN. An institution founded in 1905 at Tallahassee, Fla., for the higher education of women. For the year 1933-34 the faculty numbered 139 members. The enrollment for the autumn of 1933 was 1504, distributed as follows: Graduate School, 7; College of Arts and Sciences, 616; School of Education, 629; School of Home Economics, 176; School of Music, 46; Special Students, 30. The enrollment for the summer session was 572. There were 53,500 volumes in the Library. Income: State appropriations, \$480,065; all other sources, \$86,454. President, Edward Conradi, Ph.D.

FOOTBALL. Princeton University's football team, taught by Herbert Orrin (Fritz) Crisler, dominated the collegiate game in 1933. The Tigers possessed the lone eleven of major magnitude to go through the season undefeated and untied, and accomplished the feat with such impressive dispatch that other claims of greatness bowed to Princeton's. Up to the final Saturday of the season, Army and Duke stood on the same plane with Princeton, but a Notre Dame team, beaten five

times, scored thirteen points in the last ten minutes to down Army, and an ill-considered Georgia Tech eleven turned on Duke. Michigan's team went through undefeated but was held to a scoreless tie by Minnesota.

In a season that showed such amazing evenness among the more important teams, attendance boomed. A check-up after the season showed a 13 per cent increase in attendance figures over 1932, besides a greatly decreased mortality list and a marked subsiding of the critical outbursts against the evils of commercialization. Ticket prices were lower, more in accord with the pocket-books of the spectators, and the year furnished the greatest crowd in Western Conference history when 93,000 saw Michigan subdue Ohio State. Southern California played to more than 600,000 persons in the season and new attendance records were set in the Big Ten, Big Six, and Rocky Mountain areas. No fewer than thirty-five of forty-six major colleges reporting their figures, showed an increase.

The 1933 season was one in which past reputations meant little. After winning twenty-eight consecutive games, Southern California bowed to Stanford and was held to a tie by Oregon State. Notre Dame, held to a tie by Kansas in the first game of the season, lost to Carnegie Tech, Pittsburgh, Navy, Purdue, and Southern California, Purdue, Tennessee, Alabama, Tulane, Colgate, and Utah, all powers of 1932, met with setbacks in 1933.

Notre Dame's campaign, capped by the victory over Army, was the most disastrous in its history, and at the end, Hearly Anderson, coach, was succeeded by Elmer Layden, former member of Knute Rockne's famous Four Horsemen backfield. Princeton's eleven, the only major one in the country to do all that was asked of it, downed in succession Amherst, Williams, Columbia, Washington and Lee, Brown, Dartmouth, Navy, Rutgers, and Yale, and allowed the opposition a total of only eight points in the process. Columbia rallied after the crushing defeat by Princeton and swept through all other opponents to be chosen as Eastern representative in the Rose Bowl game at Pasadena, Calif. New Year's Day, to face Stanford, conqueror of Southern California. Columbia was the first New York City team ever chosen for the Rose Bowl, and was invited when Princeton and Michigan turned down the offer.

Fordham, coached by Jim Crowley, showed a 100 per cent attendance increase and lost only two games—to St. Mary's and Oregon State. It was one of the most powerful teams in the country as well as in the east. Among the other eastern titans were Pittsburgh, Boston College, Duquesne, Colgate, Villanova, and Bucknell. Michigan was supreme in the Big Ten, winning the conference title for the fourth straight year. Nebraska again took the Big Six crown. The Conference title on the Pacific Coast was shared by Stanford, Oregon, and Southern California. Alabama carried off the honors in the newly formed Southeast Conference, and Duke won in the Southern Conference. Arkansas, closely followed by Baylor and Texas Christian, had the best record in the Southwest Conference.

Professional football, operating under the regular intercollegiate rules with two important exceptions, was more popular than ever and furnished some exciting competition. The two rules exceptions used in the professional ranks were the moving of the goal posts to the goal line and

thus increasing the possibility of field goals, and the privilege of forward passing from any point behind the line of scrimmage. These changes opened up the game considerably and afforded more scoring chances. In the National League the Chicago Bears won the Western division title and downed the New York Giants, Eastern winners, in the final at Chicago, 23-21, before a crowd of 30,000.

The year was marked by the death of two famous coaches, Bill Roper, formerly of Princeton, and Major Frank Cavanaugh, formerly tutor at Fordham, Boston College, Holy Cross, and Dartmouth.

The scores of some important games follow:

Michigan, 40—Cornell, 0; Fordham, 2—Alabama, 0; Army, 21—Yale, 0; Stanford, 7—California, 3; Harvard, 19—Yale, 6; Southern California, 26—Oregon, 0; Princeton, 27—Yale, 2; St. Mary's, 13—Fordham, 6; Princeton, 20—Columbia, 0; Army, 12—Navy, 7; Georgia Tech, 6—Duke, 0; Michigan, 7—Illinois, 6; Notre Dame, 13—Army, 12; Tulane, 7—Louisiana State, 7; Chicago, 39—Dartmouth, 0.

FORDHAM UNIVERSITY. A Roman Catholic institution for higher education, under the Society of Jesus at Fordham, New York City, founded as St. John's College in 1841. It is the largest Roman Catholic educational institution in the United States. The enrollment for 1933-34 totaled 7274 students, including 1203 in the teachers' college and 636 in the graduate school, and a distribution among the other colleges as follows: Law, 1088; Fordham College, 1549; Fordham College (Manhattan Division), 574; School of Business, 206; Pharmacy, 177; Social Service, 331; preparatory school, 469. The registration for the summer session of 1933 was 1041. There were 375 faculty members. The endowment fund amounted to \$4,454,000. There were 115,000 volumes in the library. President, the Rev. Aloysius J. Hogan, S.J., Ph.D.

FOREIGN ARCHITECTURE. See ARCHITECTURE.

FORESTRY. Astounding developments in the field of public forestry marked the year 1933. The organization of the Civilian Conservation Corps under authorization of the Unemployment Relief Act passed by Congress on March 31 made possible the greatest advance in constructive forestry that the nation has ever witnessed. As a result of this action an army of 300,000 young active workers directed by skilled foresters were employed in planting cutover lands, in thinning overcrowded forests, in constructing fire lanes and roadways, preventing erosion by building dams and setting out soil retaining plants and in various other useful operations. At one stroke of the pen there was removed from the ranks of idleness thousands of the nation's young men and great forward strides were made possible in protecting and developing the forests, one of the nation's primary assets. Although it is not expected that a large number of the temporary forest workers will pursue forestry as a life vocation, it is certain that they will take back to their homes a more intelligent conception of the important rôle that forests play in the welfare of these United States. Additional stimulus to constructive forestry resulted from an allotment of nearly \$16,000,000 by the Public Works Administration for improvement and protection work on the National Forests and for the support of existing research activities. A grant of \$50,000,000 from the Industrial Recovery Act for building roads and trails in the National Forests, Na-

tional Parks and other public domains made possible much needed improvements.

LUMBER TRADE AND PRODUCTION. There was a surprising similarity in the values of the export and import trade in lumber products for the years 1932 and 1933 as revealed by figures released in the October Monthly Summary of the United States Department of Commerce. The total value of exports, including unmanufactured wood, sawmill products, wood manufactures, paper base stocks and paper, and manufactures, was \$50,529,310 in 1933 and \$51,406,648 in 1932. The total value of the imports of the same items was \$134,635,583 in 1933 as compared with \$139,581,675 in 1932. In view of the sharp decline from 1931 to 1932, the slight changes of the present year may well be considered indicative of improved business conditions in the lumber world.

Lumber production within the United States continued at low ebb but with some increase in late autumn as a result of purchases for the construction of winter camps for the Civilian Conservation Corps and for new construction authorized by the Public Works and Civil Works Administrations. An item in a late December issue of the *Washington Star* states that the lowest point in lumber production since 1869 was reached in March, 1933, with an upward movement since that time. Production in 1932 was 10,000,000,000 feet as compared with 37,000,000,000 feet in 1929.

The formulation of the Lumber Code under authority of the National Recovery Act was expected to aid in bringing about a better situation in 1934 due to stabilization of prices and to restrictions in logging operations where overproduction now exists. A meeting of government officials and representatives of the lumber, pulp, paper, and naval stores industries was held at Washington, D. C. in late October to discuss those phases of the code dealing with conservation of national resources.

RESEARCH ACTIVITIES. Never before in the history of the United States was the need and value of research in forestry more keenly realized than in the past year. Provided suddenly with a veritable army of workers in the Civilian Conservation Corps, the burden of developing a constructive programme of operations became the overnight problem of the scientific foresters called into service with the corps. Fortunately the work of the United States Forest Service, of the forest schools, and certain other public and private agencies supplied a foundation of knowledge. For example, the discovery that currants and gooseberries are obligatory alternate hosts of the blister rust disease of five needled pines led to a constructive and ultimately highly profitable eradication programme.

Despite reduced funds for regular research work and loss of workers' time spent in assisting the Conservation Corps, much worthwhile progress was made by scientific foresters during the year. Naturally economic problems received considerable attention. Tax delinquency followed by reversion of the land to the States, an important problem in the Lake States, South and Pacific Northwest, was carefully studied in the hope of arriving at some satisfactory solution. Further work was done on the value of variations in water content of duff and dry wood as indication of fire hazards in the forest.

Studies by the United States Forest Service in the southern States showed that the planting of black locust, creeping plants, and grasses would

materially aid in preventing and checking erosion. The Forest Products laboratory at Madison carried forward its important work. Among its valuable findings were that Florida sand pine and Monterey pine may be successfully utilized in the manufacture of paper.

THE NATIONAL FORESTS. As set forth in the Report of the United States Forester for 1933, the addition of 648,454 acres during the fiscal year ended June 30, 1933 brought the total net area of the National Forests up to a total of 162,009,145 acres. The largest single acquisition, 466,254 acres, was made possible by the Presidential proclamation which created the Nicolet National Forest in Wisconsin. Perhaps never before was the potentially stabilizing value of the National Forests on employment so fully appreciated as when they afforded useful occupational fields for over 300,000 workers of the Civilian Conservation Corps.

Marked stimulus to the enlargement of national forests resulted from the publication of the so-called Copeland report, entitled *A National Plan for American Forestry* and prepared by the United States Forest Service under orders of the United States Senate. The report showed that less than 4 per cent of the nearly 9,900,000 acres of private land logged annually is cut with regard to the future growth. In addition to recommending better handling of privately owned forests lands, the report urged more rapid enlargement of the National Forests, particularly with reference to large areas of cut over non-productive land which will require actual planting. As presently constituted, these lands are national liabilities rather than assets.

FOREST FIRES. Although the aggregate losses from forest fires were unusually small in 1933, there were some exceptionally costly disasters. According to data presented in the September number of *The Timberman* over 10,000,000,000 board feet of prime timber were killed by a devastating conflagration known as the Tillamook fire, which swept over a large area in western Oregon in August. The burned area included more timber than is normally cut in Oregon in five years. The possibility of salvaging the best of the killed timber, approximately 80 per cent of which was Douglas fir, was considered by the national conference on forest practice and timber conservation held at Washington, D. C., October 25-27.

The total number of fires in 1933 was not greatly below 1932 but their average extent and cost of suppression was markedly less. See *Civilian Conservation Corps* below.

CIVILIAN CONSERVATION CORPS. Hailed before election as a friend of forestry, President Roosevelt justified the faith of Americans who recognize the importance of the forests in the national welfare by organizing promptly the Civilian Conservation Corps under the authority of the Unemployment Relief Act. More than 300,000 young men were taken from the ranks of the unemployed and brought together in 1466 forest camps scattered over the nation. Here, after preliminary conditioning, they were put to work on various planting, thinning, and fire prevention projects. Most of the conservation work camps were established too late in the spring for effective planting but about 4500 acres were planted in Pennsylvania, Wisconsin, and Minnesota during late May and early June. Adding about 39,000 acres, mostly in the Lake States region, in autumn plantings, the total acreage reforested was more than 43,500,

constituting a splendid beginning in the restoration of cut over lands to a profitable condition. In addition, the Conservation army prepared many thousands of acres for spring planting in 1934. According to information published in the *Washington Post* on December 1, the Conservation Corps played a most important part in the prevention and suppression of fires in the National Forests. Official estimates for the first 10 months of 1933 showed that burned areas were 60 per cent less than in the corresponding period of 1932.

Obviously much of this favorable showing was due to the presence of this considerable army of student foresters, ever ready to attack fires before they attained large proportions. Up to August 1, the Conservation Corps and 12,000 members of Indian camps had built 3944 miles of fire prevention trails, 1674 miles of telephone lines, 1020 miles of fire breaks, cleared 2279 miles of roadsides and removed fire hazards, such as unburned snags, from over 45,000 acres. When, in addition, the work in suppression of insects and diseases and in prevention of soil erosion is considered, even the severest critic must concede the venture well worthwhile.

NECROLOGY. Several well known foresters passed from the active field during the year.

Lord Lovat, founder of the Imperial Forestry Institute at Oxford, England, and Director of Forestry for the Allied Armies in France during the final period of the World War, died on Feb. 18, 1933.

T. S. Woolsey, Jr., author of several forestry books, including *American Forest Regulation*, *Studies in French Forestry* and *Riding the Chuck Line*, died July 10, 1933, at the age of 54 years.

John Bentley, Jr., Professor of Forest Engineering at Cornell University, died July 26, 1933. With A. B. Recknagel he was co-author of *Forest Management* and contributed many bulletins and scientific articles on forest subjects.

John M. Briscoe, Head of Forestry at the University of Maine, died Aug. 3, 1933, at Orono, Maine.

The most tragic loss of the year was the accidental death of Maj. Robert Y. Stuart, Chief of the United States Forest Service, on Oct. 23, 1933. In addition to carrying his own responsible duties, Major Stuart had during the year rendered material assistance to the Civilian Conservation Corps. He was succeeded by Ferdinand A. Silcox, a graduate of the Yale School of Forestry, former Forest Service employee, and, at the time of his appointment, Director of Industrial Relations of the New York Employing Printers Association.

BIBLIOGRAPHY. Under the stress of the depression, publications were relatively few during the year. Among the most noteworthy were: *Trees of North America* (exclusive of Mexico) vol. i.—*The Conifers*. G. R. Green. Ann Arbor, Mich., 1933; *Forestry Bankruptcy in America*. G. P. Ahern. Washington, D. C., 1933; *Forestry, An Economic Challenge*. A. N. Pack. New York, 1933; *Enquête Internationale sur les Incendies de Forêts*. Rome, 1933.

FORMOSA or TAIWAN. An island belonging to Japan, about 75 miles from the southeast coast of China and opposite the province of Fukien. Total area, 13,890 square miles including the adjacent Pescadores Islands (49 square miles) and other small islands. The total estimated population in 1932 was 4,932,433. In 1929 there were 220,730 Japanese, and 43,118

foreigners. The chief cities are Taihoku, the capital (229,005 inhabitants in 1930); Tainan (95,013); Keelung (74,541); and Kagi (55,405). Chinese is the language most used but Japanese is used officially. In 1930-31 there were 134 primary schools for the education of the Japanese, with 34,163 students; for educating the natives there were 757 schools, with 248,478 pupils. The University of Formosa was opened in 1928.

Rice, tea, sugar, and various fruits, are the chief agricultural products. The island supplies all the world's Oolong tea and nearly all the natural camphor. Indigo, hemp, sweet potatoes, cereals, and peanuts are other crops. Agricultural production: rice (1932-33 estimate), 1,631,100 metric tons; cane sugar (1932-33 estimate), 700,900 metric tons; tea (1931), 9600 metric tons. Camphor exported in 1931 had a value of 1,586,448 yen (yen equals \$0.4985 at par). Mineral production for 1931 was coal, 1,422,000 metric tons; gold, 554 kilograms; silver, 553 kilograms; sulphur ore, 800 metric tons; copper, 1400 metric tons; petroleum production is increasing. The total value of minerals produced in 1931 was 15,141,198 yen. Manufacturing is confined mainly to the making or refining of flour, sugar, tobacco products, oil, iron-work, glass, bricks, and soap. The manufacture of opium, alcohol, salt, sake, camphor, and tobacco products are government monopolies.

In 1931, total imports were valued at 145,622,123 yen (includes 114,763,307 yen from Japan proper); total exports, 201,424,107 yen (includes 201,424,107 yen to Japan proper). The budget for the fiscal year ended Mar. 31, 1933 was estimated to balance at 98,090,805 yen. In 1930 there were 1886 vessels aggregating 3,640,258 tons entered the ports of Formosa. At the end of 1931 government railways extended 549 miles; privately owned plantation railways, 1383 miles; about 2500 miles of highway suitable for motor traffic. In 1931-32 there were 876 miles of telegraph lines; and 2286 miles of telephone lines.

The civil government of the island is administered by a Japanese governor-general, supported by a force of Japanese police. Governor-General in 1933, M. Ohta. See JAPAN.

FORTIER, SAMUEL. An American mechanical engineer, died in Oakland, Calif., Aug. 19, 1933. He was born at Leeds, Que., Canada, Apr. 24, 1855. On his graduation from McGill University in 1885 he came to the United States, entering the employ of the Denver Water Co. as first assistant engineer. From 1890 to 1893 he was chief engineer and superintendent of the Ogden Water Works and of the Bear River Canal and Irrigation Co. While acting as professor of civil and hydraulic engineering at the Agricultural College of Utah during 1893-97 he served also as hydrographer for the United States Geological Survey and as consulting engineer for irrigation enterprises. In 1899 he was called to the Montana Experimental Station as director, acting also during the next four years as resident hydrographer of the United States Geological Survey in Montana and as irrigation engineer for the United States Department of Agriculture.

Placed in charge of the Pacific Coast district of irrigation investigations of the United States Office of Experimental Stations in 1903, Dr. Fortier was promoted four years later to chief of the irrigation investigation bureau of the United States Department of Agriculture, and in 1912 was advisor to the government of British Colum-

bia on irrigation law and its administration. From 1915 to 1922 he was chief of the division of irrigation investigations for the United States Bureau of Public Roads and from 1922 to 1924 associate chief of the division of agricultural engineering. Appointed senior irrigation engineer for the United States Department of Agriculture in 1924, he was made three years later principal irrigation engineer. After his retirement from the Federal service in 1930 he was professor of irrigation at the University of California. He was the author of numerous State and government publications on irrigation subjects.

FORTIFICATIONS. See MILITARY PROGRESS. **FOUNDATIONS.** The year 1933 has been marked by an unusual number of interesting and, in large part, unique foundation undertakings among which the outstanding constructions include a remarkable, in fact record breaking, cofferdam construction, that for the North River Piers in New York, the Bay Bridge Caisson at San Francisco, the sinking of the shaft for the Antwerp Tunnel in Belgium, several interesting pier constructions, and the core wall problem for the Quabbin Dam in Massachusetts. In the building field, however, there has been practically no activity and, accordingly, no notable foundation problems have developed.

THE NORTH RIVER PIERS, NEW YORK. These three great piers, located between 48th and 52nd Streets on the west side of Manhattan Island, are each 1100 feet long and 125 feet wide with slips between 400 feet wide. In these slips a 46-foot depth, capable of accommodating the largest liners, was required.

The outer ends of the piers are of the usual timber pile construction, common to New York Harbor. In the inner portion, however, the rock surface rises rapidly and a large volume of heavy rock excavation was required.

Instead of attempting subaqueous work, the contractor, A. N. Spooner & Son, Inc., enclosed the entire rock area of this contract in a huge cofferdam. The area enclosed was then pumped out, the rock excavation was carried out in the dry, and the concrete walls for the bulkhead and shore end of piers and footings for the pier structures were completed.

This remarkable cofferdam, running 1450 feet along the river and with end walls 295 feet long (total length 2039 feet) was composed of 43 cells of steel sheet piling each 50 feet square. The bottom of the dam was reinforced with heavy rock fill but, in spite of this reinforcing, the heavy pressure from the outside forced the cofferdam in 5 feet at one point. Motor trucks, operating on ramps, were used to remove the excavated material.

ANCHORAGE PIER, BAY BRIDGE, SAN FRANCISCO. The pier constructions for the west section of this structure (the entire work consists of two great bridges and the connecting tunnel through Yerba Buena Island) involve caissons of unusual size. These have been made at the Moore Dry Dock Company's plant in Oakland, floated to the site and sunk in position.

The central or common anchorage pier for the two 2300-foot West Channel Suspension is particularly noteworthy. Its cutting edge was 92 by 197 feet in plan and 17½ feet high. Before launching on August 11 the assembly (side construction, bracing, etc.) was carried to a height of 77½ feet. This huge box was then floated to position and sunk to rock by the open dredging method

at the remarkable depth of 226 feet below bay level.

GOLDEN GATE BRIDGE PIERS. The San Francisco pier of this great bridge rests on a bed of serpentine 1000 feet offshore from Fort Point. This rock, swept clean by swift tidal currents, is 52 to 87 feet below m.l.w. (mean low water). The plans called for placing the foundation of the pier, 90 by 185 feet in size, at 100 feet below water level. To permit a caisson of this size to be securely landed at the site and to protect the finished pier, a concrete fender construction 27½ feet thick was built to surround the site. Several features of the plan are worthy of note.

The contractor began by building a construction trestle out from shore. The rock surface was then excavated in a unique manner. Operating from a derrick barge, the rock was shattered, not by drilling in the usual manner but by using dynamite bombs dropped through a 12-inch blasting tube or pipe. Holes 18 feet deep and about 10 feet apart in each direction were made in this way and single bombs of 200 pounds were then lowered in these holes and exploded. Shattered rock was removed by a clamshell bucket and dumped into deep water.

Half of the fender was then built by placing tremie concrete in steel forms. The caisson was moved into position and sunk and the fender completed. The 3-foot space between caisson and fender was finally filled with concrete up to the original surface after the bottom of the caisson had been stopped off by placing forms under air pressure from inside the working chamber. The remaining space to water level was clay filled and, inside this cofferdam, the caisson was unwatered and the pier constructed in the dry.

This method avoided the difficulties of sinking the caisson 35 feet in rock under air pressure. The North, or Marin, Pier presented no unusual difficulties as it was close to shore and is located on rock near the water surface.

NEW ORLEANS BRIDGE. In constructing the piers for this bridge, located about 10 miles above the Old City section of New Orleans, an interesting modification of the sand island method, previously employed on the Suisan Bay Bridge near San Francisco, was used.

Due to the danger from scour around the caissons, a woven willow mattress 250 by 450 feet in size was ballasted with sandstone and sunk at each pier site.

On the mattress a huge steel pipe section was then sunk, the mattress was cut through, and the shell settled several feet into the river bottom. The usual procedure was then followed, the shell being filled with sand and the caisson constructed on and sunk through the island thus formed. Open dredging was used to carry the piers to the unusual depth of 180 feet.

ATCHAFALAYA RIVER BRIDGE. The sinking of the pier caissons for this three 600-foot simple truss bridge over the Atchafalaya at Morgan City, La. presented an unusual problem. The river bottom consisted of a semi-liquid silt for a depth of 30 or 40 feet. This material was so fluid that the caisson sank of its own weight to a depth of 43 feet in the river bottom (53 feet below water level). Soil was also forced up in the inner shaft and had to be excavated to prevent its forming a plug and stopping further movement. After excavation a steel deck was placed across the caisson above the cutting edge and it was carried to a depth of 129 feet, under pneumatic conditions,

that required the maximum permissible air pressure of 49.5 pounds per square inch. Finally the excavation was continued by open dredging until the caisson rested on a bed of fine sand at a depth of 176.5 feet below water level.

ANTWERP TUNNEL. The construction of the ventilator shafts for this Belgian tunnel furnished interesting examples of the rather unusual freezing process. These shafts are about 600 feet from the river edge and are 53 by 56 feet in section. They rest on a bed of clay 85 feet below high water. The contractor drove 116 wells in two concentric circles, 78 and 86 feet in diameter. These wells were of 6-inch pipe driven to a good seal in the clay bed. A 2-inch pipe was used to carry brine to the bottom of each well, while proper connections at the top of the wells completed the circulation for the refrigerating system. Walls of ice and sand, some 10 or 15 feet thick and entirely surrounding each site, were frozen in this way. The unfrozen cores were then excavated, without sheeting, and the concrete shafts constructed in the open. See TUNNELS.

VANCOUVER TUNNEL. The shaft sinking operation for this water tunnel, being built by the Greater Vancouver Water District under the First Narrows at the entrance to Vancouver Harbor, B. C., is also a notable work. A 400-foot shaft is required to reach the tunnel level and this shaft had to penetrate 100 feet of sand before it could be sealed and work carried forward in the open. The sand island method was used to start the shaft which was sunk by open dredging, bowlders being blasted out by using numerous small dynamite charges.

QUABBIN DAM CORE WALL. The core wall for this work on the Boston Metropolitan District water supply extension is an interesting example of the pneumatic caisson cofferdam method. The wall is 1500 feet long and was sunk to rock at a depth of 40 to 140 feet below river bed by using a series of pneumatic caissons, each 9 by 45 feet in size and sunk end to end.

Inasmuch as the ground water level at the site was practically at the ground surface, three isolated caissons were first sunk and were then used practically as well points to lower the ground water level. For these first caissons a maximum air pressure of 48 pounds was required. Through the pumping, however, the ground water level was lowered 50 feet and the maximum pressure required in the remaining 25 caissons was only 18 pounds per square inch. Each caisson was sunk as far as possible by open dredging with a clamshell bucket, the working chamber was then shut off and the sinking completed under air.

FOUNDATIONS, EDUCATIONAL. See EDUCATION IN THE UNITED STATES; UNIVERSITIES AND COLLEGES; BROOKINGS INSTITUTE; CARNEGIE FOUNDATION; ROCKFELLER FOUNDATION; RUSSELL SAGE FOUNDATION.

FOUR H ("4-H") CLUBS. See AGRICULTURAL EXTENSION WORK.

FOURNIER D'ALBE, EDMUND EDWARD. A British physicist, died at St. Albans, England, July 7, 1933. Born in London in 1868, he attended the Royal Gymnasium at Düsseldorf, Germany, and the Royal College of Science in London and served for many years as assistant in the physical laboratories of the Royal College of Science for Ireland and Trinity College, Dublin. While in Ireland he became interested in the Pan-Celtic movement, organizing the congresses held in Dublin in 1901, Carnarvon in 1904, and Edinburgh in

1907, editing *Celtia* during 1901-06, and publishing *An English-Irish Dictionary* (1903). From 1910 to 1914 he was assistant and lecturer in physics at Birmingham University and from 1914 to 1915 special lecturer in physics at the Punjab University, Lahore, India.

Dr. Fournier d'Albe's great contribution was the invention in 1912-14 of the optophone, an instrument which by converting light rays into sound effects enabled blind persons to read ordinary printed matter by ear. Its action was due to the chemical element selenium, whose crystalline variety conducts electricity varying in resistance according to the degree of illumination to which it is exposed. The essential parts of the instrument were a revolving brass disk, perforated with eight rings of holes corresponding in vibration to the notes of a musical scale, a selenium tablet or "bridge" on which a strong current is concentrated after passing through the disk's perforations and over which the printed matter is passed, and a telephone receiver connected with the "bridge" by a high-voltage battery, over which are heard the varying characteristic sounds for each separate letter.

Dr. Fournier d'Albe transmitted also by radio May 24, 1923, the first photographic portrait broadcast from London, and the following year invented a system of wireless telewriting and telephotography based upon acoustic resonance. He was a Fellow of the Institute of Physics, an associate of the Royal College of Science, and a vice-president of the British Radio Association. Among his publications were: *The Electron Theory* (1906, trans. into German, Italian, Spanish, and Russian); *Two New Worlds* (1908); *New Light on Immortality* (1909); *Wonders of Physical Science* (1911); *Contemporary Chemistry* (1912); *Life of Sir William Crookes* (1923); *The Moon-Element* (1924); and *Hephæstus or the Soul of the Machine* (1925).

FOUR-POWER PACT. See ITALY under History.

FOWL POX. See VETERINARY MEDICINE.

FRANCE. AREA AND POPULATION. The area of France, including Alsace-Lorraine, is 212,659 square miles and the population at the census of March, 1931, was 41,834,923 (40,743,897 in March, 1926). The estimated population in 1932 was 41,840,000. There were 2,890,923 foreigners in the country in 1931. About half the French people live in rural districts and half in urban communities. In 1932, births numbered 722,246; deaths, 660,882; marriages, 314,878. Comparative figures for 1931 were: Births, 730,249; deaths, 680,710; marriages, 326,358. The leading cities, with their populations in 1931, are: Paris, 2,891,020; Marseilles, 800,881; Lyons, 579,763; Bordeaux, 262,990; Nice, 219,549; Lille, 201,568; Toulouse, 194,564; St. Etienne, 191,088.

EDUCATION. Primary education is free and compulsory for children from 6 to 13 years old. The school system is centralized under the Superior Council of 52 members, which acts in collaboration with the Minister of Education and a consultative committee. In 1930-31, there were 3170 public infant schools, with 343,088 pupils; 503 private infant schools, with 30,241 pupils; 68,700 public primary schools, with 3,759,125 pupils; and 11,646 private primary schools, with 876,310 pupils. Higher elementary schools on Nov. 15, 1930, numbered 561, with 74,782 pupils. For secondary education, there were in November, 1931, 361 boys' schools, with 141,565

students; and 203 girls' schools, with 65,758 students. The 17 free universities in France had an enrollment of 78,674 on July 31, 1931. Various other institutions provided technical and professional training.

AGRICULTURE. France has a well-balanced economic system, with about 41 per cent of the working population engaged in agriculture and with active mining, metallurgical, manufacturing, and fishing industries. The area of France is 136,101,760 acres, of which in 1929, 87,021,115 acres were under crops, in fallow or grass. The forest area was 25,170,407 acres; moor and uncultivated land, 12,561,333 acres. The area and production of the chief crops in 1931 and 1932 are shown in the accompanying table, from the *Statesman's Year Book*.

FRENCH CROPS: AREA AND PRODUCTION

Crop	Area (1,000 acres)		Production (1,000 metric tons)	
	1931	1932	1931	1932
Wheat	12,834	13,389	7,188	9,018
Mixed grains ..	202	180	93	95
Rye	1,838	1,775	750	893
Barley	1,864	1,836	1,039	1,168
Oats	8,558	8,525	4,591	5,129
Potatoes	3,532	3,520	16,300	15,868
Beets	619	624	6,197	7,024

In 1931, 3,827,388 acres under vines produced 1,305,281,000 gallons of wine; the 1932 production was 1,258,490,280 gallons. The value of silk production was 4,197,000 francs in 1932 (14,714,000 francs in 1930). The number of silk producers declined from 35,670 in 1930 to 18,286 in 1932. Livestock on farms at the beginning of 1933 included 2,900,000 horses, 135,000 mules, 228,000 asses, 15,643,000 cattle, 9,762,000 sheep, 6,488,000 swine, and 1,463,000 goats. According to provisional returns, the 1933 wheat crop was 92,170,560 metric quintals, as compared with the 1932 bumper crop of 90,771,340 metric quintals (quintal equals 3.67 bushels). The 1933 wine production was 49,691,000 hectoliters (47,634,000 in 1932).

MINING AND METALLURGY. The French iron ore deposits in Lorraine are among the richest in the world. Coal supplies are insufficient for domestic needs and are supplemented by imports, chiefly from Germany. Production of the chief minerals in 1932, with 1931 figures in parentheses, was (in metric tons): Coal, 46,260,000 (50,016,000), excluding the Saar; lignite, 996,000 (1,040,000); iron ore, 27,768,000 (38,476,000); bauxite, 393,600 (348,000); pyrites, 190,800 (193,000); mineral oil, 85,200 (74,000). Including the Saar, the 1932 coal output was 57,700,000 metric tons. Asphalt, antimony, manganese, lead ore, rock salt, and potash salts are produced in small quantities. The output of iron and steel products, in metric tons, was: Pig iron, 5,549,000 in 1932 (8,250,000 in 1931); crude steel, 5,604,000 in 1932 (7,812,000); steel and iron work, 4,070,000; potash, 321,000. The index figures for the average monthly metallurgical production, based on the 1913 average as 100, declined from 125 for 1930 to 103 for 1931 and 72 for 1932; during 1933 it increased steadily from 76 for January to 92 for June and then declined to 79 for December.

MANUFACTURING. An upswing in manufacturing production began in July, 1932, and continued throughout most of 1933. The general monthly index of industrial production (1913 = 100), which averaged 140 in 1930, 124 in 1931, and 96

in 1932, rose from the low point of 92 in July, 1932, to 112 in June, and 106 in December, 1933. There was a continued decline in unemployment during the same period. On Dec. 23, 1933, the registered wholly unemployed numbered 303,921, compared with 271,856 for the same week of 1932. There were several million workers unemployed or working part time who were not registered. Production of electrical energy amounted to 14,361,000,000 kilowatts in 1931 (15,339,000,000 in 1930). Statistics of manufacturing production in 1931 and 1932 are shown in the accompanying table.

MANUFACTURING PRODUCTION OF FRANCE

Product	1931	1932
Silk (conditioned at Lyons) 1,000 lbs.	7,857	5,058
Wool (conditioned at Roubaix- Tourcoing) do . . .	176,827	172,065
Wool (conditioned at Mazamet) . do . .	53,413	54,577
Cotton consumption " do . .	490,372	493,019
Artificial silk 1,000 lbs.	38,320	47,354
Boots and shoes (estimated) 1,000 pairs	65,000	50,000
Alcohol 1,000 gals.	95,702	102,309
Vessels launched gross tons	103,419	88,000

* Including waste.

COMMERCE. The decline in French foreign trade was continuous from 1930 through 1933, as is indicated in the accompanying table. The recovery noted in the foreign trade of Great Britain, the United States, and several other industrial countries during 1933 was not reflected in French trade figures.

FRENCH IMPORTS AND EXPORTS

[Millions of francs]

	Imports for consumption	Exports of French products	Excess of imports
1929	58,221	50,139	8,082
1930	52,511	42,835	9,676
1931	42,199	30,421	11,778
1932	29,826	19,693	10,133
1933 *	28,425	18,433	9,992

* Preliminary.

The value of the chief imports for consumption in 1932 was (in millions of francs): Cereals, 2854.8; coal and coke, 2402.1; wine, 2316.6; oil seeds, 1332.8; petroleum, 1293.6; wool, 1270.1; raw cotton, 1137.5; machinery, 1076.4. The chief export items, in order of value, were (in millions of francs): Chemical products, 1801.6; iron and steel, 1055; cotton textiles, 971.5; silk textiles, 897.8; automobiles, 548.7; wine, 425.4; soaps and perfumes, 316.7.

The distribution of French trade, by leading countries, in 1931 and 1932, is shown in the accompanying table.

FRENCH TRADE BY COUNTRIES, 1931 AND 1932

[Millions of francs]

Countries	Imports for home use		Exports of French products	
	1931	1932	1931	1932
United States . . .	3,800.5	2,918.5	1,543.1	957.4
United Kingdom . .	3,724.3	2,457.1	5,043.4	1,961.5
Germany	6,141.7	3,618.6	2,748.8	1,669.8
Belgium	3,638.2	2,440.7	3,582.4	2,241.1
Italy	1,486.7	634.7	992.4	594.6
Spain	1,404.8	714.7	685.4	886.2
French Colonies . .	6,214.5	6,220.0	7,318.2	6,202.4
Argentina	1,428.3	1,066.8	514.3	322.1

FINANCE. Commencing Jan. 1, 1933, the French fiscal year, which formerly ended March 31, became the same as the calendar year. Previous fiscal years had closed with successive deficits, as a result of decreased revenues during the

world depression. The budget during these years normally totaled about 50,000,000,000 francs, of which nearly 45 per cent went for military expenditures and the service of the public debt. In 1930-31, actual revenues were 50,988,000,000 francs and the actual deficit was 3,199,000,000 francs. The estimates for 1931-32 balanced at about 50,640,000,000 francs and the actual deficit was 3,148,000,000 francs. For the short budget period of nine months (April to December) in 1932, the estimate balanced at 41,101,000,000 francs and an actual deficit provisionally estimated at 5,000,000,000 francs was incurred. The 1933 estimates anticipated a deficit of over 4,000,000,000 francs, with revenues of 45,600,000,000 francs and expenditures of 49,900,000,000 francs.

Preliminary 1933 returns showed actual revenues of 36,611,000,000 francs, or 487,000,000 less than in 1932. Of the 1933 receipts 28,975,000,000 francs came from indirect taxes, 7,343,000,000 from direct taxes, and 292,000,000 from national property.

Another deficit of from 6 to 8 billion francs was forecast for 1934. During the four years 1930-33, France accumulated a budget deficit of some 40 billions of francs, of which only 15,000,000,000 represented long-term loans. The remainder, in the form of short-term credits, hung over the financial market and contributed largely to the financial difficulties which forced the resignation of successive cabinets in 1933 (see *History*).

The French public debt on Mar. 31, 1932, was reported at 459,745,600,000 francs, compared with 480,821,600,000 francs a year earlier. Of the 1932 total, 243,846,200,000 francs represented the consolidated funded debt, 40,469,000,000 francs the floating debt, and 175,430,400,000 francs the external debt. The franc equals \$0.0392 at mint par.

COMMUNICATIONS. The seven French railway systems had 25,964 miles of line open to traffic in 1931. The largest system (5667 miles) was operated by the state; the remaining six by private companies. In the same year, the main lines of the seven systems carried 777,000,000 passengers and 295,700,000 metric tons of freight, incurring an aggregate deficit of 2,579,500,000 francs. In 1932 the deficit increased to 3,580,500,000 francs. Highways in 1931 totaled about 405,000 miles, of which 22,369 miles were macadam. There were 6160 miles of navigable waterways. On Oct. 7, 1933, the five French commercial air lines were consolidated into one company under government control. In 1931 these lines reported a mileage flown of 5,945,000, with 34,238 passengers, 3,895,000 pounds of freight, and 504,000 pounds of mail carried. Radiotelephone service between Algiers and Paris was opened June 6, 1933.

SHIPPING. The French mercantile marine on June 30, 1932, aggregated 3,556,000 gross tons of shipping, of which 3,304,000 tons represented steam and 203,000 tons motor vessels. The steam and motor tonnage idle on July 1, 1933, aggregated 940,000 (931,000 tons on July 1, 1932). A total of 27,475 ships of 52,641,637 tons entered French ports during 1932, and 18,935 ships of 44,498,396 tons cleared. Marseilles was the most active port. Le Havre and Cherbourg, rivals for second place, handled 16,276,000 tons and 16,783,000 tons, respectively (entrances and clearances). A new landing stage for trans-Atlantic liners was opened in Cherbourg harbor July 30, 1933. A law dated July 20, 1933, provided for the reorganiza-

tion of the *Compagnie Générale Transatlantique* (French Line), by which the French government assumed supervisory powers in return for an annual subvention of 150,000,000 francs and the government's guarantee of a loan of 150,000,000 francs.

GOVERNMENT. The Constitution of 1875 vests executive power in the President, acting through a Ministry selected by him but responsible to parliament. Legislative power rests in the Chamber of Deputies and the Senate, the members of which jointly elect the President for a term of seven years. The Senate consists of 314 members, all 40 years of age or more, chosen by an electoral college for nine years. The Chamber consists of 614 members elected by direct manhood suffrage for four years. President in 1933, Albert Lebrun, elected May 10, 1932. The composition of the Chamber of Deputies elected May 1-8, 1932, was: Communists and Socialist-Communists, 20; Socialists, 130; Republican Socialists and French Socialists, 33; Radicals and Radical Socialists, 153; Independent Radicals, 74; Republicans of the Left, 48; Democrats, 15; Democratic Republican Union, Democratic and Social Action, Independents, 127; others, 15. For Cabinet changes in 1933, see *History*.

HISTORY

An unbalanced budget hung like the sword of Damocles over the heads of four successive French cabinets during 1933, causing the downfall of three of them. Yet the country sank ever deeper into a financial morass. Facing a budgetary crisis as menacing as that of 1926-28, France at the end of 1933 was ready for another Poincaré to restore financial equilibrium. Related to the budget crisis was the battle to retain the gold standard, in a world of rapidly depreciating currencies. Franco-German relations presented another ever-present problem for France, which grew more acute during 1933. The issue of the French war debt to the United States also remained to plague her statesmen. On the other hand, French relations with Italy, Great Britain, and the Soviet Union grew more cordial, largely as a result of Adolf Hitler's spectacular appearance upon the European stage.

PAUL-BONCOUR OVERTHROWN. The Ministry formed by Senator Joseph Paul-Boncour on Dec. 18, 1932, ended its brief and stormy existence on Jan. 28, 1933, when its budget proposals were rejected by the Chamber, 390 to 193. In this, as in succeeding budget battles, the Socialists played the dominant rôle. Following the victory of the Left in the parliamentary elections of May, 1932, the Socialists held the balance of power between successive Left governments and the opposing Right and Centre parties. They had overthrown Edouard Herriot Dec. 14, 1932, by refusing to support his proposal for payment of the December 15 war-debt installment to the United States. Now they withdrew their support of Paul-Boncour's Radical-Socialist government on a budget item providing a 5 per cent reduction in the salaries of civil service employees. The fall of the ministry was accompanied by mass protests against higher taxation staged in Paris by brokers, farmers, and taxpayers' organizations. These and subsequent demonstrations by numerous other interests reflected the wide-spread rebellion among the French taxpayers at the steady increase in taxation over a ten-year period. But the general insistence upon a reduc-

tion in government expenditures was matched by the determination of the civil service and other entrenched groups not to permit governmental economy at their expense. In this conflict of interests, the civil servants enjoyed the decisive support of the Socialist leaders.

THE DALADIER MINISTRY. A new Radical-Socialist ministry, containing many holdovers from the preceding cabinet, was formed January 31 by Edouard Daladier. The Premier also held the War portfolio. Paul-Boncour accepted the post of Foreign Minister. Georges Bonnet, former Minister of Public Works, received the important Finance portfolio. Other important figures were Camille Chautemps, Interior; Pierre Cot, Air Minister; Albert Sarraut, Colonies.

The Daladier Ministry, formed as it was along the same lines as its predecessor, was expected to receive short shrift from the Chamber. It took office at a time when the economic situation was growing steadily worse. Government revenues were declining along with foreign trade and the tourist traffic. The government was called upon to bolster with subventions and loans the railways, shipping lines, and other important national industries. Labor troubles were frequent and the demand for tax reductions grew ever more insistent. The press was critical and reflected the national discontent. André Tardieu, Joseph Caillaux, and others were calling for radical governmental reforms so as to strengthen the executive power.

Amid these multiple difficulties, the new Premier guided his government with masterly skill and tact. Favorably impressed by his declaration of policy, the Chamber approved his ministry by a vote of 370 to 200. The Socialist leader, Léon Blum, indicated that his party would support Daladier "with reservations." This support and even M. Blum's leadership of his party was soon tested in the government's strenuous effort to balance the 1933 budget—a battle which continued until June 1. The first section of the budget law, covering only the month of March, was finally approved by both the Chamber and the Senate on March 1. It provided for economies equivalent to about \$80,000,000 and new or increased taxes totaling about \$126,000,000. The remaining deficit was to be covered by borrowing.

The Ministry's victory in the Chamber on the budget measure, by a vote of 359 to 352, was the result of a split in the Socialist ranks. Of the 128 Socialists in the Chamber, only 24 followed M. Blum in voting against the measure, while 104 voted for it. Another Socialist split occurred in connection with Premier Daladier's successful attempt to secure the adoption of the budget for the entire year 1933. In the vote in the Chamber on the war budget, to which the party was opposed in principle, 90 Socialists voted for military credits rather than countenance the defeat of the cabinet and the probable establishment of a more conservative government. Unable to hold his followers in line, M. Blum resigned as Socialist leader. He was reinstated at a special party conference at Avignon in April, where a majority voted to preserve the principle of nonparticipation in coalition governments.

Meanwhile, Socialist deviations had enabled the Daladier government to pass its most crucial test in the Chamber. The budget bill for the year, as adopted by both houses June 1, still showed



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JOSEPH PAUL BONCOUR

Premier, Dec 18, 1932-Jan 28, 1933



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EDOUARD DALADIER

Premier, Jan 31-Oct 24, 1933



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ALBERT SARRAUT

Premier, Oct. 26-Nov. 24, 1933



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CAMILLE CHAUTEMPS

Premier, Nov 27, 1933-Jan. 27, 1934

FOUR FRENCH PREMIERS



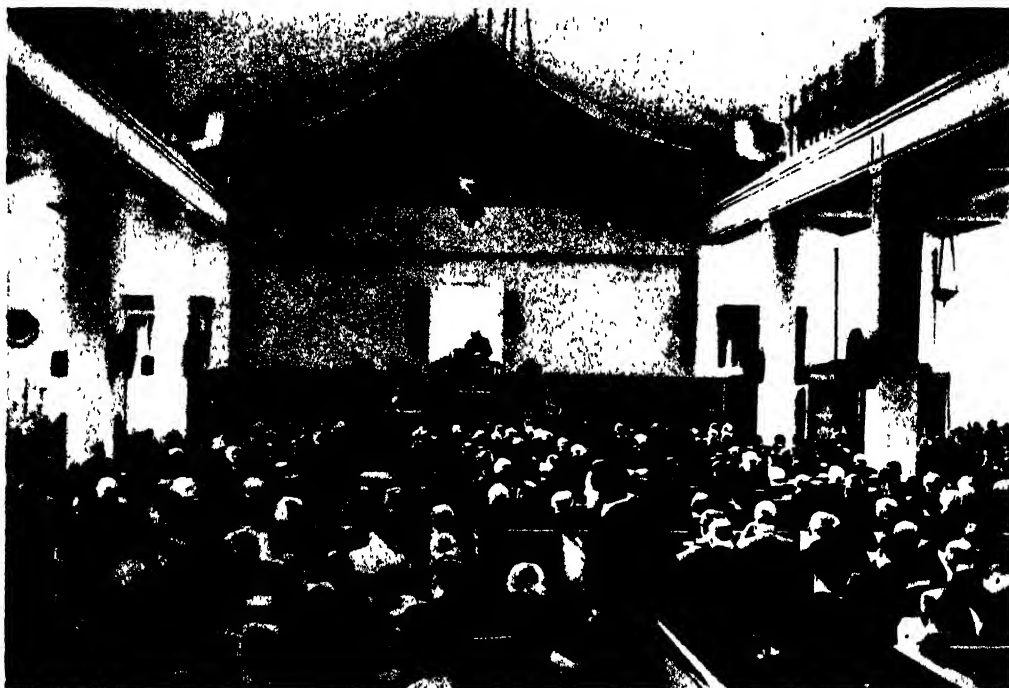
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MAJOR WALTER ELLIOTT
British Minister of Agriculture



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ARTHUR HENDERSON
Leader of British Labor Party, President of
World Disarmament Conference, and former
Foreign Minister



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THE WORLD ECONOMIC CONFERENCE

Prime Minister Ramsay MacDonald, President of the Conference, delivering his address at the opening of the Conference in the Geological Museum, London, June 12, 1933

GREAT BRITAIN

an estimated deficit of some 1,200,000,000 francs. But national fears were relieved. Government securities rose sharply on the Bourse. The gold reserve of the Bank of France again increased. And the government was left free to give its undivided attention to the problems confronting it at the World Economic Conference and elsewhere.

The prolonged budget struggle had held up other legislation throughout most of the parliamentary session. Between June 1, when the budget was finally approved, and July 8, the date of adjournment, a number of important bills were rushed through both houses. One law fixed the price of wheat at 115 francs per quintal (220 pounds) for the year beginning July 15, 1933. At the beginning of each month, the price was to be raised an additional $1\frac{1}{2}$ francs. Importation of foreign wheat was suspended for two months. The government was authorized to fix the price of flour and bread and to borrow 400,000,000 francs to put the law into effect. The existing law regulating the wine market was revised. A minimum alcoholic strength for wines placed on the French market was fixed and new plantations were limited for the next five years. Railway legislation was adopted placing two government representatives on the board of directors of each railway. A special commission was set up to supervise the purchase of railway equipment. While refusing to take over the French Line, the government on July 7 secured parliament's approval of a law increasing the state's supervisory powers over the affairs of the shipping concern (see *Communications*). The law of Apr. 1, 1926, by which pre-war rents were raised a specific amount annually, was suspended until July 1, 1934. An amnesty law covering certain political crimes committed before Jan. 1, 1933, also was passed as a bid for further Socialist support.

Before parliament adjourned, M. Daladier received (June 9) an overwhelming vote of confidence on his domestic and foreign policies. He promised his firm opposition to inflation of the currency, reaffirmed the necessity for restoration of the gold standard in countries which had abandoned it, and favored redistribution of the world's gold stocks through a return to normal economic conditions rather than through banking measures. He convincingly defended France's acceptance of the Four-Power Pact (see *ITALY under History*), holding this course necessary to prevent a break with Great Britain and other European countries. During the summer, the Premier greatly improved his prestige and parliamentary strength by his vigorous foreign policy. His firm but conciliatory policy toward Germany, his vigorous defense of the gold standard and of the principles of currency stabilization at the World Economic Conference, and his refusal to meet the June 15 war-debt installment to the United States all met with favor in France. Meanwhile, the economic condition of the country had improved somewhat. On August 26 the number of registered unemployed was 235,850, or 30,000 less than on the same date of 1932. Industrial and commercial activity showed increases in important lines. Yet declines continued in government revenues, railway operations, and foreign trade, as compared with the previous year.

THE SOCIALIST SCHISM. The summer witnessed a steady widening of the rift in the Socialist

ranks on the issue of the party's relations to the Radical-Socialist government. At the regular party conference in Paris in July the majority faction, headed by M. Blum, censured the conduct of the moderates, led by Pierre Renaudel, in voting for the government's budget. Refusing to capitulate, the Right wing members met on July 19 and gave notice that, contrary to party instructions, they could not refuse in advance to vote for the 1934 budget. A Right manifesto issued August 23, signed by 51 Deputies and 8 Senators, reiterated their opposition to the majority's policy. When parliament reconvened October 17 to consider the 1934 budget an open break between the two wings of the party was in prospect. The issue came to a head at the party's national congress held Nov. 4 and 5, 1933. Thirty members, headed by M. Renaudel, resigned or were expelled, leaving only 100 orthodox Socialists in the Chamber.

FALL OF DALADIER. Speaking at the Radical-Socialist party congress at Vichy on October 8, Premier Daladier outlined his policy on the budget and disarmament. He declared that his government was prepared to stand or fall on a financial programme which would insure the safety of the franc and reestablish national financial stability. As to disarmament, he said that his government would refuse any reduction in French armaments without an international agreement for progressive disarmament guaranteed by the establishment of permanent and automatic supervision and control.

The expenditure budget, as introduced by the government, called for appropriations of 50,442,952,000 francs, or a decrease of 43,758,000 francs from the final figures for 1933. Estimated receipts were some 7,500,000,000 francs below this figure. To eliminate this deficit the government proposed a number of new taxes and economies, the chief of which called for a levy of 2,000,000,000 francs upon civil servants and others with stable incomes. The Premier attempted to hold his moderate supporters in line by his economies while winning over the Socialists by radical revenue proposals. He did retain the backing of the Right wing Socialists, but on his proposal to reduce the salaries of government employees the moderate Centre and the Left wing Socialists combined with the conservative Opposition to defeat the ministry 329 to 241 (October 24).

THE SARRAUT MINISTRY. A new ministry was formed on October 27 by Albert Sarraut, a prominent Radical Socialist and a publisher of the influential *La Dépêche de Toulouse*. It included most of the members of the defeated ministry, with the addition of certain leaders of the Centre, such as François Pietri, the new Minister of Colonies. M. Paul-Boncour was retained as Foreign Minister to insure the support of the moderate Socialists and M. Daladier accepted the War portfolio. Other leading members were: Vice President and Minister of Justice, Albert Dalimier; Interior, Camille Chautemps; Finance, Georges Bonnet; Budget, Abel Gardey; and Air, Pierre Cot.

The Sarraut Ministry entered office confronted by a serious budgetary crisis. Its hands were partially tied by the growing tax riots on the one hand and the threat of a strike of civil servants on the other. It faced the seemingly impossible task of placating both the tax payers and the civil servants and at the same time balancing the budget. The transitional character of the

ministry was evidenced in its first appearance before the Chamber of Deputies November 3. It survived by a vote of 306 to 32 but some 276 deputies abstained from voting, including all of Léon Blum's Socialists and most of the other Centre and Right groups.

Although upheld (545 to 11) in its policy toward Germany in a test vote on November 14, the Sarraut Ministry fell on November 24, when it seemed on the point of winning its battle to balance the budget. Its budget proposals, announced November 15, called for administrative economies totaling 3,000,000,000 francs, a 4 per cent cut in government pensions, the elimination of some civil service posts, etc. These measures were expected to reduce the deficit by some 5,363,000,000 francs. Most of them had won the Chamber's approval when Premier Sarraut made the mistake of accepting a Socialist amendment to the budget measure. Deputies of the Centre and Right immediately abandoned their neutral attitude and the ministry was defeated in the next vote (321 to 247).

THE CHAUTEUPS MINISTRY. The new Cabinet formed on November 27 by Camille Chautemps was composed almost entirely of Radical Socialists; it represented merely a reshuffling of the Sarraut Ministry. Both the Socialists and the Republicans—the nearest groups to the Radical Socialists in political complexion—refused to enter the Chautemps Ministry. Consequently, its position was no stronger than that of its predecessors. Besides the Premier, the chief figures were: Foreign Affairs, Joseph Paul-Boncour; War, Edouard Daladier; Navy, Albert Sarraut; Air, Pierre Cot; and Finance, Georges Bonnet.

On its first appearance before the Chamber of Deputies December 2, the Chautemps Ministry received an unexpectedly decisive vote of confidence (391 to 19). Its financial proposal resembled those of the Sarraut Ministry. To meet the estimated 6,000,000,000-franc deficit, it proposed to reduce expenditures, including civil servants' salaries, check up more closely on tax evaders, and to increase taxation on alcoholic beverages, export licenses, and civil servants' salaries of more than 12,000 francs annually. The Socialists again withdrew their support from Premier Chautemps on December 8, when he insisted upon pay cuts for government employees. The following day the Chamber gave him a vote of confidence (345 to 150) on this issue and on December 19 the Senate did likewise (201 to 58), with the Socialists abstaining. As finally passed on second reading in the Chamber December 24, the budget bill provided for 4,632,000,000 francs in economies and new revenues. The budget was still some 1,400,000,000 francs out of balance, but the deadlock had been broken and the Chautemps Ministry had triumphed where its three predecessors had failed. In addition it secured authority from Parliament for a loan of 10,000,000 francs to consolidate the floating debt. On December 24 Parliament adjourned until Jan. 9, 1934.

Although Premier Chautemps' budget victory offered some encouragement, there was considerable pessimism in France as the year closed. Statistics for 1933 showed a sharp drop in the birth rate, a further decline in French savings accounts, an average decrease of 12 per cent in the value of government rentes (bonds), a 6 per cent decline in railway receipts, and an increase in the registered unemployed to 335,000 at the end of the year. Government revenues had declined 487,000,-

000 francs below the 1932 level and trade had slumped also. There was widespread impatience with the government, exasperation at the frequent Cabinet overturns, and demands for reform and governmental reorganization. To make matters worse, one of the most serious railway disasters on record occurred on December 23. A local train crowded with persons going home for the Christmas holidays was struck in the fog at Lagny by the Paris-Strasbourg Express. The death toll was 200 and some 300 others were injured.

FOREIGN RELATIONS. As in previous years, the dominant factor influencing French foreign policy during 1933 was the rise of the Hitler movement in Germany. The accession of Hitler to the Chancellorship of the Reich on January 30 and his subsequent success in crushing the Republic and establishing an undisputed dictatorship eliminated hope in France that the territorial revision of the Versailles Treaty might be accomplished by peaceful means under the aegis of the League of Nations. Nevertheless, the successive Left ministries in power during the year met the German challenge with moderation and restraint. This moderation was induced in large part by the knowledge that Hitler's aggressive policies had completely isolated Germany and secured powerful support for French foreign policies.

At the beginning of 1933, France and her allies in eastern Europe (Poland and the Little Entente) faced the threat of an anti-treaty bloc of nations headed by Italy and Germany and supported by Austria, Hungary, and Bulgaria. The illegal shipment of arms from Italy into Austria and Hungary, revealed by an Austrian Socialist newspaper in January, increased the general tension. France and Great Britain joined in delivering a veiled ultimatum to Austria, which evoked a furious outburst in the Italian press (see AUSTRIA under *History* for details of the Hirtenberg arms affair).

The spectacular realignment of European foreign policies produced by the Nazi régime in Germany was forcibly demonstrated a few months later. Then France and Britain joined Italy in extending the financial and diplomatic support with which Chancellor Dollfuss in Austria was able to repulse the Nazi onslaught and preserve Austria's independence (see AUSTRIA, GERMANY and ITALY under *History*).

The Franco-Italian reconciliation was made possible through the French government's conditional acceptance of the Four-Power pact, proposed by Mussolini and supported by Prime Minister MacDonald of Great Britain. Il Duce hoped that by means of the pact the fundamental differences between Germany and France could be adjusted, with Italy and Britain acting as "honest brokers." Speaking in the Chamber of Deputies April 6, Premier Daladier admitted the possibility of treaty revision by saying that France agreed that no treaty was eternal. France, he asserted, wished to find a pacific procedure of revision which would have the consent of interested states. France was ready to reduce armaments progressively, on condition that no state would attempt to rearm. Accordingly the French reply to the Mussolini proposals, delivered April 11, sought to maintain a basis of collaboration with Britain and Italy, while insisting that the "big four" negotiations should proceed within the framework of the League and that the in-

terests of Poland and the Little Entente be guaranteed.

Before the negotiations on the Four-Power pact were completed, it was rendered useless, temporarily at least, by events in Europe. Nazi propaganda activities in Austria were declared by France in a note of August 6 to the German Foreign Office to be a violation of the spirit of the pact. And with the withdrawal of Germany from the Disarmament Conference and the League of Nations on October 14, the French considered that the pact was automatically dead. On October 17, Premier Daladier made a noncommittal response to Hitler's proposal for direct Franco-German negotiations. "If an entente is sincerely desired," he asked, "why begin with a rupture?" However, Franco-German negotiations for an agreement on armaments were proceeding at the end of 1933, with Italy and Great Britain acting as conciliators.

Italian chagrin at the failure of the Four-Power pact was offset in some degree in November, when the French accepted Mussolini's plan for improvement of economic conditions in the Danubian states (see ITALY under *History*). Previously, the success of Italian diplomacy in checking Nazi absorption of Austria had aroused some alarm in France, where it was feared that Mussolini would take advantage of the occasion to establish Italian hegemony in central Europe. Meanwhile the bonds between France and her allies had been drawn closer by the Nazi menace. For the same reason, the Anglo-French entente reached at the Lausanne Conference in 1932 was cemented more strongly. Common fear of Germany furthered the rapprochement between France and the Soviet Union, which had been inaugurated by Premier Herriot in 1932. On Feb. 11, 1933, the Franco-Soviet non-aggression pact was ratified by the French government, the exchange of ratifications taking place February 15. A visit to Russia in August and September by former Premier Herriot and a party of prominent Frenchmen was followed on September 15 by the arrival at Moscow of Air Minister Pierre Cot at the head of a French air squadron. As the champion of the League of Nations, France won many friends among the smaller countries of Europe and of the world following the German attack upon the League.

FRANCO-AMERICAN RELATIONS. Franco-American friendship had been severely strained toward the end of the Hoover Administration due to French resentment at Mr. Hoover's moratorium proposal of 1931 and American anger at the French default on the war debt payment of Dec. 15, 1932. This irritation was allayed to some extent by the advent of the Roosevelt Administration in March, 1933, and President Roosevelt's friendly gestures. Soon after his inauguration he proposed that France send a representative, preferably M. Herriot, to Washington to confer with him on Franco-American problems. With an entourage of officials and advisers, M. Herriot arrived in Washington April 23. He sailed for home April 28, without reaching any understanding as to war debts, in which the French were primarily concerned. France defaulted on the war debt installments due the United States June 15 and December 15. At the end of the year, this issue continued as the principal source of dispute between the two countries. See **REPARATIONS AND WAR DEBTS.**

The Roosevelt-Herriot conversations were be-

lieved to have laid the foundation for collaboration between their respective countries with regard to "economic disarmament," the restoration of stable monetary policies, the raising of world prices by reducing barriers to world commerce, and the execution of public works programmes. However the abandonment of the gold standard by the United States April 19 had already launched the United States upon an economic policy fundamentally at variance with that of France. The necessities of the domestic situation forced President Roosevelt to repudiate the international economic policies which he had contemplated at the time of his talks with M. Herriot.

The depreciation of the dollar in terms of foreign currencies threatened to drive France off the gold standard. At the World Economic Conference, France headed a bloc of nations in opposing any negotiations upon tariff reductions unless the United States agreed to end the fluctuations of the dollar. The stabilization issue was the rock upon which the conference was wrecked (see **ECONOMIC CONFERENCE, WORLD**). On October 12, France denounced the international tariff truce, which had been entered into by most of the nations of the world in advance of the London conference.

OTHER DEVELOPMENTS. In the Far East, France came into conflict with Japan over the French annexation of a group of small islands in the South China Sea, dominating the sea route to French Indo-China (see JAPAN under *History*). A tariff convention between France and Spain, supplementing that of Oct. 23, 1931, became effective June 23, 1933. An important trade agreement with Canada, signed at Ottawa May 12, became effective June 10, 1933, for one year.

See **UNION OF SOVIET SOCIALIST REPUBLICS** under *History*; **LEAGUE OF NATIONS**; **UNITED STATES OF EUROPE**; **DISARMAMENT**.

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FRANZ, SHEPHERD IVORY. An American psychologist, died in Los Angeles, Calif., Oct. 14, 1933. He was born in Jersey City, N. J., May 27, 1874, and was graduated from Columbia University in 1894, receiving the Ph.D. degree from the same institution, after intervening study at the University of Leipzig, in 1899. He served as assistant in physiology at Harvard University during 1899-1901 and as instructor in physiology and medical physics at the Dartmouth medical school during 1901-04. After acting for two years as physiologist and pathological psychologist at the McLean Hospital for the Insane at Waverley, Mass., he was called to George Washington University, holding the chair of physiology in its medical school until 1921 and of experimental psychology in its graduate school until 1924. He acted also from 1907 to 1924 as psychologist, from 1910 to 1919 as scientific director, and from 1919 to 1924 as director of laboratories at St. Elizabeth's Hospital, the government hospital for the insane in Washington. During 1920-24 he was instructor in neurology at the Naval Medical School and during 1922-23 lecturer in psychology at the Johns Hopkins University.

Called to the University of Southern California as lecturer in psychology in 1924, Dr. Franz

served after 1925 as professor of psychology at that institution and also as chief of the psychological and educational clinic of the Children's Hospital in Hollywood. He was president of the Southern Society of Philosophy and Psychology in 1911, of the American Psychological Association in 1920, and of the Western Psychological Association in 1927 and during the War was a member of the psychological committee of the National Research Council. In addition to editing the *Psychological Bulletin* during 1912-24 and *Psychological Monographs* during 1924-27, he published a *Handbook of Mental Examination Methods* (1912), *Nervous and Mental Reeducation* (1923), and *Persons One and Three* (1933) and contributed to the *Psychological Review* and other scientific journals about 100 articles on psychology, neurology, and psychopathology.

FRASER, WILLIAM ALEXANDER, A Canadian author, died in Toronto, Ont., Canada, Nov. 10, 1933. Born in Pictou Co., N. S., in 1859, he was educated at Westchester, N. S., and spent several years as an oil prospector in the Canadian Northwest. He assisted also over a period of nine years in developing the oil resources of India and Burma. He later vividly described the life of these regions in *The Eye of a God, and Other Tales of East and West* (1899); *Mooswa and Other Animals of the Boundaries* (1900); *The Outcasts* (1901); *Sorrow and Old Friends* (1901); *Blood Lilies* (1903); *Sa-zada Tales* (1905); *Thirteen Men* (1906); *The Lone Furrow* (1907); *The Three Sapphires* (1918); *Bulldog Carney* (1920); and *Caste* (1922). Even more popular were his tales of horse racing, including *Thoroughbreds* (1902); *Brave Hearts* (1904); and *Delilah Plays the Ponies* (1927). Among Mr. Fraser's poems were the national song, *Canada, God, and our Land*.

FREEMASONRY. *Universality*. Masonic orators and writers are fond of stressing their order's wide diffusion. "Masonry knows no state line; it is universal," said the Georgia representative at the laying of the new Federal building's cornerstone at Chattanooga, Tenn., Jan. 10, 1933. At the sesquicentennial of the lodge at Larne, Ireland, the orator spoke of their pride in the "great fellowship which spans all distance, bridges all differences of speech and brings men together by a common inspiration." Speaking at an open meeting of Arcadia Lodge No. 2096 of London, Sir Kynaston Studd told of his experience as a member of a deputation which had visited India and noted the leveling effects of bringing together in the same lodge men of diverse creeds and castes. The Provincial Grand Master of Netherlands East Indies reports that

There are quite a few Javanese Masons, also Malays and a few Chinese. No color line is drawn. The Oriental is inclined to a contemplative conception of Freemasonry; the spread of good will among all people and love of humanity has taken deep root among the native brethren.

The Universal League of Freemasons, organized at Boulogne in 1905, held its annual Congress at the Hague, August 31 to September 3. It invites all Freemasons to participate and announces as its aim "the pacification of the world and the universal brotherhood of mankind." In Switzerland, the organization arranges for Masonic pilgrimages—e.g. to Egypt and Palestine.

This feature is best exemplified by a review of affairs in the leading jurisdictions.

America (United States of). On February 22, the George Washington National Memorial Association, held its 23d annual convention in the

auditorium of the new memorial temple at Alexandria, Va. (See 1932 YEAR BOOK, p. 303.) The Virginia Grand Master extended a welcome to the delegates and Alexandria-Washington Lodge, of which the first American President was once Master, entertained them in a stated communication on Washington's birthday. The Northern (U. S.) Supreme Council held its 121st annual communication in Boston, September 26 to 28. Melvin M. Johnson was elected Grand Commander, to succeed the late Leon Abbott, for three years, on September 27th and that evening the 33° was conferred on 60 candidates. On October 8 the General Grand Council of Royal and Select Masters assembled in the Masonic Temple at Washington. Robert A. Woods of Princeton, Ind., was elected General Grand Master for the ensuing three years. The session was followed immediately by that of the General Grand Chapter of Royal Arch Masons, of which William S. O'Hara of Toledo was elected General Grand High Priest. The body declined to approve the so-called council of "allied degrees" recently formed. The Earl of Cassilis, leading Scotch Mason, was among the visitors, and St. Louis was selected as the next place of meeting in 1936. In the following week the Supreme Council of the Southern Jurisdiction (U. S.) was in session at Washington. The number of visitors was smaller than for many years and the customary pilgrimage to Mt. Vernon was omitted. No new active members were elected and there was no award of the grand cross.

The leading Masonic anniversary in the United States was the bicentennial of the Grand Lodge of Massachusetts, observed June 25-28 at Boston. That distinguished body was warranted as a provincial grand lodge by the premier Grand Lodge of England in 1733 and on April 30 of that year, Maj. Henry Price (1697-1780) was commissioned provincial grand master. His jurisdiction was extended, in the following year, over the whole of North America. In 1769, under the authority of the Grand Lodge of Scotland, St. Andrew's provincial grand lodge was opened in Boston with Joseph Warren (later hero of Bunker Hill) as its first master and in 1792, these two provincial grand lodges united to form the present Grand Lodge of Massachusetts, which thus claims to be the premier grand lodge of the United States. At the celebration, representatives were present from the grand lodges of England (Sir Francis J. Davies, Provincial grand master of Worcestershire), Scotland (Lord Belhaven and Stenton, Grand Master, who delivered an address), Nova Scotia, Ontario, Prince Edward Island, Quebec, Queensland, Rio de Janeiro, and 27 of those of the United States. Music was furnished by the Haverhill Masonic choir which rendered "God Save the King," followed by "America" in closing. Past Grand Master, Melvin M. Johnson, delivered the address of the occasion.

Austria. The annual report of Grand Secretary Misaer, of the Grand Lodge of Vienna, at its annual communication on March 11, showed an increase in membership with two new lodges chartered—one in Vienna (Saraastro) and the other at Shanghai, China (*Lux Orientis*). There are altogether 26 constituent lodges, four of which are outside of Austria, with a total membership of 1870. The Grand Lodge addressed a memorial in behalf of peace to the disarmament conference and observed the anniversaries of Haydn, George Washington, and Goethe. Charity was dispensed to a considerable extent during the year.

Belgium. The centennial of the Grand Orient was observed May 4-6 with representatives present from various European grand bodies. A brilliant musical concert marked the opening and there were two banquets—one for the poor (at both Brussels and Antwerp) and the other for members and visitors. A ritualistic session was held on Sunday and a jewel and diploma were awarded.

Brazil. In the year when the national convention began to consider a proposed new constitution the governing bodies of Masonry, the Grand Orient and the Supreme Council, effected a separation and grand lodges have been formed in eight of the states.

British Empire and Commonwealth. England. The number of lodges under the United Grand Lodge increased from 4622 to 4696, during the year and 200,000 Grand Lodge certificates were issued. On July 12, in the presence of eminent Masons, the King and Queen of England opened with ceremony the Royal Masonic Hospital at Ravenscourt Park, London, built at a cost of about \$1,700,000. The dedicatory prayer was offered by the Archbishop of Canterbury and His Majesty, in response to an address by the Duke of Connaught, Grand Master, and uncle of the King, spoke at some length. But the crowning Masonic dedication of the year was that of the Masonic Peace Memorial, at 52 Great Queen St., London, on July 12. The "Memorial" is a huge building which also serves as the headquarters of the Grand Lodge of England and the "central home of the craft." It was recently completed, after 14 years of construction, at a cost of £1,000,000. The dedication ceremonies were conducted by the same Grand Master, now 83 years old.

Around him were other officers of the Mother Grand Lodge, including the Prince of Wales and his younger brother, Prince George, Senior Grand Warden, and representatives of grand lodges of every continent, including many from the United States, and the provincial and district grand lodges. The 2000 who filled the main hall were augmented by about 4000 more in the various other halls of the massive structure which extends 450 feet along Great Queen St. and supports a tower as high as Niagara—100 feet—overlooking central London. The delegations were greeted in the order of the seniority of the jurisdiction which they represented and numerous memorials and illuminated addresses were received.

Canada. The total number of Masons in the Dominion is reported as 201,454 and of lodges, 1379. The *Masonic Sun* of Toronto advocates a stricter investigation of applicants as to character and fitness. Preparations have begun for observing in 1938, the bicentennial of Canadian Masonry. Southern Cross Lodge No. 44 (Scotch Constitution) of Vancouver, B. C., held a session in the Scottish Rite Temple at Tacoma in April and conferred the Master's degree according to the Scotch ritual. About 100 of its own members were present with over 2000 visiting Masons and the Grand Masters of British Columbia, Washington, and Oregon.

Ireland. Increase in membership throughout the jurisdiction as a whole with special progress in the province of Antrim is reported.

New South Wales. The total membership was reported as 64,254; of lodges, 594. Aubrey Halloran was Grand Master during the year.

Queensland. The total membership was reported

as 21,111; of lodges, 354. Sir John Goodwin was Grand Master during the year.

Czechoslovakia. On October 27, the National (native) Grand Lodge celebrated its 10th anniversary. Its heroes, according to a message from its Grand Master, Dr. Charles Weigner, are

Huss, the prophet of freedom of conscience against medieval force; Comenius, the teacher of nations and one of the creators of modern Masonry; Masaryk, a disciple of truth and one of the builders of the new democratic Europe.

The "Jan Huss League of Slav Freemasons in America," made its second annual pilgrimage to Praha (Prague) for the observance of its hero's martyrdom which occurred on July 6, 1415.

China. A new lodge was opened at Nanking under a warrant from the Philippine Grand Lodge. A council representing the various grand jurisdictions working in China has also been formed.

Germany. In April, the Grand Master of the National Grand Lodge was advised by the "Nazi" government that the order would be allowed to continue only by changing its designation to that of the "National Christian Order of Frederick the Great," discontinuing all international relations, eliminating all non-Germans and all secrecy. It will be seen that this meant the practical suppression of the fraternity as theretofore existing; and such has been the result; although some of the bodies purport to continue under the title above given.

Paraguay. Under a decree of the Grand Master, as in Brazil, the Grand Lodge is divorced from the Grand Orient and the Bible is placed on the altar.

San Domingo. On February 27 the annual communication of the Supreme Council was opened at Santo Domingo City. No deaths were reported for the year and 45 new honorary members were elected, one of whom had received his first degree more than 60 years before. Charters were issued for 10 new bodies and steps were taken to revise the liturgies and reprint them as well as the statutes.

Spain. The annual communication of the Grand Orient adopted a Masonic passport in booklet form; provided for a Masonic publishing house; resolved that historical textbooks, especially those for schools, be revised by eliminating references to war and demanding equal rights for Moroccans with Spaniards. Diego Martinez Barrio was elected Grand Master. Deaths reported included José Moreira, 33°, member of the Spanish Grand Orient and Supreme Council, authority on Masonic history in Spain and Spanish America; Carmen of Burgos, Grand Maestra of the Lodge of Adoption Amor and lecturer on special subjects.

CEREMONIALS. Freemasonry, as the successor of a guild of builders, has inherited much of the latter's nomenclature, symbolism, and ceremonial—notably that of

Cornerstone Laying. In 1933, cornerstones of United States public buildings were laid by Masonic Grand Lodges in Chattanooga, Tenn., on January 10; in Atlanta, Ga., on February 11; at Reno, Nev., on May 13; at Norfolk, Va., on September 7; and at Columbus, O., on September 24.

Claremore Lodge No. 53 of Oklahoma, was presented with an old cornerstone which it had laid officially 28 years before and which contained various historical relics. Apropos of the third ceremony above mentioned, the Roman Catholic bishop of Reno, wrote the postmaster of that city,

contending "that the Masons are intruding into a sphere that is public business in this matter." In reply the latter traced the history of Masonic cornerstone laying in this country and declared that "until now, there has been neither assertion nor implication that there was anything objectionable, unrighteous, or offensive in that proceeding."

On July 4, under the auspices of the Centennial Commission, the Grand Lodge of North Carolina reproduced the ceremony of laying the cornerstone of the State capitol at Raleigh 100 years before. It is reported that "thousands lined Fayetteville St." along which the Grand Lodge marched in procession.

Lord Harewood, Provincial Grand Master of West Yorkshire, laid the cornerstone of St. Christopher church at Lower Shiregreen, Sheffield, in the presence of 18 lodge masters, many other Masons and the general public. The cornerstone of a strictly Masonic building was laid for Chatham Hall Lodge No. 152 (warranted in 1810) on June 17 by William Wallace, Provincial Grand Master of Antrim, Ireland.

CHARITIES. A Freemasons' orphanage at Stockholm is claimed to be the oldest Masonic charitable institution. It was founded by Adolphus Frederick, King of Sweden, in 1753, after he had become Grand Master of the order in that country. The Illinois Grand Master called a relief conference of Cook County (Chicago) lodge officers. The Scottish Rite bodies of Tacoma, maintain a Masonic Service Bureau and have obtained employment for nearly 1000. Those of Columbus, O., organized a Masonic Cooperative Bureau for the same purpose. The Shrine, as is well known, maintains numerous hospitals for crippled children. The organization known as the "Grotto," seeks to enable boys of the Masonic Homes to learn trades. Annuitants numbering 2040, are represented as receiving \$110,000 annually from the Royal Masonic Benefit Institution of the United Grand Lodge of England. Subscriptions of Mark Masons of the province of Hertfordshire, to the Benevolent Fund, averaged over £6 per capita. Netherlands Masons dedicated an institute for the blind of both sexes in the presence of Queen Wilhelmina, her daughter, Princess Juliana, and the Prince Consort, who expressed their appreciation of the noble enterprise. The Dominican Supreme Council set aside for charity 10 per cent of all receipts by it or its tributary bodies. The Grand Lodge of New South Wales appropriated £1210 for miscellaneous charities, mostly hospitals, in addition to its regular ones.

CIVIC ACTIVITIES. Lodges of five outside nationalities met in London and resolved on a greater effort for world peace. American Masons are generally strong supporters of the public school system and correspondingly opposed to State aid for private schools of any class. In Montana they helped to defeat on March 1, the bill to furnish free text books to the private schools of the State. In California they participated in the rejection on June 27 of "Proposition No. 4," an initiated bill to relieve from taxation the property of private educational institutions. In Ohio, they assisted in preventing the passage of a measure which would have enabled the parochial schools to share in the common educational funds. The Attorney General had previously rendered an opinion that such a measure would be unconstitutional.

The prominence of royalty and the nobility in

English Masonry finds its reflection in other branches of civic life. Guildhall Lodge No. 3116 of London is but 28 years old and 22 of its Masters, including, as we have seen, the present one, have been Lord Mayors of the city. In the United States, President Roosevelt is the 14th Masonic President, having received the Master Mason's degree on Nov. 28, 1911 in Holland Lodge No. 8. In an address delivered almost exactly eight years later, at the cornerstone laying of the new building of Stansbury Lodge No. 24 (of which he is an honorary member) of Washington City, he expressed himself as

proud to say that no family in the country as a whole is more closely identified with Masonry than the Roosevelt family.

He received the 32° of the Scottish Rite in the Albany Consistory on Feb. 28, 1929 and became a member of Cyprus Temple, Nobles of the Mystic Shrine at Albany, on Mar. 25, 1930. He is also a member of the Grotto and of the Tall Cedars of Lebanon, whom he received at the White House during their annual convention in Washington in May, 1933. Of his Cabinet, Secretaries Dern and Roper are Scottish Rite Masons and Attorney General Cummings has been since Aug. 1, 1892, a member of Hiram Lodge No. 1 of New Haven, Conn. During the evening of February 17, 1933, in Architect Lodge No. 517, New York City, and in the presence of over 1500, President-elect Roosevelt assisted in "raising" to the Master Mason's degree his son Elliott, and later addressed the assemblage.

Mayor LaGuardia of New York City is a life member of Garibaldi Lodge No. 542, of that metropolis and Ferdinand Pecora, who was the Recovery party candidate for district attorney of New York City, and has conducted the banking investigation for the Senate Committee, is Past Master of York Lodge, No. 197 of the same city and was recently appointed deputy district grand master of the 2nd Manhattan district, which has 24 lodges. Many members of Congress, governors, and other high officials of the country are affiliated with the order. Attorney General Bennett of New York, a Catholic, was invited by Truth Lodge No. 888, to deliver its annual greeting to the State's 350,000 Masons.

LITERATURE. The year's output of Masonic publications has not been extensive. One of the most permanent is *The Morgan Episode in American Freemasonry* (The Roycrofters, East Aurora, N. Y., 152 pp.) by Rev. David Upton Mock of Batavia, N. Y., a member of Batavia Lodge No. 475. It followed closely upon *The Strange Disappearance of William Morgan* (Macoy Publishing Co., 302 pp.) by Thomas A. Knight. Both writers lay stress on the fictitious nature of the Morgan story, the evil nature of its promoters and the mercenary and political motives which inspired its exploitation. Another notable work of the year is the second issue of *Freemasonry in the Thirteen Colonies* (Macoy Publishing Co., 273 pp.) by J. Hugo Tatsch, covering a period hitherto much neglected in the history of the American craft. The Grand Lodge of Czechoslovakia has launched a quadrilingual bulletin.

FRENCH ACADEMY. See ACADEMY, FRENCH.

FRENCH CAMEROON. See CAMEROON.

FRENCH CONGO. See FRENCH EQUATORIAL AFRICA.

FRENCH EQUATORIAL AFRICA. A French colonial empire extending in a northeasterly direction from the Atlantic Ocean be-

tween Spanish Guinea and the Belgian Congo inland to the Anglo-Egyptian Sudan. It comprises the four French colonies of Gabun (area, 104,320 square miles; population in 1931, 387,283); Middle Congo (172,411 square miles; population 661,909); Ubangi-Shari (236,363 square miles; population 1,090,084); Chad (398,955 square miles; population 1,053,006). Total area, 912,049 square miles; total population, 3,192,282 including 3806 Europeans. The chief towns are Brazzaville, the capital, 4000 inhabitants; Banqui, 13,301; Fort Lamy, 6100; Libreville, 4326. In 1932 there were 150 schools with a total of 11,266 students.

The products are wild rubber, ivory, coffee, cacao, ground nuts, palm oil, and cotton. Copper, lead, and zinc are found. For 1931, imports were valued at 224,920,537 francs (franc equals \$0.0392 at par); exports, 119,152,370 francs. The general budget for the four colonies balanced at 86,875,000 francs. Local budgets for 1932 were balanced as follows: Gabun, 17,185,000 francs; Middle Congo, 23,600,000; Ubangi-Shari, 17,800,000; Chad, 17,048,200. The public debt, in 1930, amounted to 363,800 francs.

The governor-general, assisted by a secretary-general and a council of government, has general supervision, but each colony is governed by a lieutenant-governor assisted by an administrative council. Governor, Raphael Antonetti.

FRENCH FILMS. See **MOTION PICTURES.**

FRENCH GUIANA, gé-à'-nà. A French colony on the northern coast of South America between Brazil and Surinam (Dutch Guiana). Total area, about 34,740 square miles; total population (1931 census), 29,085 of whom 5954 were in the penal settlements. There are penal settlements at Cayenne and Maroni. Cayenne, the capital, had 12,000 inhabitants in 1931. In 1930-31 there were 3263 students in the various schools.

Agriculture is limited. Only about 7900 acres were under cultivation. The crops consist of maize, rice, gutta percha, tobacco, manioc, cacao, and coffee. The forests are rich in commercial gums and tropical lumber. The important industries are gold mining and the extraction of rosewood essence. In 1931, imports were valued at 42,698,693 francs (franc equals \$0.0392 at par); exports, 30,153,575 francs. Three main highways and many secondary roads connect Cayenne with the centres of population in the interior. The capital has steamboat communication with the other towns in the colony. There are about 30 miles of railway.

The budget for 1932 balanced at 16,578,950 francs; the public debt was 635,000 francs. A governor administers the colony assisted by a privy council, and a council-general elected by French citizens of the colony. French Guiana sends 1 deputy to the French Parliament. Governor in 1933, M. Bouge.

FRENCH GUINEA, gín'-t. A French colony on the west coast of Africa between Sierra Leone and Portuguese Guinea, forming a part of French West Africa (q.v.). Lieutenant-Governor in 1933, M. Vadier.

FRENCH INDIA. The five French dependencies in India along the western coast of the Bay of Bengal about 100 miles south by west of the city of Madras and north of the island of Ceylon. Total area, about 196 square miles; total population (estimated Feb. 26, 1931), 290,460, divided among the five dependencies as follows: Pondichéry, 188,064; Karikal, 58,228; Chander-

nagor, 27,393; Mahé, 11,959; Yanaon, 4816. French residents numbered about 1113. The chief towns are Pondichéry, the capital, with 43,449 inhabitants in 1931; and Karikal, 17,558. In 1930 there were 59 primary schools and 3 colleges with 10,922 students.

Manioc, rice, and ground-nuts are among the main crops. Imports of the ports of Pondichéry, Mahé, Karikal, and Yanaon for the year 1931 amounted to 96,215,000 francs (franc equals \$0.0392 at par); exports 173,695,000 francs. In 1931, 271 vessels entered and cleared the four ports mentioned above. There were 43 miles of railway open to traffic.

The budget for 1932 was estimated to balance at 2,675,595 rupees (rupee equals \$0.3650 at par). The governor is assisted by an elective general council. French India is represented in the French Parliament by one senator and one deputy. Governor in 1933, Adrien Juvanon.

FRENCH INDO-CHINA. A French dependency south of China and east of Siam and Burma, consisting of the colony of Cochin-China; the protectorates of Annam, Cambodia, Tongking (Tonkin), and Laos; and Kwangchow (Kwangchowwan), leased from China in 1898. The capital city is Hanoi, but during certain seasons of the year, when climatic conditions are oppressive, the government offices remove to Saigon. The area and population are shown in the accompanying table.

Division	Sq. miles	Pop. (1931)	Capital
Cochin-China ..	24,274	4,484,000	Saigon
Cambodia	69,866	2,806,000	Pnom-Penh
Annam	56,976	5,122,000	Huê
Laos	89,320	944,000	Vientiane
Tongking	44,660	8,096,000	Hanoi
Kwangchow ...	328	250,000	Fort Bayard
Fr. Indo-China .	285,424	21,702,000	Hanoi

The total population included 42,000 Europeans and 418,000 Chinese. Chief cities are Cholon (Cochin-China), 134,000 inhabitants in 1931; Hanoi, 124,000; Saigon, 122,000; Haiphong (Tongking), 122,000; Binh-Dinh (Annam), 74,000; Huê, 124,000; Vientiane, 10,000. In 1931 there were 5164 elementary schools for native children with 330,000 students; 14 high schools with 5036 students; the Indo-Chinese University at Hanoi with 472 Indo-Chinese students, and the school of Medicine and Pharmacy with 80 students.

PRODUCTION. The principal industries are agriculture, mining, and fishing. The region tributary to Saigon is a great rice growing district of the world. Rubber, sugar, cinnamon, and tea are other agricultural products. The 1931-32 production of rice (rough) for Indo-China was 5,612,000 metric tons from 13,105,820 acres. Rubber exported in 1932 amounted to 14,000 metric tons. Mineral production in metric tons was as follows: Coal (1932), 1,680,000; cement (1931), 152,000; natural phosphates (1931), 13,000; zinc (1932 estimate), 10,000; chrome ore (1931), 1400; tin ore (metal content), 1000.

COMMERCE. The various divisions of French Indo-China were united into a Customs Union in 1887. Rice, fish, rubber, coal, pepper, cattle and hides, corn, zinc, and tin ore are the chief exports. In 1932, total exports were valued (preliminary report) at 1,021,000,000 francs (franc equals \$0.0392 at par). The principal imports are metal goods, cotton and silk tissues, kero-

sene, and automobiles. Total imports (1932 preliminary report) were valued at 967,900,000 francs.

FINANCE. There is a general budget for Indo-China and a separate budget for each of the component divisions. The general budget for 1933 balanced at 74,980,950 piastres (piastre equals 10 francs). Public debt of Indo-China on Jan. 1, 1932 amounted to 66,352,400 piastres. Local budgets were estimated to balance as follows: Annam (1932), 8,086,105 piastres; Cambodia (1931), 11,434,020; Cochinchina (1931), 17,000,000; Kwangchow (1931), 620,000; Laos (1932), 4,246,100; Tongking (1932), 12,946,590.

COMMUNICATIONS. On Jan. 1, 1932 there were 5252 miles of colonial routes and 10,222 miles of local roads. Government owned railways (leased in part to private operators) extended 1488 miles in 1931. In the same year there were 4000 miles of telephone line; and 11,425 miles of telegraph line in 1930. Ships entering the ports in 1931 totaled 2094 and aggregated 4,075,394 net registered tons; ships clearing totaled 2020 and aggregated 4,100,012 net registered tons. Weekly air mail service is maintained between Saigon and Europe.

GOVERNMENT. A governor-general heads the government, assisted by a secretary-general, a government council, and a grand council for economic affairs. A French resident-superior administers the affairs of each of the states except Cochinchina which has a governor at its head. Governor-General in 1933, Pierre Pasquier.

FRENCH IVORY COAST. See FRENCH WEST AFRICA.

FRENCH LITERATURE. There is constantly discussed in France the book business crisis, but overproduction of books is what strikes the observer. There is perhaps a relation between the two. Authors, knowing how hard it is to find a market, turn out better copy, which publishers cannot afford to discard. There is, of course, a certain amount of trash, but, on the other hand, so much of general excellence that a selection is very hard to make in this article. Even the Surrealists offer to-day prose that one can understand. The works on literary history of a superior kind have multiplied considerably: it is difficult to keep track of them.

Again, the distinction between literature and non-literature is often non-existent; one knows not where to draw a line. How would it be possible to ignore Maeterlinck's *La grande loi*, or Mauriac's *Le romancier et ses personnages* or *Dieu et Mammon*? In the latter the most successful of present-day novelists (who was elected this year to the French Academy) discusses the relation of the novelist with his characters, and his responsibility when he is—like Mauriac himself—a Catholic writer. Neither can we omit A. Maurois's *Chantiers américains*, written after a trip made specially to observe at first hand the Roosevelt experiments by one of the ablest writers of to-day. The same is true of *Quand Israël n'est plus roi* by the brothers Tharaud, whose fame rests largely on their novels depicting Jewish populations of the Near East. Can we ignore *Londres* by Paul Morand, who published recently his brilliant *New-York*? Or, in the domain of history, Pierre Gaxotte's views on *Le siècle de Louis XV*, a bold attempt at rehabilitating this monarch, or D. Mornet's *Origines intellectuelles de la Révolution*? Even Rosstand's *L'Aventure humaine: Du germe au nouveau-*

né has been everywhere discussed as a literary product.

One must mention also in this connection the constantly increasing number of literary prizes offered in France. Among the more important was the Prix Osiris, valued at 100,000 francs and offered every third year, which went to Camille Jullian, author of the magnificent *Histoire de la Gaule* which raised him to the rank of the great historians like Augustin Thierry and Michelet. The Grand prix de littérature went to Henri Duvernois, novelist and playwright, whose most recent works are *À l'ombre d'une femme*, and the play *Maison de confidences* at the Grand Guignol. The Grand prix du roman (French Academy) was awarded in June to Roger Chauviré for *Mademoiselle de Boisdauphin*, the dénouement of an old, aristocratic family, of which a charming girl is the tragic victim. (Chauviré, who teaches French at the University of Dublin, was known already for a poem *Tombeau d'Hector*, crowned by the Société des gens de lettres, and by his *Geste de la branche rouge, ou l'Iliade irlandaise, inspirée par les Gallois*). Part of the Prix Gobert went to J. M. Carré, author of lives of Goethe, Stevenson, Rimbaud, and, in 1933, of *Voyageurs français en Egypte*. The Prix Lasserre, valued at 10,000 francs, was awarded to Marius Ary Leblond.

The Prix Goncourt, which was awarded to André Malraux chiefly for his last book *La Condition humaine*, depicting the unceasing civil wars in China with a powerful realism skillfully mixed with keen human psychology, was aimed also at his earlier *Les Conquérants* and *La Voie Royale* (having the same background). Geneviève Fauconnier's *Claude*, the story of a woman who courageously struggles with life and wins our sympathy and admiration, carried the honors of the Prix Femina; there may well be many elements of autobiography in this novel, as the author herself is the courageous mother of five children reared on a farm which she herself is managing in the Charente. The Prix Renaudot was taken by the much discussed *Le Roi dort* of Ch. Braibant, a clever picture of a peasant child in Champagne who is to be the heir one day of the family's estate, but is in the meanwhile well under the control of a commanding mother. The style is, at times, shockingly realistic and brutal, and one sees the influence of Céline's *Voyage au bout de la nuit*, which was crowned last year by the same jury and which aroused considerable discussion.

Why not recall that, as in the case of Goethe in 1932, France celebrated the centenary of Walter Scott on January 2, in a great ceremony at the amphitheatre of the Sorbonne, in the presence of the President of the Republic, of the British ambassador, and under the patronage of the Minister of Public Instruction. At the banquet which followed, presided over by the Marquis de Vogüé, the eulogy was delivered by Professor Cazamian.

A remarkable exhibition of *Rabelaisiana* was held in the spring at the Bibliothèque Nationale in commemoration of the fourth centenary of the appearance in print of *Pantagruel*. An exhibition in Bordeaux commemorated the 400th anniversary of the birth of Montaigne, and a statue of the great essayist, by Landowski, was inaugurated at the Sorbonne June 24. (The statue will be placed finally on Place Clugny near-by.)

POETRY. Let us begin by mentioning a few of the Prix de poésie. The French Academy awarded one of 5000 francs to Paul Fort, several years ago elected *roi des poètes*, and the author of the well-

known *Ballades françaises*. La Maison de poésie, fondation Émile Blémont, gave the prix Petitdidier (12,000 francs) to Emmanuel Égarter, for his complete works; the Prix Blémont, to Henry d'Yvignac for *L'Écharpe de Viviane*; the Prix Verlaine, to Henri-Puvis de Chavannes for *Visage de la Terre*; and the Prix Edgar Poe, to René-Louis Piachaud (of Geneva) for *Le Poème paternel*. The Société des gens de lettres awarded the Prix Jacques Normand to Jacques Hameline for *Idole de cendre*, and a special prize of 3000 francs to Mlle. Suzanne d'Olivera Jackowska for her translation in free verse of the best of Poe's poems. The Prix Sully Prudhomme went to Marie-Louise Boudat for *Eve* (the title being borrowed from Péguy). One of the most coveted of the poetry prizes, the Prix Moréas, went to Jean Lebrau for *Images de Moua* and *Ciel sur la Garigue*.

Among the other publications of the year were Saint-Georges de Bouhélier's *Choix de poésie* (the fortieth anniversary of his entering upon a literary career was commemorated by a ceremony at the Sorbonne). Rosemonde Gérard (Mme. Edmond Rostand) published a new volume, *Féeries*, and Fr. Mauriac, the new Academician, brought out *L'Adieu à l'adolescence*. R. Valléry-Radot published an *Anthologie des poètes catholiques* (which completes *Anthologie des poètes religieux* by M. Allem, 1932).

Of the lesser known poets, let us first name some who are inclined to resist modern tendencies, especially Yves-Gérard Le Dantec (poetry critic of *Le Correspondant*) in *L'Aube éolée*; Noël Ruet, in *Cercle magique*; and Gaston Pulings, in *Dans cet exil aride*. Pierre-Jean Jouve betrayed a rather mystic turn of mind, although not religious in the orthodox sense, in his *Sueur de sang*, to which he added a commanding preface. The naïve, delicate, and humane poetry of Banville was reflected in Henri Strentz's *Complainte pour les innocents*. Valéry continued to exert a fascination on poets, for example, in Henri-Gautier du Bayle's *Faste*.

Most poets, however, are trying to strike a new note. Tristan Tzara, former leader of the Dadaists now considered effaced, persisted in his attempts to derationalize poetry; his last volume is called *L'Antitête*. Disarticulated poetry was offered also by Marcel Raval in *Au jour la nuit*, René Laporte in *Le somnambule* (entirely in the domain of Surrealism) and Hubert Dubois in *L'Heure entre chien et loup*. Wild attempts to amaze the bourgeois were found in Ernst Moerman's *Fantômes* and Gisèle Vallerey's *La Chanson de l'esclave*. Jacques Baron in *Peines perdues* (preface by Ribemont-Dessaignes, former Dadaist) gave vent to a general ire. Merouyan Barsamian's *Les Poètes dans l'arche de Noé* was a charming selection of poems about animals.

That poetry is not losing its grip in France is shown in the number of publications discussing poetry. In a preface to a new edition of the *Roman de la Rose*, M. Gorce pointed out a relation between the mystic code of love in the thirteenth century and the biblical Song of Songs.

Attention is especially drawn to A. Bejot's *L'Évolution poétique en France, Du langage à la poésie, du vers bas-latin au vers libre, de l'art naïf à l'art syllabique, du barde celtique au poète d'après-guerre*; M. Raymond's *De Baudelaire au Surréalisme, essai sur le mouvement poétique contemporain* (very much praised); and a curious article in the October issue of *La Nouvelle*

Revue Française entitled "Tableau de la Poésie." Finally P. Valéry's *De la diction des vers*, in which he seems to extend the olive branch to the *poésie pure* of Brémont (see YEAB BOOK, 1929).

Many journals have mourned the death of the poet Fagus (Felix Fayet), and an edition of his works in six volumes is being prepared. An anarchist at first, he died an ardent royalist and Catholic. He was the singer of the primitive soul in all its aspect, the author of *La Danse macabre*, *La Guirlande de l'espousée*, *Frère tranquille*, *A l'enseigneur* (about Shakespeare). Besides Fagus, the death of Rictus (Gabriel Randon), chiefly known as the author of *Les Soliloques du Pauvre*, must be recorded.

THEATRE. There have been an unusual number of successful plays. *Stève Passeur's Une vilaine femme*, which opened in December, 1932, continued in 1933; it was a revival of *Pas encore*, produced in 1927, but considerably altered in plot, the woman who refuses to lose youth being passionately portrayed by Mme. Simone. As to René Fauchois's *Attention à la peinture*, it met with even greater success in the United States in its adaptation under the title of *The Late Christopher Bean*, both stage and cinema.

Among the most successful, or most discussed, plays of the year was *Le Vol nuptial*, by Fr. de Croisset, produced by Baty. It was a very amusing and, at times, somewhat bold love story of a man and a woman, both aviators; the whole success of the play rested on its brilliant wit and clever performance. Whether to attribute the long run of Alfred Savoir's *La Voie lactée* to the real merit of the play or to the fact that the public openly saw in it a personal satire on Sacha Guitry's love affairs, as he parted with Yvonne Printemps, is difficult to say. *Maria*, by the same author, was played by Mme. Simone, with a part not very different from that in *Une vilaine femme*, i.e., a woman à l'âge dangereux. This time, however, she is so conscious of that fact that she willingly frees her lover, who does not want the separation at all, and even provides her substitute; the result was: three wrecked lives. Marcel Achard had a very clever comedy in *La Femme en blanc*, a bewitching woman who delights in nothing else than to create quarrels around her and who enjoys seeing her lover, who is an officer, fight duel after duel for her sake. Late in the year Achard had another clever play, *Petrus*, in which a woman, trying to shoot a man, hits another who promptly falls in love with her. Raynal's play, *La Francerie*, constructed in the same manner as *Le Tombeau de l'Aro de triomphe*, was again a discussion of the War by three symbolical characters (a German officer, a French woman, and a French boy) during the battle of the Marne; the German officer explains why the German plan cannot fail and, of course, it does fail. There was no action but the play received the highest praise from some critics.

Another who belongs to the stage generation now at its best is Jacques Deval. He had two important plays, one more pretentious, the other lighter but on the whole more successful. *Prière pour les vivants*, frankly pessimistic, represented in a series of pictures the "seven ages" of a man mediocre, even harmful to his surroundings. When he dies we see his heir develop into a man of exactly the same sad type, and we foresee his grandson continuing the melancholy tradition. Deval continued this note of gloom in a vein of satire in *Tovaritch*. A couple of the old Russian nobility become, incognito, servants in the house of a

socialist deputy. The amusing situations are easily imagined and the author makes the most of them.

A stirring play was *Milmort*, by Paul Demasy, which, with ruthless frankness but much skill, pictured a situation similar to that presented in *The Barretts of Wimpole Street*, namely, the unnatural love of a father for his daughter. Stève Passeur produced in the fall *L'Amour gai*, in which he turned into gayety his usual bitterness; the public seemed more surprised than pleased. Denys Amiel in *Trois et une* showed three brothers, a sportsman, a financier, and an artist, in love with one woman; she yields to the first, but finally all three leave her. Jean Sarment's *Peau d'Espagne* is pure dry wit—a wealthy shirtmaker poses as an English lord, and a rather disreputable midinette as a languid Spanish lady; the whole world, we are given to understand, is built on such absurd and mutual trickeries.

Jean-Jacques Bernard tried his hand at a risky theme in *Jeanne de Pantin*, an idealistic girl who wants to liberate modern youth from materialism as Joan of Arc tried to free France from the English; it ends in piteous failure. This preaching mood is new with Bernard. The revival of *L'Invitation au voyage*, typical of *le drame par les silences*, was more in his style. Jean Giraudoux in *Intermezzo* turned again to the unreal; this mixture of fairy tale, ghost story, socialism, and politics, although hailed as a masterpiece by the critics, did not retain public interest very long. The veteran Bernstein scored early in the year with *Bonheur*, a play acted by Yvonne Printemps, in which an anarchist wins the love of the cinema star he had tried to kill, but he finally understands that there can be nothing in that love, and just walks off. At the end of the year Bernstein scored again with *Le Messager*. Not quite so original, it was the story of a man who sends greetings to his fiancée by a friend who falls in love with her—all ends piteously.

In spite of scant praise from the critics, Saint Georges de Bouhélier found much public response to his two historical dramas, *Napoléon* and *Danton*. In the former he claimed that the return from Elba was a machination of the English who wanted an excuse to send Napoleon much farther away. The latter was a spectacular presentation of some scenes of the Revolution. There was presented in Geneva Gaston Sorbets's *La Moisson verte*, depicting the hardships brought on a family by the war. The same author gave at the Odéon, in November, *La Colombe poignardée*, recounting a fictitious intrigue during some revolutionary period. The attempt to put on the stage *Les Caves du Vatican* by Gide (Studio des Champs Elysées) met with little success.

Some of the best farcical plays were: *Monsieur le Comte*, by Yvan Noé and Vera Stacpole (based on the old idea of a man who has a double); *Teddy et Associé* by the same Yvan Noé; *Une Poule sur un mur* by L. Marchand; *La Demoiselle de Mamers* by Yves Mirande; *Maman, marietoi* by Dekobra; *La Main dans le sac* by Veber; *Le Téméraire* by H. Decoin. Both comic and sentimental was *Mandarine* by Jean Arnouilh. At the Grand Guignol appeared *Quinze couples*, a number of sketches by various authors.

Sacha Guitry's wit received unusual recognition, his plays being given simultaneously at no less than five Paris theatres. His new plays included *Adam et Eve* (one act, at the Comédie Française), *Le renard et la grenouille* and *Un*

Tour au Paradis (Michodière), and *Châteaux en Espagne* (Variétés).

Events in Germany brought to the limelight three plays: *Les Juifs* by Tschikieroff (translated by Mme. J. J. Bernard, and played by the Pitoëfs at the Vieux Colombier), *La Maison d'Israël* by Matei Rousson and Adolph Orna (Renaissance), and *Ezechiel* by Albert Cohen which caused quite a scandal at the Théâtre Français.

Henri Ghéon remained the moving spirit of the *Compagnons de Jeux* who offer plays in the spirit of the medieval mysteries. In January he gave a *Job*. He produced also a morality play, *Violante, comédie romanesque en quatre journées sur un thème de Tirso Molina*, which was acted by the *Compagnie des Quinze*; it was a very free adaptation of a Spanish play by Tirso, Don Juanesque in character. A splendid contribution was made by the recently founded *Compagnie de la petite scène* (who act in a hall holding about 100 persons); they give classical plays by young actors, such as Marivaux's *Prince travesti*, or modern plays, like Bernard's *L'Invitation au voyage*.

Several extremely clever adaptations of foreign plays were acclaimed in 1933; indeed one may almost say that they were the sensational successes of the year. Early in the spring appeared Porché's adaptation of *La Paix* by Aristophanes; then Charles Vildrac's adaptation of *Songe d'une nuit d'été* (Shakespeare's *Midsummer's Night Dream*). More successful even was another Shakespearean play, *Richard III*, as arranged by Obey for Dullin of the Atelier. Finally there was *Coriolan* (Shakespeare's *Coriolanus*) at the Théâtre Français. Dostoevski's *Crime and Punishment* produced by Baty, was seen by all Paris, as was also Ben Jonson's *Volpone*, adapted by Jules Romains and Zweig. Two plays by the Danish author, Mme. Karen Bramson, *Le Professeur Klenow* and *Bonheur*, attracted much attention. Another Scandinavian play was Strindberg's *Mademoiselle Julie*. Schnitzler's *Liebelein* was less successful. Quite modern plays thus adapted were Roland Mackenzie's *Musical Chairs* (Polka des chaises); and, strangest of all, *Abie's Irish Rose* arranged by no less than Tristan Bernard under the title *Bloch de Chicago*.

The appearance of Emete Zacconi, the famous Italian actor, created quite a furor. He gave some Ibsen, some Shakespeare, some Turgeniev, and Mirbeau's *Les Affaires sont les affaires*.

The marionettes of Salzburg (especially in *Vie scandaleuse et fin terrifiante du célèbre magicien, le Docteur Johann Faust*) and the Italian Piccoli met also with great success. Here may be mentioned the inauguration in the presence of the Minister of Public Instruction of a new Guignol for children in the gardens of the Luxembourg.

The Prix Eugène Brieux, after long tergiversations, was finally awarded to André Obey for his *Bataille de la Marne* (given in 1932), and for the preceding year to Antoine for his general achievements for the stage.

Many books dealt with the problems of the stage or with individual playwrights, such as Lugne Poë's continuation of his memoirs, *Sous les étoiles*; Antoine's *Le Théâtre*, II; Edmond See's *Mouvement dramatique*, 1932-33; and A. Mortier's *Quinze ans de théâtre*, 1914-1930. There were also discussions by Jean Richard Bloch on *Le Destin du théâtre* (he wants something new) and by F. Proché, who is particularly severe on the Théâtre Français, in *La Revue de Paris* for September 15th.

The great actor, Firmin Gémier, died November

26. René Benjamin published *Sacha Guitry, roi du Théâtre*.

THE NOVEL. For the most important prize novels, see the foregoing. In the March issue of *Les Marges*, Eugène Monfort, the veteran novelist, challenged the tendency of those endless novels in several volumes which he calls "romans fleuves" and which may be a reaction against the "romans ruisseaux" of which we had many for some years; neither is to be advocated. All the same, the "romans fleuves" keep coming out. René Behaine's *Histoire d'une société* reached its ninth volume with *La Solitude et le silence* (pessimistic). Romain Rolland's *L'Âme enchantée* reached the Tome II, *L'Enfantement*, of Part IV (pacifist), Jules Romains published the fifth and sixth volumes, *Les superbes* and *Les Humbles*, of *Les Hommes de bonne volonté* (unanimism theory). Jacques de Lacretelle gave the second volume, *Les Fiançailles*, of *Les Hauts-Points* (a family which wants to keep its hereditary domain). H. Béraud produced the third volume, *Ciel de suie*, of his powerful historical epic, *Conquête du pain* (here he judges rather severely the spirit of Lyons). Jean Richard Bloch began a *roman en série* with *L'Aigle et Ganymède* (an enthusiastic American, through her art of dancing, enthuses the Parisian bourgeois). Finally a talented newcomer, Robert Francis, in a novel of almost 600 pages, *La Grange aux trois belles*, began the history of a family under the Third Republic.

One of the most praised single volume novels of the year was Marcel Prévost's *Ebroue*, the name of a faithful servant of an old professor who, under pretext of extreme care, seems to plot against him with the agreement of his wife. Abel Hermant in *Le Fils d'un Inca*, which may remind one of Voltaire's *L'Ingénu*, uses the old theme of a primitive observing our civilization. J. J. Tharaud had one of the most original and timely novels of the year, *La Jument errante*, in which is sketched the history of the Jewish race through the centuries. Roger Martin du Gard in *Vieille France* gave a vivid but not very charitable picture of provincial life (a shrewd postman who knows how to know all the private affairs of people on his route and pulls all sorts of strings). Ed. Jaloux in *La Grenade mordue* exposed with some bitterness the artist life in Paris.

Eugène Monfort published *L'Évasion manquée* (of a husband); J. H. Rosny, aîné, *Le bel amour de Jeanne de Navres* (a late love), and *Helgvor du Fleuve bleu* (one of his prehistoric novels); and J. H. Rosny, jeune, *La Cité infernale* (the slums of Paris). H. Bordeaux in *Les Déclassés* portrays a man who wants generously to marry below his social class, but is misunderstood by his new mates. In *Guiette, Marie, Louise, Minie* he describes a lover attracted by four charming girls. Pierre Benoit in *Port de France* struck a very different note with the wild adventure of a Martinique girl, in love first with a very civilized Parisian, and then falling under the fatal influence of a beastly mulatto (romanesque enough!). A. de Chateaubriant, author of *La Brière* (Grand Prix du roman, 1923), came before the public this time with a very symbolic story of a *gentilhomme breton* who discovers on his estate a treasure of very unusual nature, namely, a butterfly which "by contemplation" assumes the color of the leaf on which it settles—so ought man to attain an end by contemplation and not by action; the hero converts a young man to his views.

Paul Margueritte in *Nos égales* continued his

campaigns for feminism, pacifism, and other reforms. G. Duhamel in *Le Notaire du Havre*, as in the *Salavin* series, which came to a close with *Tel qu'en lui-même*, turned his attention to mentally mediocre humans (here especially a sort of Micawber). Mauriac in *Le Mystère de Frontenac* studied (as in *Le Nœud de vipère*, 1932) the complex feelings that family ties will create—not always of the best sort. Mme. Colette scored with *La Chatte*, in which the sensual, cruel beast is not the cat but the woman. Simone Ratel was awarded for *La Maison des Bories* the Prix interallié (this award, which corresponds to the Prix Renaudot, is given by journalists while awaiting the decision of the Prix Femina, in the Parisian building called *La Maison interalliée*); she tells one of those gloomy family dramas which in literature are quite in fashion to-day. Similar unpleasant stories were: Deberly's *Le Fils indigne*; Aug. Bailly's *L'Excommuniée*; J. Jolinon's *L'Arbre sec*; M. Genevoir's *Gai l'amour* (a rustic Phèdre); Jean Prévost's *Rachel*; A. Lamandé's *Jeu d'amour*; and Ch. Géniaux's *Découverte de l'amour*.

Collette Yver lashed the *affolés d'argent* of recent years in *Mammon* 1924. E. Pérochon (*Les Yeux clairs*), Jean Giono (*Le Serpent étoilé*), and Ch. Silvestre (*L'Orage sur la maison*) offered novels in their usual style. Francis de Miomandre in *Les Egarements du cœur* pictured a situation which reminds one very much of Rostand's *Cyrano de Bergerac*. Francis Carco in *L'Ombre* probed once more, as in his famous *L'Homme traqué*, the problem of conscience after a crime.

One of the real successes of the year in the domain of the novel was André Chamson's *L'Auberge de l'abîme*, the story of a man who after the disbandment of Napoleon's army in 1815 meets with a tragic fate at the hands of a world full of rancor for the soldiers of the era just closed. M. Larrouy, author of *Odyssée d'un transport torpillé*, gave another of his sea stories in *Cargo tragique*. And here is the place to mention E. Peisson's *Parti de Liverpool*, which claims to tell (under another name, however) the true story of the *Titanic* disaster. In Kessel's *Wagon-lit* there is a picture of the cosmopolitan mobs traveling; the author sketches chiefly Russians. A. Billy in *Princesse folle* portrays the modern girl, somewhat as Henry James did in *Daisy Miller*.

Scenes of real savagery were offered in André Savignon's *Au petit bateau*. In Demaison's *Tropiques* we have, this time, not the taming of wild beasts but the nefarious effect of climate on white men living in Africa. Ph. Hériat, the famous young author of *L'Innocent*, depicted cruel moral suffering in *La Main tendue*, reminding one thereby of Daudet's *Le petit chapeau*, but the story is told with less humane feeling. The same author in *Araignée du matin* told a story of friendship but among weak specimens of humanity. Four renowned women writers produced acceptable novels: André Cortis in *Appel de flammes*, Marie-Louise Paileron in *Si j'avais su*, Germaine Acremant in *Les Ailes d'argent*, and Irène Némirowski in *L'Affaire Kourilof*. Fr. Lefèvre in *L'Amour de vivre* gave, without much reserve, the story of a *coq de village*, while Drieu de la Rochelle tried to portray a modern Don Juan in *Gilles*.

Populism seemed somewhat in retreat in 1933. The Prix du roman populiste went to Henri Polès for *Sophie de Tréguier*. Except for Léopold Chauveau's *Pauline Gropsain* and two volumes of short stories, E. Dabit's *Faubourgs de Paris* and

Jean Pallu's *Marées* (sort of film scenarios), there was nothing to mention.

For amusing novels there were Henri Ormesan's *Le Candidat Lauriston*, a satire on politics in Corsica, and G. de la Fouchardière's *Joseph Pantois, fils de gendarme*. Two war novels were published. One was by the late Dumur, *Lafayette, nous voilà*. The other, *Ainsi que l'albatros*, rather a post-war novel, was by Phil Barrès, author of *La Guerre à vingt ans*.

The following are mentioned for the original themes presented: H. Dorgelès's *Comme au ciel* (scholars who are trying to discover some medical secrets); J. Malègue's *Augustin ou le Maître est là* (a distinctly Catholic novel which was one of the most praised of the year, receiving the Prix Northcliffe); Jean Cassou's *Souvenirs de terre* (two souls, damned for having violated their religious vows of chastity as monk and nun, converse in after life; they are still passionately in love, but are deprived of their bodies to satisfy that passion).

Among the authors who recently came to the front was Roger Verceel, whose *Au large de l'Eden*, a story in the polar seas, was striking for its gripping power, being awarded the Prix Femina Américain, and who added another strong novel by the end of the year, *Le Maître du rêve* (a sort of *Père Goriot*). Pierre Mélon, a lawyer in Lyons, won the Prix littéraire du Temps with *Achmet Reis*; this is a sixteenth century story of a handsome African pirate, with many love adventures and other adventures, pigmented by the account of a long and carefully prepared vengeance. Another new comer was Albert Soullou, who plans a series of novels under the general title *Le Temps promis*; the first volume, called *Elie ou Ford*, questioned which was to win, industrialism or *le lyrisme aîlé*. René Jouget in *Le Jardinier d'Argentueil* discussed the gamblers on the stock market, gold, inflation, etc., while Raymond Desorties in *Le Tétrabie* evoked a monster machine which will combine ship, automobile, and aircraft. Pierre Neyrac in *L'Indifférence perdue* tried to win public applause by using the brutal style that so well succeeded with *Céline* last year. Jean Blanzat's *A moi-même ennemi* pictured those humans who delight in being unhappy, while Paul Nizan in *Antony Bloyé* depicted the weakling in the style of Duhamel's *Salavin*.

The best volumes of short stories were: Pierre Millé's *La Femme et le député* (title of the first story); Paul Benoit's *Chavalier 6*, followed by *L'Oublié*, and four other stories; P. Bourget's *L'Honneur du nom*, and four other stories; A. Maurois's *L'Anglaise et d'autres femmes*; H. Pourrat's *Sorciers du canton* (the writer's authority on peasant folklore and superstitions has long been recognized); and Paul Morand's *Rococo*. Gabriel Nigod was awarded the Prix de littérature régionaliste for *Contes de la Limousine*. The Belgian, Jean Tousseul, had three striking stories in *Le Passé*.

Two books on the novel were A. Bopp's *Tout sur le roman*, and Jacques Arnaut's *Le Roman de tous les romanciers, les situations*.

VARIOUS ITEMS. Some of the books belonging here have been mentioned already in the first part of this article. One must add, in the first place, several autobiographical works by men of letters. There is a new volume by Barrès, *Mes cahiers*, V, which brings the series almost to a close. Then there is Henri Lavedan's *Avant l'oubli*, very charming souvenirs of childhood, reminding one

of those by Anatole France. A. Hermant's *Souvenirs de la vie frivole* recalled more of the cold Stendhal. Pierre Champion's *Mon vieux quartier* (the Latin Quarter) was very rich in documentation. The still very young Henri de Montherlant in *Mors et Vita* gave war remembrances and published again the famous *Chant funèbre pour les morts de Verdun*. Young also is Jules Supervielle, the poet born in Montevideo, who called his book *Boire à la source*. R. Escholier told of his childhood in *Gascogne*.

To this group belongs also Maurois's *Mes songes que voici*; Jacques Chadourne's *L'Amour du prochain*, in which he summarizes the psychology of his well-known novels; and Fr. Nohain's *Guide du bon sens*. Philosophizing on literary topics we have Émile Bauman's *Le Cantique éternel*; *la symphonie du désir*, in which, as a good Catholic, he emphasizes the nothingness of human love (*Amour d'égarément, even amour satanique*) in the case of such famous characters as Sappho, Iseult, Julie de Lespinasse, Emma Bovary, Don Juan. Profoundly Catholic too was Mauriac's *Pèlerins de Lourdes*. Le Goffic in *Brocéliande* exalted the poetry of Celtic legends, while René Lalou's *Le Clavecin non-temperé* appealed to eclectic tastes. Fr. Nohain published a new installment of his *Fables*. In *Affaires de mœurs*, one will find a selection of the best pages of one of the keenest satirists of modern life, La Fouchardière, whose daily column in *L'Œuvre* delights thousands of Frenchmen every day.

French authors still continue to travel and record their impressions. Very successful was H. Béraud's *Le Feu qui couve* (will it be war?). Paul Morand, after *Paris* (1932), offered a no less acceptable *Londres, par un écrivain qui a traversé 150 fois la Manche*. Suarès pictured a Marseilles under the title of *Marsiho*. Two books on Egypt attracted much attention: Fr. Carco's *Palace Egypte* and Jacques Boulenger's *Au fil du Nil*; and we might add here Jean-Marie Caré's *Écrivains français en Egypte*. The posthumous *Marchés d'esclaves*, by Kessel, revealed that slavery is far from being a dead custom to-day. History and literature, no less than geography and literature, remained in close contact in such works as Suarès's *Vues sur Napoléon*; Octave Aubry's *Trahison de Marie-Louise*; and Maurois's *Edouard VII et son temps* (trans. *The Edwardian Era*).

Some interesting biographies were Guy de Pourtalès's *Wagner*; Ed. Jaloux's *Goethe*; and J. Boulenger's *Nostradamus*. Dr. Cabanès published two volumes on *Les Condé, Grandeur et décadence d'une famille princière*. H. de Versonneix's *Sabrez*, the recollections of a cavalry man who served at the opening of hostilities in the World War when cavalry was much in demand. Olivier Cérans passed from cavalry to infantry and gave his *carnet de route in Du sabre à la baïonnette*.

Owing to the popularity of Mérimée's *Colomba* in the United States, the novel has been filmed; and so has *Madame Bovary*. An edition of Romain Rolland's *Jean-Christophe* for children has been prepared by Mme. Hélier-Malaurie in two volumes.

LITERARY HISTORY AND CRITICISM. Chronologically arranged were R. Fawtier's *La Chanson de Roland, étude historique* (which discusses Bédier's theories); M. Wilmette's *Le Poème du Gral et ses auteurs*; F. Desonay's *François Villon*; Kathleen Chesney's *Guillaume Cretin, Œuvres poétiques*; Noël Dupire's *Le Rhetoricien Jean Molinet, 1435-1507*; Plattard's *Montaigne et son temps*; Bonnerot's *Pour bien lire Montaigne*; G.

Cohen's *Ronsard, vie et œuvres*; Magendie's *Le Roman français au 17^{me} siècle*; and P. Emar'd's *Tartuffe, sa vie, son milieu et la comédie de Molière* (which identifies Tartuffe with Charpy de Ste. Croix, of the Compagnie du St. Sacrement). H. Lyonnet's *Les Premières de Molière*; J. Lhermet's *Pascal et la Bible*; A. M. Schmidt's *Saint-Evremond ou l'Humaniste impur*; E. Bauman's *Bossuet moraliste*; H. Brémond's Tome XI, *Le Procès des mystiques, de l'Histoire littéraire du sentiment religieux en France depuis la fin des guerres de religion jusqu'à nos jours*. (The death of the author means that the work stops here).

The sixth volume of *L'Histoire de la littérature française* (under the direction of Calvet), G. de Gigord's *De Télémaque à Candide*; J. M. Carré's *La Philosophie de Fontenelle, ou le sourire de la raison*; Claude Ferval's *Madame du Deffand, L'esprit et l'amour au 18^{me} siècle*; André Cazès's *Grimm et les Encyclopédistes* (important); *Correspondance générale de J. J. Rousseau*, vols. 18 and 19 (up to 1770); and P. Trahard's fourth and last volume of *Les Maîtres de la sensibilité au 18^{me} siècle* depicted the eighteenth century. For the nineteenth and twentieth centuries there were Hugo P. Thieme's *Bibliographie de la littérature française de 1800 à 1930* (3 vols.), with a complementary *Essai sur la civilisation française*; J. Gastard's *La Jeunesse de René* (Chateaubriand); Pierre Moreau's *Conversion de Chateaubriand*; Marie-Jeanne Durry's *La Vieillesse de Chateaubriand* (2 vols.); Baronne Constant de Rebecque's *Julie Talma à Benj. Constant*; Marcel Morand's *Le Romantisme français en Angleterre, 1815-1848*; Bailly et Harris's *État présent des études Lamartiniennes*; and V. Giraud's *La Vie tragique de Lamennais*. Victor Hugo received special attention with the publication of R. Escholier's *La Place royale et Victor Hugo* and F. Gregh's *L'Œuvre de Victor Hugo* (once holder of the Hugo chair at the Sorbonne), while several volumes of Hugo's works were issued as the *édition nationale*—*Les Châtiments* (2 vols., ed. by Berret), *Chansons des rues et des bois* (ed. by Mme. Daubray), and one volume of plays (*Torquemada*, Amy Robsart, and *Les Jumeaux*, ed. by Mme. Daubray).

Balzac by E. R. Curtius, the famous German critic, has been much praised in the French edition. There were also L. Allard's *La Comédie de Mœurs en France*, II, 1815-1830; Galopin's *Frédéric Ozanam* (belles-lettres); G. Jarbinet's *Les Mystères de Paris*; A. Boschot's *Théophile Gautier*; Maxime Leroy's *Taine*; Gerard Gailly's *L'unique passion de Flaubert*, Mme. Arnoux; R. Dumesnil's *Flaubert*; Jacques Chenevière's *La Comtesse de Ségur*; Abbé Le Muer's *Vie et œuvre de Coppée*; Fr. Porché's *Verlaine tel qu'il fut* ("ange et pourceau"—some pronounced the book great, some the opposite); Benjamin Fondane's *Rimbaud le voyou*; Paul Chauveau's *Alfred Jarry, ou la naissance, vie et mort du Père Ubu*; H. Tabureau, *Guillaume Apollinaire* (which created a revival of interest in that original figure); Ch. Sénéchal's *Romain Rolland*; Daniel Rops's *Péguy*, and J. J. Brousson's *Les Vêpres de l'Avenue Roche* (new revelations of Anatole France by his discharged secretary).

The twentieth century already seems to be ripe for critical appreciation. Thus we have Ch. Sénéchal's *Les grands courants de la littérature française contemporaine*; René Groos's *Les Lettres de 1900 à 1933: Poésie, théâtre, critique, roman*; J. Erhard's *Le Roman français depuis Marcel*

Proust; J. Charpentier's *Estuanié, romancier du mystère*; L. P. Quint's *André Gide, vie, œuvres*; and R. Schwob's *Le vrai drame d'André Gide*. G. Cohen published in a small volume his *Explication du cimetière marin par Valéry*. A valuable volume by E. L. Tinker was devoted to *Les Écrits de la langue française en Louisiane*.

The fourth part of the *Dictionnaire de l'Académie*, has been issued, as well as a new edition of the much discussed *Grammaire de l'Académie*, with various corrections. There was also a vindication of the latter published by C. Aymonier, *La Grammaire de l'Académie et ses critiques*. A new volume was added to the monumental *L'Histoire de langue française* by Ferd. Brunot, which terminates the eighteenth century, and Millet had an important work on *La Grammaire et la Phonétique, ou l'enseignement des sons du français depuis le 16^{me} siècle à nos jours*.

LITERARY EVENTS. There is not much to mention that has not been said before. An inscription was placed on the house of Anatole France, Quai Malaquais, Paris. A statue was erected in the Place Malesherbes, Paris to Alexandre Dumas, père, and dedicated on November 5.

Abel Bonnard was received in the French Academy on March 16, while Fr. Mauriac, who was elected on June 1, was received on November 16.

NECROLOGY. The list is long this year: Abbé Henri Brémond, and Camille Jullian, both of the French Academy; Valléry-Radot (author of the famous *Vie de Pasteur*); Comtesse de Noailles; G. de Pawlowski (the genial author of *Voyage au pays de la 4^{me} dimension*, and dramatic critic of the *Journal de Paris*); Professor Zyromski, of Bordeaux (famous for his studies on Sully-Prudhomme, Lamartine, and the Guérins); Marc Elder (winner of the Prix Goncourt in 1913); A. Lamandé (author of *Vie gaillarde de Montaigne*); L. Dumur (novelist, and for years secretary of the *Mercur de France*); and Othon Guérac, of Cornell University (author of *Les Citations françaises*). The poets, Fagus and Rictus, as well as the actor Gémier, have been mentioned before.

FRENCH SOMALILAND, sö-mä'lë-länd, or **FRENCH SOMALI COAST**. A French colony between British Somaliland and Eritrea in East Africa, occupying the western shore of the southern entrance to the Red Sea and extending inland about 56 miles from the coast. Total area about 8880 square miles; population (July 1, 1931), 69,362 including about 1362 Europeans. The port of Djibouti, the capital, had 11,366 inhabitants in 1931, of whom 628 were Europeans. The coast fisheries, salt mines, and inland trade are the chief sources of livelihood. In 1931, 22,000 metric tons of salt were exported. Trade in 1931, most of it in transit to or from Ethiopia, comprised imports of coal, sugar, cotton goods, and butter with a total value of 220,006,000 francs and exports of salt, coffee, ivory, skins and hides, etc., with a total value of 189,911,000 francs (franc equals \$0.0392 at par). Railway mileage in 1932 was 59 miles. There were 546 steamships aggregating 2,053,600 tons entered the port of Djibouti in 1931. The budget for 1932 was estimated to balance at 14,935,350 francs. The colony is administered by a governor, assisted by an administrative council. Governor in 1933, M. Chapon-Baissac.

FRENCH SUDAN. A colony of France and a division of French West Africa (q.v.). The government is administered by a lieutenant-governor,

under the governor of French West Africa. Lieutenant-Governor in 1933, M. Fousset.

FRENCH WEST AFRICA. A French colonial empire in West Africa comprising the interior and Atlantic colonies shown in the accompanying table.

Colony *	Sq. miles	Pop. (1931)	Capital
Dahomey	47,131	1,112,000	Porto Novo
Dakar, Circle of	61	53,982	Dakar
French Guinea . .	96,888	2,236,968	Conakry
French Sudan . . .	581,933	3,568,925	Bamako
Ivory Coast	184,247	3,885,153	Bingerville
Mauritania	322,252	823,819	Saint Louis
Niger, Colony of	482,577	1,810,953	Niamey
Senegal	77,731	1,584,273	Saint Louis
French W. Africa	1,792,220	14,575,973	Dakar

* Upper Volta ceased to be a colony on Jan. 1, 1933, and its territory and population were divided among three other colonies as follows: French Sudan received 20,226 square miles and 713,167 inhabitants; Ivory Coast, 59,212 square miles and 2,018,837 inhabitants; Niger, 27,290 square miles and 268,239 inhabitants. The lieutenant-governor of Mauritania resides in Saint Louis in the colony of Senegal.

The total population for 1931 included 21,088 Europeans of whom 14,400 were French. The principal native tribes are the Ouolofs, Bambaras, Mandingos, Peuhls Faulbés, Mossi, and Kroumen. In 1931 there were 870 schools with 62,708 students, including 195 evening schools for adults with 9089 pupils. The chief towns were Dakar, with 42,000 inhabitants in 1931; Saint Louis, 30,000; Porto Novo, 27,000; and Bamako, 20,000.

PRODUCTION, ETC. The 1931 production of the chief agricultural products was: Ground-nuts, 510,232 tons; palm oil (raw), 50,500 metric tons; cacao, 19,212 tons; cotton, 4842 tons. Other products are crude rubber, gums, fruits, timber, and hides as well as such native crops as millet, maize, and rice. Cattle raising is extensively carried on.

In 1931, total imports were valued at 707,858,471 francs (of which 388,209,645 francs were from France); total exports, 651,272,975 francs (of which France took 399,357,133 francs). The general budget for French West Africa for 1933 balanced at 179,723,000 francs. For 1932 the total budget balanced at 811,470,582 francs, of which 185,538,000 francs represented the general budget, 477,856,357 francs the aggregate of the local budgets, and 148,076,225 francs the supplementary budgets. The public debt on Jan. 1, 1930 was 304,000,000 francs. In 1932 there were 25,000 miles of telegraph line, 2126 miles of railway in operation and 606 miles under construction. A total of 10,371 vessels aggregating 9,677,461 tons entered and cleared the ports in 1931.

GOVERNMENT. A governor-general, assisted by a council, administers the entire colony. Each colony is under a lieutenant-governor, Dakar and Dependencies being under a governor of colonies, all subordinate to the governor-general. The military force maintained in peace time consisted of 17,400 men, of whom 2720 were Europeans. Governor-General in 1933, M. Brévié.

FREQUENCY AND TIME CONTROL. See ELECTRIC LIGHT AND POWER STATIONS.

FRIENDLY ISLANDS. See TONGA.

FRIENDS, RELIGIOUS SOCIETY OF. A mystical religious sect which originated in England in the middle of the seventeenth century. For early history see THE NEW INTERNATIONAL YEAR BOOK for 1932.

FIVE YEARS' MEETING. In 1902 the largest body

of the Religious Society of Friends, known as the Orthodox Group, organized the Five Years' Meeting. This organization meets as a delegate body every five years and in 1933 consisted of 12 yearly meetings, with a membership of approximately 80,000. Its headquarters are in Richmond, Ind. The work of the various departments, such as missions, peace, prohibition and public morals, religious education, is under the direction of executive committees and secretaries of boards. The Five Years' Meeting also maintains seven colleges for higher education; Earlham in Richmond, Ind.; Penn in Oskaloosa, Iowa; Guilford in Guilford, N. C.; Wilmington in Wilmington, Ohio; Whittier in Whittier, Calif.; Nebraska Central in Central City, Nebr.; and Friends University in Wichita, Kans. Haverford College in Haverford, Pa. is maintained by the Philadelphia Yearly Meeting and Pacific College in Newberg, Ore., by the Oregon Yearly Meeting. The latter bodies, however, and the Ohio Yearly Meeting are not a part of the Five Years' Meeting. In 1933 the membership of the Oregon Yearly Meeting was 3135; of the Ohio Yearly Meeting 5607; and of the Philadelphia Yearly Meeting (Orthodox), approximately 4732. *The American Friend*, a bi-weekly religious journal, is published at headquarters, as is also literature for the Bible Schools of the Five Years' Meeting.

LIBERAL BRANCH. This branch was formed in 1827 as the result of a separation which centred around the doctrinal issues of the day and with which the name of Elias Hicks is associated. The Liberal Branch includes seven Yearly Meetings federated in the Friends' General Conference, which meets in even numbered years and conducts work in religious education, social service, and advancement of Friends' principles. The society emphasizes the freedom of the individual to follow the voice of God in his own soul rather than any external or church authority. The membership in 1932 was 16,251, and there were 135 meetings. Publications include the weekly periodical, *Friends' Intelligencer*, and a monthly magazine for children, *Scattered Seeds*. The society conducts several secondary schools, and Swarthmore College in Swarthmore, Pa., was founded by it. It coöperates with other branches of Friends in supporting the American Friends' Service Committee for international understanding and service in this country and abroad, and in Pendle Hill at Wallingford, Pa., a Quaker educational institution for graduate study in religion and social science.

FRUIT (APPLES, ORANGES, PEACHES, ETC.). See HORTICULTURE.

FRY, ALFRED BROOKS. An American engineer, died at Coronado, Calif., Dec. 4, 1933. Born in New York City, Mar. 3, 1860, he attended the engineering school of Columbia University and acted as a marine and mechanical engineer from 1879 to 1886. In the latter year he entered the civil service as assistant engineer in the construction of public buildings for the United States Treasury Department. On the outbreak of the Spanish-American War he enlisted, being made acting chief engineer for the United States Navy. In 1899 he was appointed chief engineer and superintendent of construction for Federal buildings in New York, retaining this position until the entry of the United States into the World War when he was made engineer aide to Admiral Bird and industrial manager of the Third Naval District. He was commissioned captain in the United States

Naval Reserve in 1918, seeing service at the New York Navy Yard, at sea, and in French and English ports. He was also a member of the board of consulting engineers for the improvement of New York State canals during 1904-11, and in 1914 was appointed consulting engineer to the Department of Water Supply, Gas, and Electricity of New York City. In 1921 Mr. Fry served on the special Panama Canal Commission and the following year was consulting engineer to the transport service of the United States Army. During 1924-26 he was supervising engineer for the Federal government at the port of New York. He then became chief inspection engineer for the supervising architect of United States public buildings on the Pacific Coast and after 1927 was consulting engineer. In the New York Naval Militia he rose from engineer-lieutenant in 1892 to commander and chief of staff in 1910, retiring in 1924 with the rank of rear admiral. He was a past president of the Society of Constructors of Federal Buildings and American member of the International Congresses of Navigation.

FUEL. See **BOILERS**.

FUNCHAL. See **MADEIRA**.

FURNITURE, ANTIQUE. See **ART SALES**.

GABUN. See **FRENCH EQUATORIAL AFRICA**.

GAINFUL WORKERS. See **STATISTICS**.

GALAPAGOS ISLANDS. See **ECUADOR**.

GALSWORTHY, JOHN. A British novelist and playwright, died at Hampstead, near London, Jan. 31, 1933. Born at Coombe, Surrey, Aug. 14, 1867, he was educated at Harrow and at New College, Oxford, where he took honors in law. After being called to the bar in 1890, he abandoned this profession and went globe trotting. Three years later, while sailing from Australia to South Africa on the *Torrens*, he became friendly with the mate, one Joseph Conrad. From a remark made by Galsworthy in later years—"I was writing fiction for five years before I could master even its primary technique"—it is possible that he had been writing at that time. He learned his craft laboriously, and it was not until he reached 40 that he achieved artistic maturity. His early fiction, published under the pen-name of John Sinjohn, included *From the Four Winds* (1897); a collection of foreign adventure stories; the artificial novels, *Jocelyn* (1898); *Villa Ruben* (1900); and *A Man of Devon* (1901); the genesis of *The Forsyte Saga*, dealing with an episode of Swithin Forsyte's youth. The first work to be published under his own name was *The Island Pharisees* (1904; revised, 1908), which was of value for its criticism of British social conventions.

Galsworthy's first novel of note was *The Man of Property* (1906), a satire on the modern capitalist whose great weakness, as impersonated by Soames Forsyte, is a possessive instinct which blinds him to all spiritual and aesthetic values. It was followed by *The Country House* (1907), the satire of which was directed against the limiting traits of the English country gentry, the adherence to tradition and to the letter of outmoded laws and customs; *Fraternity* (1909), whose ironical title referred to the artificiality of any attempt at fraternization of the English classes; *The Patriotic* (1911), the story of an aristocratic family bound by an inflexible adherence to caste; and *The Freelanders* (1915), which dealt with the social tyranny over their tenants exercised by some landowners. Galsworthy next displayed his talent as an analyzer of the emotions

of romantic passion in *The Dark Flower* (1913), which while delicately executed had as its theme one of unfortunate morbidity; *Beyond* (1917), which presented the feminine side of the grand passion; and *Saints Progress* (1919), which dealt with changing moral standards in war-time.

Prior to the appearance of *The Forsyte Saga* (1922) Galsworthy's work was but little known or appreciated outside of England. This was a trilogy, containing, in addition to *The Man of Property*, *In Chancery* (previously published in 1920), *To Let* (1921), and the interludes, *Indian Summer of a Forsyte* (1918) and *Awakening* (1920), and was soon acclaimed as one of the great works of fiction of the twentieth century. In it the author showed his perfect delineation of character, so painstakingly carried through four generations of Forsytes as to seem actual and intimate biographies. It also afforded a study in the contrasting manners, morals, standards, and ideals of each succeeding generation, with the possessive, materialistic instinct the dominating trait of the Forsyte clan. A sequel to *The Forsyte Saga* was *A Modern Comedy* (1929), containing three previously published novels, *The White Monkey* (1924), *The Silver Spoon* (1926), and *Swan Song* (1928), and the two interludes, *A Silent Wooing* and *Passers By*, which gave the reader further glimpses of the Forsyte family and its friends in a modern setting. Shorter tales relating to this fictional family were published in *Caravan* (1925) and *On Forsyte 'Change* (1930).

Galsworthy's most recent novels were *Maid in Waiting* (1931) and *Flowering Wilderness* (1932), part of another Forsyte trilogy entitled *End of the Chapter*, the third volume, *One More River*, in manuscript at the time of his death, appearing posthumously in 1933. Among his prose sketches and essays were *A Commentary* (1908); *A Motley* (1910); *The Inn of Tranquillity* (1912); *A Sheaf* (1916); *Five Tales* (1918); *Another Sheaf* (1919); *Tatterdemalion* (1920); *Captures* (1923); and *Castles in Spain* (1927). *The Burning Spear* (1923) was a satire on war-time mentality. His poetry included *Moods, Songs, and Doggerels* (1911) and *Verses New and Old* (1926).

Galsworthy was a master of the didactic drama, most of his plays being pleas for the oppressed and outcast. This was notably true of *The Silver Bow* (1906), with its theme of different legal justice for rich and poor; *Strife* (1909), the tense and moving story of a strike; *Justice* (1910), a protest against solitary confinement and other cruelties of the English prison system; *The Pigeon* (1912); *The Fugitive* (1913); and *The Mob* (1914). Among his other plays were *Joy* (1907); *The Little Dream* (1911); *The Eldest Son* (1912); *A Bit o' Love* (1915); *The Foundations* (1916); *The Skin Game* (1920); *Six Short Plays* (1921); *A Family Man* (1921); *Loyalties* (1922); *Windows* (1922); *The Forest* (1924); *Old English* (1924); *The Show* (1925); *Escape* (1926); *Exiled* (1929); and *The Roof* (1929).

Galsworthy declined knighthood in 1918, but in 1929 received the Order of Merit, one of the highest honors bestowed by the empire. After a lecture tour in the United States in 1919 he frequently returned, making long sojourns in California, Arizona, and Florida. His last visit was in 1931. In addition to being an honorary Fellow of New College, Oxford, and an honorary cor-

responding member of the American Academy of Arts and Letters, he received the honorary degrees of Doctor of Laws from St. Andrews University and Doctor of Literature from the Universities of Manchester, Dublin, Cambridge, Sheffield, Oxford, and Princeton. His career was crowned with the award of the Nobel Prize for Literature in 1932, but his failing health prevented him from attending the presentation exercises held in Stockholm in December of that year.

GAMBIA. A British colony and protectorate in West Africa occupying 6 miles on each side of the Gambia River from the sea to approximately 200 miles inland in a straight line (300 miles by river). Total area, 4134 square miles; area of the colony, which consists of the towns of Georgetown and Bathurst with adjacent land, 69 square miles. Total population (1931 census), 199,520. Bathurst, the capital, had 14,370 inhabitants in 1931. In 1932, Bathurst had six elementary and four secondary schools with 1966 pupils enrolled, and a teacher manual training school with 20 students on the register. In the protectorate the government school at Georgetown in MacCarthy Island Province had 43 students.

Groundnut cultivation is the principal industry. Cotton is grown in some provinces. Maize, rice, guinea corn, cassava, and sweet potatoes are grown for local consumption. Groundnuts exports in 1932 amounted to 37,315 tons valued at £391,659; palm kernels, 722 tons valued at £5550. In 1932, imports (including specie £5141) totaled £297,841; exports (including specie £199,020), totaled £606,514. Revenue for 1932 amounted to £208,132; expenditure, £196,015; the surplus of assets over liabilities on Jan. 1, 1933 amounted £75,026. The colony is administered by a governor assisted by an executive and a legislative council. Governor and Commander-in-Chief in 1933, H. R. Palmer.

GANDHI, M. K. See INDIA.

GARBAGE AND REFUSE DISPOSAL. A new garbage and rubbish incinerator for Baltimore with a daily capacity of 600 tons went into operation Jan. 1, 1933. The contract for this plant provided not only for its construction but also for operating it ten years on a yearly-payment basis, after which it becomes the property of the city. See "Incinerator Contract at Baltimore Results in Economical Garbage Disposal," in *Municipal Sanitation* for April, 1933; also see 1932 YEAR BOOK. Early in the year Detroit requested bids for four incinerators with a combined capacity of 1800 tons a day: two of 600 tons each, one of 400 and one of 200 tons. They were to become the property of the city after the contractor had operated them for seven years and had been paid for the service at the contract rate. No bids were received. Already possessed of two incinerators, which are operated by the city, *Toronto* added a 500-ton high-temperature plant during 1933. On arrival of the collection vehicles on the receiving floor of the incinerator building the refuse is dumped into a pit 124 ft. long, 15 ft. wide, and 18 ft. deep. From this pit the refuse is lifted some 45 ft. in buckets of 2 cu. yds. capacity by traveling electric cranes, and emptied into hoppers located above the charging hoppers that feed the four furnaces. These hoppers discharge onto drying hearths from which the refuse, minus part of its moisture, is discharged onto the furnace grates. There are two radial-brick chimneys, each 175 ft.

high. At the close of the year the authorities of New York City decided to collect and dispose of the garbage and refuse of Brooklyn Borough, which work had been done for the city by private contract for 20 years. The change entailed taking over by the city several large incinerators built by the old contractor. See "German Methods of Refusal Removal and Disposal from the Hygienic and Economic Point of View," by Dr. I. Erhard, in *Municipal Sanitation*, September and October, 1933.

GARBO, GRETA. See MOTION PICTURES.

GAS. The gas utilities in the United States suffered a further decline in revenue during 1933, according to the Statistical Department of the American Gas Association, amounting to a decrease of 5.8 per cent from the 1932 figures. The greater loss was experienced by the manufactured gas companies whose total reported revenue for the year was \$379,841,000 as against \$411,750,300 in 1932, a decrease of 7.7 per cent. Natural gas utilities reported a revenue of \$302,289,000 for 1933, as against \$312,511,000 in 1932, or a decline of 3.3 per cent. These figures, however, represent declines in income due to decreased rates rather than to proportionate decreases in consumption, for the sales of manufactured gas decreased by only 4.7 per cent, while those for natural gas showed an increase of 2.3 per cent over 1932.

MANUFACTURED GAS. Sales of manufactured gas in 1933 amounted to 354,539,300,000 cu. ft., as against 372,208,100,000 cu. ft. in 1932. Improvement in sales in the industry as a whole was found in those for house heating, where a gain of 7.2 per cent was reported, 23,197,600 M. cu. ft. as against 21,640,100 M. cu. ft. in 1932, and in commercial and industrial sales where a slight increase, from 81,270,800 M. cu. ft. to 81,535,400 M. cu. ft. in 1933, was obtained. These gains in consumption, however, were more than offset by lowered prices and did not begin to cover the loss in domestic sales which, amounting to 267,281,500 M. cu. ft. in 1932, dropped by almost 20,000,000 M. cu. ft. to 247,929,200 M. cu. ft. in 1933.

The percentage of decline in sales was not uniform through the regions utilizing manufactured gas. The greatest decline in total sales on the percentage basis occurred in the western States of Arizona, Idaho, Nevada, Oregon, and Washington, in which the ten companies whose sales constitute 95 per cent of the total sales reported a decline in consumption of 13.5 per cent from that of 1932. The least percentage of decline was reported from Illinois, in which the 9 companies whose sales constitute 85 per cent of the total sales reported a drop of but 2.2 per cent below the figures for 1932. In this State the sale of gas for house heating was strongly pushed, with the result that consumption in this line showed an increase of 46.6 per cent and with a slight industrial gain almost offset the drop in domestic consumption.

NATURAL GAS. As with manufactured gas, total sales of natural gas for domestic purposes during 1933 dropped about 6 per cent below the sales for 1932. Although the total number of customers for manufactured and natural gas was substantially unchanged, remaining slightly in excess of fifteen and a half million, the loss in customers for manufactured gas was offset by the gain in users of natural gas. The gains in the latter, each less than 1 per cent were in domestic users, commercial users and industrial users. But whereas domestic and commercial users of natural gas

consumed less by 6 per cent and 4 per cent respectively than in 1932, industrial users gave indication of a large shift from other fuels to this commodity. Main-line industrial consumption increased during the year from 111,016,900 M. cu. ft. in 1932 to 129,409,800 M. cu. ft. in 1933, a gain of 16.6 per cent, and ordinary industrial consumption increased from 345,121,900 M. cu. ft. to 366,237,300 M. cu. ft. in 1933, a gain of 6.1 per cent, or a total gain of more than 39,500,000 M. cu. ft. This increased consumption more than offset the decline in domestic and commercial consumption, and the total sales of 848,652,300,000 cu. ft. for the year showed a gain of 2.3 per cent over the 829,895,000,000 cu. ft. reported for 1932.

The gain in industrial use was reported in all States, with the greatest increase shown in California where main-line industrial rose 15 per cent and industrial advanced 46.8 per cent. Pennsylvania showed an increased industrial use amounting to 18.7 per cent; Ohio showed an increase of 31.9 per cent; New York, 43.8 per cent in industrial and 11 per cent in main-line industrial; Oklahoma, 21.3 per cent in industrial and 28.4 per cent in main-line industrial. But in all of those States, except California, in which domestic use constitutes the main sale, the industrial gains were insufficient to offset the decreases of domestic consumption. In California, where unprecedented inclement weather prevailed during much of the year, there were gains in all sales with an increased number of customers.

GÉMIER, FIRMIN. A French actor and theatrical manager, died in Paris, Nov. 26, 1933. Born at Aubervilliers, Department of the Seine, Feb. 13, 1865, he early displayed his histrionic ability through his portrayal of the characters that frequented his father's tavern and studied for the stage with Saint Germain. After appearing with several provincial touring companies he made his Paris début in 1892 at the Théâtre Libre, where he began a life-long association with André Antoine, the apostle of naturalism. Both Antoine and Gémier sought a rebirth of the French drama through abandoning the artificial plots and acting of the classical school and producing plays of realism, accompanied by natural speech and gesture. They carried out this purpose at the Théâtre National de l'Odéon, of which Antoine was appointed co-director in 1896 and director in 1906, and after 1897 at the Théâtre Antoine, producing the works of such successful French playwrights at Brioux, Cured, Hermant, Donnay, and Porto-Riche, as well as those of foreign playwrights, such as Ibsen, Hauptmann, and Shaw. The Odéon was noted especially for its Shakespearean productions, Gémier's finest rôle being that of Shylock in *The Merchant of Venice*, which he played with an intensity of emotion unsurpassed by that of any other actor. He was also widely acclaimed for his performance in *Antony and Cleopatra* and *The Taming of the Shrew*.

On his appointment in 1922 as director of the Théâtre National de l'Odéon, Gémier continued the tradition which had been established by Antoine. Becoming interested in the contribution which certain American playwrights were making to the theatre, he added to the company's repertoire the works of Eugene O'Neill. In 1924 he was invited by the State Department to appear with his company in New York and other cities; this invitation was in reciprocation for the courtesy extended by the French Ministry of Fine Arts in 1920 in inviting James K. Hackett, the

American actor, to appear at the Odéon in *Macbeth*. Gémier founded the Théâtre Ambulant in 1911 and after 1930 was general manager of the Théâtre National Populaire (Trocadéro), through both of which he attempted to bring art to the masses. In June, 1927, he presided over the first congress of the Universal Society of the Theatre, which he had founded for the purpose of bringing to the drama an international unity. He was also founder of the French Shakespearean Society and a member of the Higher Council of Fine Arts.

GENERATORS. See DYNAMO ELECTRIC MACHINERY.

GENETICS. See BOTANY.

GENEVA CONFERENCE. See DISARMAMENT; NAVAL PROGRESS; MILITARY PROGRESS.

GEOGRAPHICAL SOCIETY, AMERICAN. An organization, founded in 1852, to collect and disseminate geographical information by discussion, lectures, and publications; to establish in the chief city of the United States a place where there may be obtained accurate information concerning every part of the globe; and to encourage such exploring expeditions as seem likely to result in valuable discoveries in geography and related sciences.

Within recent years the society has taken an active part in the encouragement of exploration, the scientific work of Sir Hubert Wilkins in the Arctic and Antarctic and of Rear Admiral Richard E. Byrd in the Antarctic having been carried out under its auspices. Contributions to the development of geographical science and explorations are recognized in its elections to honorary and corresponding memberships and in the bestowal of medals. It sponsors also six regular lectures annually by distinguished explorers or geographers. Its periodical is the *Geographical Review*, a quarterly.

In 1933 the society published a four-volume *Catalogue of Maps of Hispanic America*, listing more than 15,000 published maps, covering a period of nearly 400 years, in the collections of the American Geographical Society, the New York Public Library, the Library of Congress, the Pan American Union, and the libraries of Columbia, Yale, and Harvard universities and representing five years of work by an expert map cataloguer. There were also completed two additional sheets of the map of Hispanic America, published in conformity with the International Millionth Map of the World, bringing the total of completed sheets to 44 out of 100. Other publications were *New England's Prospect, 1933*, comprising the results of geographical, social, economic, and governmental studies of New England, carried out by 27 specialists, and *The Discovery of the Amazon*, the first English translation of the only original account of Orellana's famous voyage down that river in 1542.

During the summer of 1933 the Louise A. Boyd expedition to East Greenland, carried out under the auspices of the society, successfully explored the unknown area lying to the west of the heads of Franz Josef Fiord and Ice Fiord. Geological studies were made and photogrammetrical surveys were executed under the direction of O. M. Miller, head of the department of technical training.

The president of the society in 1933 was John H. Finley, LL.D.; and the director, Isaiah Bowman, Ph.D. Headquarters are at Broadway and 156th Street, New York City.

GEOGRAPHIC SOCIETY, NATIONAL. An organization for "the increase and diffusion of geographic knowledge," founded in 1888. During 1933 the society voted a grant of \$10,000 and furnished photographic equipment to the second Antarctic expedition led by Rear Admiral Richard E. Byrd. Postmaster-General Farley appointed Dr. John Oliver La Gorce, vice-president of the National Geographic Society, postmaster of Little America. Dr. La Gorce appointed a deputy to serve for him.

The first award of the Franklin L. Burr Prize was made by the society to Capt. A. W. Stevens, U. S. Army Air Corps, for his contributions in the field of aerial photography on National Geographic Society expeditions, "particularly for his splendid achievement in photographing the total eclipse of the sun on Aug. 31, 1932, showing the moon's shadow on the earth at an altitude of approximately 26,000 feet." Captain Stevens made in the Andes the first photographs showing the curvature of the earth, and worked out a vastly improved technique in high-level aerial photography and in the design of cameras therefor. The Franklin L. Burr Prize was established under the bequest of the late Mary C. Burr, who bequeathed \$35,000 to the National Geographic Society in memory of her father under the condition that it should be known and called the Franklin L. Burr Fund, the income from which should be spent in cash prizes to those members of National Geographic Society expeditions found by the board of trustees to have done especially meritorious work upon said expeditions.

The society cooperated with the Chilean government in commissioning Amos Burg, explorer, to study the Alakalufs, Yahgans, and Onas Indians, the rapidly vanishing tribes in Chilean Patagonia. Ethnological records of these vanishing cultures were preserved by means of photographs. Mr. Burg was also gathering data on the fauna and flora of this little known land and its neighboring waters. Ernest G. Holt, leader of the National Geographic Society's Venezuela-Brazil expedition, published a second paper on his explorations in the Venezuela-Brazil boundary country.

Conclusions based upon the society's Mt. Katmai expeditions were published by Dr. Robert F. Griggs, leader of the expeditions. Daniel Ready collaborated with Dr. Griggs in part of this work. These two scientists found that liverworts would colonize on the Katmai ash, a new and inorganic "soil." The liverworts thus began the work of reestablishing vegetation in the region, for they were followed by mosses, willows, grasses, and other seed plants. The Katmai liverwort of the genus *Cephaloxiella* grew in a culture solution so nearly free from nitrogen that tests did not reveal its presence. Even green algae that require only one or two parts per million of combined nitrogen or nitrates and ammonia would not live in this medium in which the liverworts were able to thrive and develop a nitrogen content at the end of the growth period of approximately 3000-3800 parts per million.

A map of the United States was published and more than a million copies were distributed. The use of the Albers equal area conic projection reduced the maximum distortion of the map from the 7 per cent usual to maps of this country to 1½ per cent. More than 8500 place names were inserted by a special method of photographing handdrawn alphabets, devised by Albert H. Bum-

stead, chief cartographer. The map followed the decisions of the United States Geographic Board.

A second major map made was that for the continent of Asia. Based on the Azimuthal-equidistant projection, which the society's cartographers have found most satisfactory and accurate in the charting of continental areas, this map showed 26½ per cent of the surface of the globe and almost 50 per cent of the land surface of the earth. The latest available information on Asia, Europe, Netherland India, and northeast Africa was collated, making the map both more modern and more authentic than any previous general map of the large area covered.

Maps were made also of the States of New Jersey, New York, and Washington to accompany articles on those States published in the *National Geographic Magazine*. The latter is distributed to the 1,000,000 members of the society.

GEOGRAPHY. See EXPLOATION; POLAR RESEARCH; ANTHROPOLOGY.

GEOLOGY. The outstanding geological event during the year 1933 was the 16th International Geological Congress which convened in the United States. Eleven hundred and eighty-one individuals or organizations enrolled as members and approximately 165 Foreign and 500 American geologists attended the general sessions held in Washington, D. C. from July 22 to July 29. Thirty-four foreign countries were represented by official delegates.

The delegates began to assemble early in July with headquarters in the Geological Society of America House, 419 W. 117th St., New York City. Field excursions to study local and northeastern geology were conducted from this centre. Others, covering phases of the geology exhibited between New York and Washington, D. C., started in New York and ended in Washington in time for the opening of the sessions. The longer, transcontinental excursions followed the sessions.

The following topics were chosen to be discussed by this international gathering: (1) Fossil Man and Contemporaneous Faunas; (2) Batholiths and Related Intrusions; (3) Orogenesis; (4) Measurement of Geologic Time; (5) Geomorphogenic Processes in Arid Regions; (6) Major Divisions of the Paleozoic Era; (7) Geology of Petroleum. The papers read at the sessions and the ensuing discussions will be published in the "Comptes Rendus" of the congress and will be reviewed here at a later date. W. C. Mendenhall of the United States Geological Survey has already published an article in *Science* (Sept. 22, 1933) that outlines the activities of the Congress and abstracts the more important papers.

The immediate value of the Congress is twofold. First, the interchange of ideas between the scientists of many nations on the important topics listed above, and on the many problems encountered in the field during the extended excursions will be reflected in the literature of geology for years to come, and will result, as always, in important advances in our knowledge; second, the publication of 31 guide books covering the geology of the routes followed on all the excursions, and the detailed geology of the mining camps, oil fields, and so forth visited, furnishes a valuable summary of the geology of the United States. These are important additions to geological literature.

The appended list of the guide books emphasizes their wide range and indicates where

information may be obtained on different sections of the United States: 1. Eastern New York and Western New England; 2. Mining Districts of the Eastern States; 3. Southern Appalachian Region; 4. The Paleozoic Stratigraphy of New York; 5. Chesapeake Bay Region; 6. Oklahoma and Texas; 7. Geomorphology of the Central Appalachians; 8. Mineral Deposits of New Jersey and Eastern Pennsylvania; 9. New York City and Vicinity; 9A. The Catskill Region; 10. Southern Pennsylvania and Maryland; 11. Northern Virginia; 12. Southern Maryland; 13. Western Texas and Carlsbad Caverns; 14. Ore Deposits of the Southwest; 15. Southern California; 16. Middle California and Western Nevada; 17. The Salt Lake Region; 18. Colorado Plateau Region; 19. Colorado; 20. Pennsylvanian of the Mid-Continent Region; 21. Central Oregon; 22. The Channeled Scabland; 23. The Butte Mining District; 24. Yellowstone-Beartooth-Bighorn Region; 25. The Black Hills; 26. Glacial Geology of the Central States; 27. Lake Superior Region; 28. An Outline of the Structural Geology of the United States; 29. Stratigraphic Nomenclature in the United States; 30. The Baltimore and Ohio Railroad and Maps.

The numbers as here listed, correspond to the numbers of the guide books. Their varied content is apparent from their titles.

The United States Geological Survey also issued a new geological map of the United States just before the Congress met. This is in four sections, in color, and to the scale of 1:2,500,000 (approximately 1" = 40 m.). It was compiled by G. W. Stose assisted by O. A. Ljungstedt from Federal and State maps, and manuscript maps and information furnished by geologists familiar with various sections of the country. It is the only authoritative and up-to-date map of the whole country now available.

Another valuable publication that appeared in time for use by members of the various excursions is "Airways of America; A Geological and Geographical Description of the Route from New York to Chicago and San Francisco," by A. K. Lobeck, published by the Geographical Press, Columbia University, New York. It is the second publication of the J. F. Kemp Memorial Series. The first part is devoted to the details of the route which are presented by text, diagrams, and photographs. This is followed by chapters on the Physiographic Provinces, Agricultural Areas, and Natural Vegetation Regions of the United States; and Climatic and Seasonal Aspects of the Air Route; Airways, and Aviation, all profusely illustrated. It should be valuable to all who make use of our airways and have any interest in the panorama that unfolds below them.

SOCIETIES. The various Societies met as usual during the year. The Geological Society of America, the Paleontological Society, and the Mineralogical Society held their meetings jointly in Cambridge, Mass., Dec. 26 to 29, 1932. The Society of Economic Geologists had its meeting in Princeton, N. J., July 7 and 8, 1933, immediately preceding the Geological Congress.

The addresses delivered by the Presidents of these Societies and some of the more important topics discussed are outlined below:

R. A. Daly, President of The Geological Society of America, spoke on "The Depths of the Earth." The material of this address has since been published in much more complete form as

a book of 590 pages entitled *Igneous Rocks and the Depths of the Earth* (McGraw-Hill Book Co., New York.) It is impossible to review this work thoroughly here. The address is published in the Bulletin of The Geological Society of America, vol. 44, April, 1933. The book is a brilliant assemblage of hypothesis and fact which first considers the facts needing explanation, then states a general theory of the make up of the earth, with particular emphasis on the outer layers, and on the origin and mode of igneous intrusion and differentiation. The final part sketches the result of applying the theory to the major types of igneous rocks. The book abounds in useful records of facts and bibliographic references and contains two very valuable tables. Pages 298 to 301 list reported cases of assimilation giving locality, assimilating magma, rock assimilated, product, and authority. Pages 334 to 335 give examples of gravitative differentiation. Chapter I is an abstract.

R. S. Bassler, President of The Paleontological Society of America, addressed a joint meeting of the Societies on the "Development of Invertebrate Paleontology in America." This address outlined the march of American paleontology from Colonial days to the present, then took stock of the present state of paleontology, and outlined its field of usefulness in stratigraphy, structural geology, and economic geology.

It ended with a discussion of current problems, including the necessity for further study of the following groups, among others: Radiolaria, sponges, coelenterates, and hydrozoa; and the necessity for further faunal studies in many of the great rock systems. (Published in the Bulletin of the Geological Society of America, vol. 44, April, 1933.)

Dr. A. N. Winchell, President of the Mineralogical Society of America, spoke on "The New Mineralogy." He compared the present state of mineralogy with the state of that science 30 years ago. He showed that the former knowledge of minerals gained from a study of their outward form and chemical analysis could be compared to the knowledge obtained about a house by first studying it outside and then completely wrecking it and determining the total weight of stone, mortar, etc. To-day, by use of the X-ray methods one can learn the precise arrangement of the internal parts, as one can learn the arrangement of the inside of a building by looking into it.

This new research has taught us much concerning the variability of the composition of minerals, once regarded as having a relatively simple and definite chemical formula. These variations may take place in a number of different ways. (1) Atoms of one or more elements may replace each other in a mineral. Such variations result in a gradual change in the physical properties of the mineral, they take place during the formation of the mineral and the resulting range of composition and properties makes a mineral correspond roughly to a genus of plants or animals rather than to a definite species. (2) Other changes result from the loss of or acquisition of new atoms by mineral structures after they have been formed. These result in minerals that cannot be formed directly. Wherever such products are found, it is possible to reach certain conclusions regarding the history of the rock in which they are found. (Published in the *American Mineralogist*, March, 1933.)

During the meetings of the Geological Society

of America, Nelson H. Darton of the United States Geological Survey exhibited a new geological map of Texas. This has been compiled from many different sources and has been circulated among geologists in and near Texas for criticism. The revised map will be published within a year or two and will include all the latest knowledge of this large and important area.

F. A. Melton described some peculiar depressions near the Carolina coast. He said that more than 1500 shallow, elliptical depressions, from a few hundred feet to more than two miles in diameter exist on the Atlantic coastal plain of the Carolinas. No known geologic process is considered adequate to explain them and they are tentatively regarded as the result of the impact of a globular meteoric cluster some 400 miles in diameter which struck sometime during the pleistocene ice age.

At the conclusion of the 45th annual dinner of the geological and affiliated societies, held at the Harvard Union on December 29, the 5th presentation of the Penrose Medal of the Geological Society was made to Dr. Edward Oscar Ulrich of Washington, D. C., one of America's leading paleontologists and stratigraphers.

The American Institute of Mining and Metallurgical Engineers (q.v.) held its annual New York Meeting at the Engineering Societies Building Feb. 20-23, 1933. The section on Mining Geology devoted a considerable part of its meeting to a discussion of the utilization of geology by mining companies. Reno H. Sales and D. H. McLaughlin led off with an informal presentation of the geological work in Butte, Montana, and in the Homestake Mine. This was followed by "Mining Geology in the Cœur d'Alene District, Idaho" by O. H. Hershey (published in *Mining and Metallurgy*, February, 1933) and other papers dealing with the Ducktown, Tenn. deposits, Birmingham, Ala., and Elk City, Idaho. O. H. Hershey showed how the early development of the Cœur d'Alene went forward without geology, but that a recurrent influx of specialists during litigations finally resulted in the more or less continuous employment of geologists.

Harrison Schmidt presented a paper on "Structural Associations of Certain Metalliferous Deposits in Southwestern United States and Northern Mexico" which emphasizes structural features as of first importance in localizing ore deposition. Whatever other factors operate in depositing ore, the previous preparation of the ground by breaking and brecciation is considered essential. (Published as A.I.M.M.E. Contribution no. 38, Class I, February, 1933.)

Another paper by Billingsley and Locke, the "Tectonic Position in Ore Districts in the Rocky Mountain Region" emphasizes the areal relation of mineralized districts to the major structural features of the crust. Their theory is that the position of the zones of mineralization is determined by structural "crossroads" where the Tertiary thrusts cross the anticlinal axes of the Laramide folds and effect a penetration within the crust itself.

W. H. Weed presented a paper on "The Role of Volatiles in Ore Genesis" (Mimeographed and distributed in pamphlet form) which emphasizes the rôle of the magma and its derivatives in ore formation; "... the magma is the vehicle, the volatiles the motive force during the entire

process of igneous intrusion, differentiation and ore genesis."

Among other papers presented before the Non-Metallic Minerals section, the following are important because of their bearing on agriculture. "Potaash Development in Southeastern New Mexico" by H. I. Smith. This outlines the development, under government initiative, of a source of supply which can be depended upon in times of need and greatly reduces America's former utter dependence on a foreign supply.

H. A. Husche spoke on the "Use of Lime and Gypsum in Agriculture." The great importance of lime rests on the fact that the basic salts in the soils of humid climates are rapidly leached out and that the crops use them up rapidly. Liming corrects this soil acidity and also furnishes Calcium and Magnesium as plant foods. Gypsum is not a liming material but is a source of sulphur in sulphur-deficient soils, and when used on black alkali soils, it changes them to the less harmful white alkali.

The Society of Economic Geologists held its annual meeting at Princeton, N. J., July 7 and 8 at the beginning of the International Geological Congress. President B. S. Butler addressed the meeting on the topic "Ore Deposits of the United States in their Relation to Geologic Cycles." The geologic cycle is recognized as having a definite series of events too well known in their broad features to require comment. Metal concentrations during the cycle are grouped into three periods: 1. concentrations from weathering and erosion; 2. concentrations during the period of intrusion and extrusion of basic magma; 3. concentrations following the intrusion of batholithic bodies of granitic and intermediate rocks. The cycles of the different eras are reviewed, and the control over major structural features and igneous activity by the basins of deposition bordering the positive areas, is pointed out. The Canadian Shield, the Piedmont Plateau of eastern United States, the Ozark Plateau, and the Colorado and Columbia plateaus are the centres about which most of the great mineral districts are grouped.

G. W. Bain stated that most of the problems connected with marble as a building material, i.e. differences in grain, color, and silication, are due to thermal metamorphism by hot solutions flowing along the bedding planes of the original rock. He illustrated his point from his experience in the Vermont marble belt.

Arnold Heim of Zurich, Switzerland, described the iron ores of Minas Del Rif, Spanish Morocco. His description and the discussion that followed, indicated a contact metamorphic origin for the ores that were originally sedimentary rocks.

J. W. Peoples described the Stillwater igneous complex along the Beartooth Mountain front in Montana and Edward Sampson called attention to a remarkably constant chromite-bearing band in the ultrabasic zone of the complex. The similarity of this complex and its mineralization to the Bushveld complex of Africa was brought out.

L. W. Currier related the zinc deposits of southwestern Virginia and eastern Tennessee to structural conditions in the limestone. These structures are zones of shattering and fault brecciation. The ores are usually found replacing dolomitized limestone beds, especially at the base of breccia zones.

T. Stadnichenko described studies on the cause of the progressive carbonization of the Lower Kittanning coal bed from west to east. He regarded

the thrust pressure theory as giving the only satisfactory explanation of the facts.

A published paper that should be mentioned here is L. C. Graton's "The Depth Zones in Ore Deposition." This was the subject of his address as retiring President at the meeting of the Society at Tulsa, Okla., December, 1931. It was published in the September number of *Economic Geology*, 1933. This important contribution reviews the accumulated evidence for a deep-seated magmatic source for most types of ores and the great depths to which such ores may persist. The discussion is largely confined to the ore deposits of hydrothermal lineage and it expands Lindgren's classification of these types by introducing a "leptothermal" and a "telethermal" zone. The former comes between and includes neighboring parts of the mesothermal and epithermal zones and includes such ores as the outermost zone at Butte, Mont., some of the San Juan region veins, Casapalca, Peru, the Michigan Copper Deposits, and the veins of Cobalt, Ontario. The latter embraces those deposits that form the very terminus of the hydrothermal lineage, such as the lead-zinc ores of the Mississippi Valley, the "red bed" copper deposits, the Broken Hill lead-zinc deposit of Northern Rhodesia and perhaps the limestone replacement deposits of Kennecott, Alaska, and the Katanga.

The contact metamorphic deposits are bound more closely to the genetic classification by being regarded as representatives of the hypothermal zone in limestones, a type otherwise lacking.

The expanded classification is based upon long field experience, extensive reading and study, and has the attractiveness inherent in any scientific theory that tends toward unification and therefore simplification.

OTHER PAPERS PUBLISHED DURING THE YEAR

Some Theoretical Aspects of Contamination in Acid Magmas, by S. R. Nockolds, the *Journal of Geology*, August-September, 1933.

This paper considers a problem of long standing from a somewhat novel viewpoint. The rôle played by assimilation in the formation of igneous rock types has been discussed many times before, but this author stresses particularly the means by which foreign material is incorporated in the magma. The volatiles which an acid magma contains form a medium of low viscosity through which material can diffuse to and fro. This reciprocal action is a chemical interchange that takes place between the magma and the included fragment. But the magma may also incorporate material from the invaded rock by "mechanical" means. These are I. the solution of certain phases by the magma which sets free those crystals that are in equilibrium with it to be strewn about in the magma. II. minerals from the magma wedge their way into the xenolith or are deposited throughout it and force the component minerals apart. III. injection of granitic material en masse. This usually occurs in rocks with well defined schistosity or many planes of weakness. These three methods, or any two, often work in unison or follow one another.

Petrotectonics by E. B. Knopf, *Am. Jour. Sci.*, June, 1933.

This is the first elaboration in English of the detailed microscopic study of the tectonic history of a rock by determining the orientation of the space lattice of the minerals. Foliation in a rock caused by a definite arrangement of minerals according to shape has long been recognized, but the fact that this orientation also occurs in the equidimensional minerals such as quartz and feldspar can only be proved by special optical investigation. This work was begun by Bruno Sander prior to 1911 and has been continued by him and a number of other European geologists in the intervening years. Its great importance is due to the possibility of ascribing the different sort of orientation patterns revealed by minerals to different types of deformation. Rocks may thus be related directly to the stress conditions that produced them, and repeated foldings may be recognized by a discordant superposition of symmetry even when field evidence for more than one folding is inconclusive.

Ein Wort Zur Mikrotektonik Besonders im Archaischen Grundgebirge, by Th. G. Sahlstein, *Comptes Rendus de la Société Géologique de Finlande*, no. 7, 1933.

This considers the differential motions in the Archeozoic rocks, the relation between micro- and macrotectonics, the symmetry of rock deformation, and the structure of the granulites of Lapland.

Ancestral Rockies and Mesozoic and Late Paleozoic Stratigraphy of Rocky Mountain Region, by R. L. Heaton, *Bull. of American Assoc. of Petroleum Geologists*, February, 1933.

The maximum development of Paleozoic land areas in the present southern Rocky Mountain district was reached in the Pennsylvanian. These mountains coincided with the present ones in only a part of their extent. They were practically base-leveled by the end of the Jurassic and were flooded by marine waters during most of the Upper Cretaceous. Upward movement began before the end of Cretaceous, and culminated in the making of the present Rocky Mountains in the Laramide revolution.

Mechanics of Formation of Salt Domes with Special Reference to Gulf Coast Salt Domes of Texas and Louisiana, by D. C. Barton, *Bull. American Assoc. of Petroleum Geologists*, September, 1933.

Relates the origin of the gulf coast salt domes to the plastic flowage of sedimentary salt intrusive into the overlying sediment. The evidence upon which this conclusion is based comes from the structures revealed in oil field drilling, from algae remains in the salt, and the close similarity to German salt domes. The salt is older than most of the lower Cretaceous. The motive force was the static weight of sediment, but the growth of the domes was largely by downbuilding though some actual upthrusting has occurred.

Tectonic Structure of Northern Andes in Colombia and Venezuela, by H. de Cizancourt, *Bull. American Assoc. of Petroleum Geologist*, March, 1933.

The Andes of Colombia and Venezuela represent in part a folded geosynclinal zone and in part a block faulted foreland with the Maracaibo Lake depression forming a "Median mass" in the folded Cordilleras. The conclusion is reached that the Colombian and Venezuelan Andes do not form an extension of the Peruvian folds.

Depth Changes in Sagami Bay during the Great Japanese Earthquake, by F. P. Shepard, *Journal of Geology*, July-August, 1933.

A critical examination of the evidence in favor of large modifications in Sagami Bay shows that much of it is of uncertain character, but that there is good evidence that the floors of certain submarine valleys in the Bay were deepened. Faulting can hardly be the cause of these changes since they are on an entirely different scale from the faults reported on the bordering land and in earthquakes in general. The alternative explanation relates their origin to submarine landslides.

Origin of the Igneous Rocks of Minnesota, by F. F. Grout, *Journal of Geology*, February-March, 1933.

Reviews the suggestion made in the final report of the Minnesota Geologic and Natural History Survey 30 years ago that igneous magmas in that State were formed almost in place by hydrothermal fusion of older rocks. Concludes that that is not so and that, while most magmas are increased in volume by solutions of the crust, there is very little direct fusion. Most magmas appear to reach the crust from below.

The Basal Regions of Granitic Batholiths, by W. H. Emmons, *Journal of Geology*, January-February, 1933.

A systematic study of granitic batholiths shows that they may be divided into (1) the metallized roof, (2) the metallized hood, and (3) the barren core. Veins without metals are found in this core. The magma is believed to have generated sufficient pressure on cooling to fracture the roof, and thus it furnishes the force to form the veins as well as the materials that fill them.

On the Chrome Minerals of Ontokumpu, by Pentti Eskola, *Extrait des Comptes Rendus de la Société Géologique de Finlande*, no. 7, 1933.

Describes the chrome-bearing minerals that occur in different rocks associated with serpentine rock, itself very poor in chromium, near the Ontokumpu copper mine

in eastern Finland. Concludes that these minerals, including chromite, are in all probability of hydrothermal origin. States that this occurrence illustrates the ability of chromium to migrate and to take part in metasomatic replacement.

On the Differential Anatexis of Rocks, by Pentti Eskola, *Extrait des Comptes Rendus de la Société Géologique de Finlande*, no. 7, 1933.

Divides the earth's crust below the zone of weathering into zones showing a different behavior as far as intrusions and anatexis are concerned. (1) No truly plutonic granite or pegmatitic intrusions but with hydrothermal intrusions, largely quartz veins, derived from crystallizing magmas or dissolved from surrounding rocks. (2) Zone of intrusion and injection and potash metasomatism. Still little if any partial re-fusion. (3) Zone of differential anatexis.

Trends of Differentiation in Basaltic Magmas, by W. Q. Kennedy, *Amer. Jour. Science*, March, 1933.

Relates the contrast between alkaline and calc-alkaline magma types to two distinct primary basalt magmas. The common view to-day regards the alkaline magmas as abnormal derivatives of a primary, parent magma common both to them and to the sub-alkaline magma. According to this view the alkaline type results from fractional crystallization under certain special circumstances, or from desiccation consequent upon assimilation of calcic sediments. Kennedy presents evidence to prove that the olivine-basalt magma with a lime-rich diopsidic augite gives rise to alkaline derivatives, while the tholeiitic magma with a lime-poor enstatite-augite, the common rock of the plateau basalts, results in sub-alkaline derivatives.

The Thermal History of the Earth, by A. Holmes, *Jour. Wash. Acad. of Science*, vol. 23, 1933. (Review by A. Knopf, *Am. Jour. of Science* September, 1933 quoted below.)

"In this paper the author presents in compact form his recently formulated hypothesis of subcrustal convection currents. The time-honored hypothesis of the Earth's contraction as the source of the energy of mountain-building, and Joly's hypothesis of thermal cycles are held to be inadequate. A planetary system of convection currents maintained by radio thermal energy in a liquo-vitreous zone beneath the Earth's rocky shell is envisaged and is held to be consistent with a wide range of geologic and geophysical data."

Greenland; the Advances of a Decade, by W. H. Hobbs, *Michigan Acad. of Science*, vol. xviii, 1932 (1933).

The results of the explorations, surveys, and research investigations carried on during the past 10 years.

The Geological Age of the Glacial Horizon at the Base of the Gondwana System, by Sir Thomas H. Holland, *Quarterly Journal Geol. Soc. of London*, vol. 89, 1933.

Reviews the evidence for the exact age of this formation and aligns himself with those who consider it to be Upper Carboniferous. Believes in more than one glacial horizon in the Gondwana rocks of Australia and South America.

Land and Sea on the Canadian Shield in Pre-Cambrian Time, by H. C. Cooke, *Am. Journal of Science*, October and November, 1933.

Gathers together the known information, which, with some interesting theorizing, allows the author to construct broadly generalized paleogeographic maps.

Alpine Land Forms of Western United States, by R. J. Russell, *Bull. Geol. Soc. America*, October, 1933.

The author disputes the concept that land forms in the alpine portions of western United States are the products of the erosional processes familiar at lower elevations and modified by glaciation. He also questions the emphasis that has been placed on the latter process. He finds the nearest relatives to these forms in the Arctic borderland and ascribes their origin largely to nivation and solifluction.

Contact Metamorphism of the States of Minnesota by Granite and by Gabbro Magmas, by F. F. Grout, *Bull. Geol. Soc. America*, October, 1933.

The slate series is so uniform in character that the changes produced by intrusives can be judged with unusual accuracy. The products are carefully described and

distinguished, the effects and the character of the two types of intrusions are compared.

Mineral Zoning in the New Jersey-Pennsylvania-Virginia Triassic Area, by W. H. Newhouse, *Econ. Geol.*, November, 1933.

Ascribes the contact-metamorphic magnetite deposits of Pennsylvania to solutions that originated at depth along the major faulted portion of the Triassic area. The upper mineralization with varying mineralogy extends northward into New Jersey and southward into Virginia. These variations are ascribed largely to temperature conditions mainly controlled by the Triassic erosion surface, and in part to the influence of ferric oxide in the Triassic red beds.

Report of the Committee on Batholith Problems, by F. F. Grout. A mimeographed pamphlet issued by the Division of Geology and Geography of the National Research Council.

Contains report of the Committee by A. F. Buddington and a discussion of "Partial Miscibility of Magmas" by O. N. Fenner. There is also a separate report of 59 pages on "Problems of the Batholiths."

NEW BOOKS

Mineral Deposits, by Waldemar Lindgren (McGraw-Hill Book Co., New York, 1933). The fourth revised edition of a standard text. It is shortened by over 100 pages, contains new illustrations, brings the references up to date and mineral statistics up to 1930. There is a rearrangement of the treatment of certain deposits within the frame-work of the same genetic classification as that formerly used. For instance, one chapter headed "Sedimentary Iron Ores Regionally Metamorphosed" replaces the "Hematite Deposits of the Lake Superior Region" and "Deposits resulting from Regional Metamorphism." The deposits of native copper are considered after the epithermal deposits instead of before them. The discussions of origin take in the most recent ideas concerning the magmatic ore deposits and the magmatic derivation of the lead-zinc ores in limestones. As in the case of its predecessors, it is a book that every geologist and mining engineer must have available for constant reference.

Historical Geology, by Schuchert and Dunbar (John Wiley & Sons, Inc., New York, 1933). This is part II of "Textbook of Geology" and is the third edition, largely rewritten. Emphasizes the two fold development of the Earth itself and the life upon it, and the principles concerned in geological thinking, avoiding encyclopedic cataloging of facts. It is illustrated with new plates and paleogeographic maps. A greater continuity in the text over that of previous editions is obtained by relegating the descriptive biologic chapters to the appendix. It is again the most comprehensive and up-to-date textbook of Historical Geology.

A Manual of Foraminifera, by J. J. Galloway (Principia Press, Bloomington, Ind., 1933). A study of the phylogeny of the families, sub-families, and genera of foraminifera which presents a more complete and more strictly scientific classification of those organisms than any previous one. It bases the phylogenetic interpretation on the geologic record. It is illustrated by plates and charts.

Ores and Industry in the Far East, by H. Foster Bain (Council of Foreign Relations, New York, 1933). This is the second, revised edition of an important work New data regarding Manchuria and Jehol are included. It is a timely and up-to-date summary.

Tabellen zur Berechnung von Mineral und Gesteinsanalysen, by H. von Philippsborn (Akademische Verlagsgesellschaft M. B. H., Leipzig, 1933). Technical tables for the mineralogist and petrologist more comprehensive and more accurate than any previous ones.

Principles of Historical Geology, by R. M. Field (Princeton University Press, 1933). Attempts to show how Earth history has been deciphered by an elementary description of the geology of various regions, but at the expense of principles and chronologic arrangement. A departure from the ordinary method of presenting Historical Geology which is marred by the carelessness with which it was put together.

Earth Lore, Geology without Jargon, S. J. Shand (Thomas Murby & Co., London, 1933). Geology presented by an expert but in simple fashion. A brief, readable, informative book for the non-specialist.

Early Steps in Human Progress, by H. J. Peake (J. B. Lippincott Co., Philadelphia, 1933). A summary of present day knowledge concerning the development of human culture, making sharp distinctions between what is known and what may be fairly inferred as to the origin of civilization.

The World of Fossils, by O. L. Fenton (D. Appleton-Century Co., New York, 1933). A brief, interesting review of the life of the past. Paleontology for the layman that views fossils as they once were and lived, rather than as traces on a rock that need only to be described.

Mineral Deposits of the Canadian Shield, by E. L. Bruce (The Macmillan Company of Canada, Ltd., Toronto, 1933). The first quarter of the book is devoted to those parts of geology that are most closely allied to mineral deposits. It is a compact summary, critically prepared, and is therefore of value. The rest of the book describes the many and important Canadian mineral deposits.

Textbook of Paleontology, Vol. II, by the late Karl A. von Zittel, translated and edited by C. R. Eastman (Macmillan & Co., Ltd., London, 1932). Volume II deals with the vertebrates from fishes to birds. It is the second English edition, revised and with additions by Sir Arthur S. Woodward. The form of the book remains the same as the original and Zittel's methods have been followed throughout, but the many new discoveries made since 1902 are incorporated, so that the old book, largely rewritten, is considerably enlarged and the references are brought up to date.

An Introduction to the Study of Fossils (revised edition), by H. W. Shimer (The Macmillan Co., New York, 1933). In this second edition the first chapter on "General Considerations" has been enlarged. It summarizes the conditions of preservation, process of fossilization and other important facts introductory to the study of fossils themselves. The various phyla of plants and animals are then studied in detail and the fossil forms interpreted through the related living forms. Summaries of relationship and evolution have been added and the importance of each phylum as a rock-builder is noted.

Mineralogy of Sedimentary Rocks, by P. G. H. Boswell (Thomas Murby & Sons, London, 1933). Consists of 121 pages covering such features as "The Individuality of Sediments," "Minerals as Clues to the Source of Sediments," "Correlation by Means of Minerals," "Deep Sea Sediments," etc., a list of general works, and 135 pages of bibliography and abstracts. This is an exceedingly valuable section and is followed by indices to stratigraphical horizons, localities, minerals, and technique.

The Jurassic System in Great Britain, by W. J. Arkell (Clarendon Press, Oxford, England, 1933). This is a large book of nearly 700 pages, undertaken because of the necessity of coordinating the vast amount of work that has been done on the Jurassic of Great Britain. It is not a summary of everything available, but a general description indicating what has been done and where the information may be obtained. Since the Jurassic system in Great Britain is the standard section for the world, the importance of this book is evident.

Geology of California, by R. D. Reed (Thomas Murby & Co., London, 1933). A general account of the geologic work done in California and of the structure, stratigraphy, and geologic history of the State. Emphasizes some of the still unsolved problems.

Phase Rule Studies, by J. E. W. Rhodes (Oxford University Press, London, 1933). Not a geological book but an excellent guide to knowledge concerning chemical principles that are involved in the formation of minerals and rocks.

Historical Geology, by R. C. Moore, (McGraw-Hill Book Co., New York, 1933). Because of the comprehensiveness of the subject and the almost limitless number of possible methods by which the subject may be presented, there is always room for another textbook on Historical Geology. The discussion of Eras and periods of Earth history is preceded by chapters on the materials of the Earth, the origin and the development of the Earth. Life is treated in separate chapters for each Era in order not to encumber the student with too much biologic detail under each period. The restricted use of paleogeographic maps and the rather poor reproductions of many of the plates and figures are noticeable.

The Story of a Billion Years, by W. O. Hotchkiss (The Williams and Wilkins Co., Baltimore, Md., 1933). One of 20 books in the "Century of Progress Series." Describes widely selected geological subjects in simple language and makes a coherent story out of them. A good book for the non-geologist who wishes to learn something of Earth science in a short time.

Earth Oil, by G. Egloff (The Williams & Wilkins Co., Baltimore, Md., 1933). Another of the "Century of Science Series." An interesting story of petroleum in all its phases. Excellent for the layman and full of unusual bits of information for the specialist.

Conodont Studies Number 1, by E. B. Branson and M. G. Mehl (University of Missouri Studies, Vol. VIII, No. 1, Columbia, Mo., 1933). Discusses the methods of collecting and studying these minute fossils whose uncertain biologic relationship has given rise to much speculation. They are locally abundant in certain Paleozoic formations. This new study and description may lead towards their use in subsurface correlation.

Geologie der Erde, Pt. I Geologie Sudamerikas, by H. Goth (Berlin, 1932). Considers the geology of South America up to the end of the Paleozoic Era. The introduction is concerned with the general orographic and geologic organization of the continent. Chapters I-III deal with the pre-Cambrian, Chapter IV with the older,

and V with the younger Paleozoic, chapter VI with the Gondwana rocks.

College Textbook of Geology, Part I, Second Edition, Geologic Processes and Their Results, by R. T. Chamberlin and Paul MacClintock. This is the latest of a long line of textbooks started by Chamberlin and Salisbury. It is some 60 pages longer than its immediate predecessor but is printed on thinner paper which decreases its size somewhat. Much new material, and a more complete discussion of processes make this a valuable short text.

Minerals Yearbook, 1932-1933, by O. E. Kieseling (U. S. Bureau of Mines, 1933). This is a new publication which takes the place of the "Mineral Resources of the United States" which has been issued annually for 50 years. This single, handy volume will be kept up to date and will be a marked improvement upon the older system. It includes metals and non-metals, gives statistics and a summary of uses and developments during the year.

The Mineral Industry during 1932, edited by G. A. Roush (McGraw-Hill Book Co., New York, 1933). Continues this invaluable series, published yearly, that gives a résumé of conditions in the various mineral industries. *Elements of Optical Mineralogy, Part II, Description of Minerals*, third edition, by A. N. Winchell (John Wiley & Sons, Inc., New York, 1933). Incorporates the advance in knowledge of the composition of complex silicates resulting from X-ray studies and the reexamination of the relations between optical properties and chemical composition. The new classification of silicates based upon the crystallographic relationships revealed by X-ray studies is used.

Thin Section Mineralogy, by A. F. Rogers and P. F. Kerr (McGraw-Hill Book Co., Inc., New York, 1933). A new, comprehensive, introductory text on optical mineralogy which combines an unusual number of clear diagrams and well chosen photographs with new identification tables and descriptions of the common minerals.

History of the Theory of Ore Deposits, by Thomas Crook (Thomas Murby and Co., London, 1933). A readable account of the development of the various theories that have been advanced to explain ore deposits. Emphasizes the recurrence of the relatively few fundamental theories.

NEW MAPS

Geological Map of the United States of America, see under XVIIIth International Geological Congress (this article).

Carte Géologique Internationale de la Terre, published by the Prussische Geologische Landesanstalt, Berlin, 1933. Four sheets covering Africa south of the equator, Madagascar and the oceanic islands to latitude 50° south. Scale at the Equator 1:5,000,000 (beginning of series).

Carte Géologique Internationale de l'Europe, published by the Prussische Geologische Landesanstalt, Berlin, 1933. The first four sheets of the forthcoming geological map of Europe. Scale 1:1,500,000 includes part of central and eastern Europe.

Geological Map of Maryland, Maryland Geological Survey, E. B. Mathews, State Geologist. Scale 1:380,160 or 6 miles to the inch.

Mapa Geologica de Espana, published by the Instituto Geologico y Minero de Espana (Madrid, 1932). Scale 1:1,000,000.

Preliminary Geologic Map of Maine, Maine Geological Survey, by Arthur Keith. Scale 1:1,000,000 on United States Geological Survey base map.

Carte Géologique Murale de l'Alsace et de la Lorraine, under the direction of E. de Margerie. A large wall map in four sheets on the scale 1:200,000 with a contour interval of 100 meters.

Catalogue of Small-scale Geologic Maps (Preliminary Edition), W. H. Bucher, Editor, National Research Council, Washington, D. C., 1933.

A handy reference to locate geologic maps of many scales and types published in the periodicals and the Federal and State Survey Bulletins.

GEORGE, STEFAN. A German poet, died at Lugano, Switzerland, Dec. 4, 1933. He was born at Budesheim, near Bingen, Germany, July 12, 1868, and after attending the Darmstadt gymnasium studied philosophy and the history of art in Paris, Berlin, and Munich. While in Paris he came under the sway of such symbolistic poets as Beaudelaire and Mallarmé, and before returning to Berlin visited London where he was influenced by the Pre-Raphaelites. His poems appeared after 1890 in *Blätter für die Kunst*, the earlier volumes, such as *Hymnen* (1890), *Pilgerfahrten* (1891), and *Algalal* (1892), being published privately. Later appeared *Die Bücher der Hirten und Pre-*

isgedichte, der Sagen und Sänge und der hängen-den Gärten (1895); *Das Jahr der Seele* (1897); *Der Teppich des Lebens und die Lieder von Traum und Tod* (1899); *Die Fibel* (1901); and *Ser siebente Ring* (1907). Of the World War he wrote *Der Stern des Bundes* (1904); *Der Krieg* (1917); and *Drei Gesänge—An die Toten, Der Dichter in Zeiten der Wirren, und Einen jungen Führer im ersten Weltkrieg* (1921).

Das Neue Reich, which George published in 1929, caused the National Socialists on their ascendancy to proclaim him the prophet of the Third Reich. In this work he upheld the vision of the heroic man, collectivism or the citizens' obligations to the state, the power of faith, and the spiritual ideal of the nation. He published also the essays *Tage und Taten* (1903) and *Maximin, Ein Gedenkbuch* (1906) and translated into German Baudelaire's *Flowers of Evil* (1901), Shakespeare's *Sonnets* (1909), Dante's *Divine Comedy* (1912), and the works of Rossetti, Swinburne, Verlaine, Rimbaud, and D'Annunzio.

In 1927 Stefan George received the Goethe prize, awarded by the city of Frankfurt-am-Maine for upholding in his work the dignity and spirit of that poet. Recognized as the leader of the cult of esoteric poetry in Germany, he sought to extol beauty of form through imagery and euphony, in opposition to the tenets of the naturalistic school.

GEORGETOWN UNIVERSITY. A Roman Catholic institution of higher education for men in Washington, D. C., founded in 1789, and conducted by the Society of Jesus. In the autumn of 1933, 2086 students were enrolled. The faculty numbered 410. The Riggs Memorial Library contained 164,547 volumes; the Hirst Library 10,456 volumes, and the individual libraries maintained by the professional schools, many additional volumes. In 1933 the White-Gravenor Building was completed. It contains the executive offices of the college and a number of class and lecture rooms. The fourth floor is devoted to modern chemical laboratories. President, the Rev. Coleman Nevils, S.J., Ph.D., D.D.

GEORGE WASHINGTON UNIVERSITY, THE. A nonsectarian institution of higher learning for men and women in Washington, D. C., founded in 1821. The enrollment for the first semester of 1933-34 was 4778. The faculty numbered 350. Outstanding among the 21 new faculty appointments were those of William John Cooper, former United States Commissioner of Education, as professor of Education; Joseph Quincy Adams, director of research of the Folger Shakespeare Library, as professorial lecturer in English; and Edward Bright Vedder, former director of the Army Medical School, as professor of experimental medicine and executive officer of the department of pathology and experimental medicine. The endowment amounted to \$2,060,000, from which the income for 1932-33 was \$81,164. The total income from all sources was \$1,166,389. The library contained more than 100,000 volumes. President, Cloyd Heck Marvin, Ph.D., LL.D.

GEORGIA. POPULATION. The population of the State on Apr. 1, 1930, was 2,908,506 (Federal Census); in 1920, it was 2,895,832; in 1933 (Federal estimate), 2,911,000. Atlanta, the capital, had (1930) 270,366 inhabitants.

AGRICULTURE. The following table shows the acreage, production, and value of the principal crops for 1933 and 1932:

Crop	Year	Acreage	Prod. Bu.	Value
Cotton . . .	1933	2,147,000	1,110,000 ^a	\$52,170,000
	1932	2,651,000 ^a	854,000 ^a	24,766,000
Corn	1933	3,740,000	39,720,000	23,562,000
	1932	3,856,000	38,560,000	12,725,000
Peanuts ..	1933	773,000	456,070,000 ^b	11,858,000
	1932	888,000	398,050,000 ^b	5,175,000
Tobacco ..	1933	66,000	58,124,000 ^b	6,598,000
	1932	23,500	12,565,000 ^b	1,415,000
Sweet potatoes .	1933	95,000	7,600,000	3,800,000
	1932	109,000	8,938,000	3,128,000
Hay (tame)	1933	706,000	358,000 ^c	3,759,000
	1932	826,000	481,000 ^c	3,848,000
Peaches ...	1933	.....	5,440,000	4,080,000
	1932	.....	1,170,000	1,112,000
Oats	1933	295,000	5,810,000	3,717,000
	1932	378,000	6,993,000	2,657,000
Potatoes ..	1933	18,000	1,026,000	1,077,000
	1932	17,000	1,003,000	782,000

^a Bales. ^b Pounds. ^c Tons.

EDUCATION. A public-school code having support of educational groups was prepared in the course of the year for submission at the next session of the Legislature. For the academic year 1932-33 the number of persons of school age in the State was reckoned as 869,744. There were enrolled in the public schools 757,830 pupils. Of these, 642,174 were in common schools or elementary grades; in the ordinary high schools, 107,880; and in evening high schools, 776. The year's current expenditures for public-school education totaled \$15,836,864. Salaries of teachers, for the year, averaged \$603.18.

LEGISLATION. A regular session of the Legislature convened in January, the former time of convening (July) having been altered to conform with the shift to January for the inauguration of governors. The session occasioned disappointment by making appropriations in excess of the expected revenue for the two years ahead. It provided State road payments to counties which had aided in road building, the payments for this purpose being estimated as likely to reach \$25,000,000. No provision was made for a State convention to deal with the proposed Federal Eighteenth Amendment. The Twentieth Amendment to the Federal Constitution was ratified.

POLITICAL AND OTHER EVENTS. In the course of the banking panic the banks of the State were closed on March 3 by the Governor's proclamation of a legal holiday. Prior to the closure, inability to meet payments in cash had led Atlanta to issue a considerable total in scrip, which had been accepted by merchants and some banks as cash at face value. Plans for a large new issue of scrip in Atlanta were abandoned during the period of closure of the banks. The banking institutions under State control reopened on March 12, subject to close restriction by the superintendent of banks under powers accorded by the Legislature.

By the operation of a new system as to terms of office Governor Talmadge was inaugurated, not in June like his predecessors, but on January 10. Upon the Legislature's adjourning without having provided to balance State expenditure with revenue he ordered on March 25 that the governmental departments immediately reduce their budgets by an aggregate of \$1,000,000; this was reported to require reductions of between 20 and 25 per cent. Chairman Barnett of the Highway Board refused in April to obey the Governor's order to dismiss four designated engineers from the Board's employ. Governor Talmadge

thereupon refused to sign warrants for the pay of 1300 employees of the Highway Department. In June he ordered the sequestration of funds in the hands of the Highway Board, totaling by report some \$2,500,000. It was supposed at the time that the order would be made to apply to subsequent highway revenues, running to some \$800,000 a month. The purpose of the order was to provide revenue to meet State obligations, of which some were overdue, notably payments to eleemosynary institutions, Confederate veterans, and public schools. Talmadge called out State troops and put the Highway Department under military law. Under the doctrine of military law he prevented the service of subpoenas on him by those who would have put his course to court test. He ousted two members of the Highway Board, who had sought to bring civil action against him.

In other parts of the State government Talmadge took summary action. He was reported to have directed the activities of the Controller General and of the State Department of Agriculture. By his order the State's ad-valorem tax-rate was cut to 4 mills. Charging the members of the public-service commission with favoring utility companies he removed all five and appointed in their place members who, he declared, would carry out his intention to reduce utility rates. The reorganized commission made lower electric rates, to which companies reportedly agreed, and lower telephone rates, which were fought in the Federal courts.

OFFICERS. The chief officers of the State, serving in 1933, were: Governor, Eugene Talmadge; Secretary of State, John B. Wilson; Attorney General, M. J. Yeomans; Treasurer, George B. Hamilton; Auditor, Tom Wisdom; Comptroller General, William B. Harrison; Superintendent of Schools, M. D. Collins; Commissioner of Agriculture, G. C. Adams; Commissioner of Commerce and Labor, H. M. Stanley.

Judiciary. Supreme Court: Chief Justice, Richard B. Russell; Assistant Justices, H. Warner Hill, R. C. Bell, Marcus W. Beck, Samuel C. Atkinson, S. Price Gilbert.

GEORGIA (GEORGIAN SOCIALIST SOVIET REPUBLIC). A Soviet republic (area, 26,981 square miles; population, 2,883,200 on Jan. 1, 1931), which in 1922 united with Azerbaijan and Armenia to form the Transcaucasian Socialist Federated Soviet Republic (q.v.).

GEORGIA, UNIVERSITY OF. A State institution of higher education for men and women in Athens, Ga., chartered in 1785 and opened in 1801. The enrollment in the 1933 summer session was 1072 and for the autumn term 2118. The faculty numbered 141. The productive funds of the university amounted to \$425,000, and the income for the year from the State and other sources was \$8,000,000. The library contained 80,000 volumes. The Georgia State College of Agriculture and the Mechanic Arts and the Georgia State Teachers College have been integrated with the university, all three institutions constituting the University of Georgia. President, Steadman V. Sanford, Litt.D.

GERMAN, WILLIAM MANLEY. A Canadian lawyer and legislator, died at Welland, Ont., Mar. 31, 1933. He was born at Hillier, Ont., May 26, 1851, and was educated at Victoria College, Cobourg. Called to the Ontario bar in 1881, he practiced at Welland, being appointed Queen's Counsel in 1899. In 1904 he gained international prominence by appearing before the Privy Coun-

cil, with Lord Haldane, at the instance of the owners of the *Kitty D*, an American fishing schooner which had been seized by Canadian revenue officers. He won his greatest fame, however, as a trial lawyer.

In addition to representing Welland Co. in the Ontario Legislature from 1894 to 1898, Mr. German was a member of the House of Commons of the Dominion Parliament from 1891 to 1892, 1900 to 1917, and 1921 to 1925. He was one of the leaders in the fight of the Conservative party to destroy the American power monopoly at Niagara Falls, which led to the treaty stipulation of 1910 whereby there could be diverted on the American side for power purposes 20,000 cubic feet of water per second and on the Canadian side 36,000 cubic feet per second.

Mr. German was a former president of the Welland Electrical Co., Ltd., and of the International Peace Bridge Co., which constructed during 1926-27 the bridge connecting Buffalo and Fort Erie, Ont., and at the time of his death was president of the General Brock Hotel Co., Ltd., of Niagara Falls, Ont. He was also deeply interested in the promotion of the St. Lawrence waterway project.

GERMAN FILMS. See **MOTION PICTURES.**

GERMAN LITERATURE. The past twelve months have witnessed much excitement, change, and turmoil in Germany. To a very considerable extent published literature reflects this situation, though editors have bravely persisted in issuing much that remains "above the battle" and though some voices have been silenced. Business conditions and political attitudes have likewise altered a great deal that seemed a year ago the relatively permanent façade of German letters. Not a few prominent authors have gone into exile, where their latest works await publication. During the next few years it may be necessary to list separately writings which have been banned in the Fatherland, but which still reflect the energy of the German tongue. At present this is hardly possible, nor is it as yet really necessary.

NOVELS. The four most important novels of the year are probably Thomas Mann's *Die Geschichten Jakobs*, which seems not to equal his earlier masterpieces; Karl B. von Mechow's *Vorsommer*, a somewhat idyllic tale (in the manner of *Silas Marner*) by a writer of unusual promise; Franz Werfel's *Die Vierzig Tagen des Musa Dagh*, which deals with a characteristic theme; and Rudolf Hans Bartsch's *Ein Deutscher*, a romantic-minded attempt to interpret much that has occurred recently. The contemporary soul and its chaos is the theme of Will Kramp's *Die ewige Feindschaft*, while F. Thiess deals more rhetorically and optimistically with the "new Germany" in *Johanna und Esther*. Many well-known names are represented this year: Friedrich Griese's *Das letzte Gesicht*, which many Germans profess to admire; Ina Seidel's *Der Weg ohne Wahl*, another story of happiness achieved through sacrifice; Hermann Steyr's *Die Nachkommen*, readable separately but in fact a sequel to *Nathanael Maechler*; Jakob Schaffner's *Eine deutsche Wanderschaft*; H. Grimm's *Der Oeleucher von Duala*, an old story somewhat revamped; and Ludwig Mathar's *Strasse des Schicksals*, a novel with a political background. Josef Ponten's *Volk auf dem Wege* is the first part of a projected nationalistic trilogy. Several relatively new story-tellers are on the lists, including Otto Bräse, with *Das Mädchen von Utrecht*, Charlotte

Ursina's *Erasmus*, a story with a quaint Rhenish milieu, and the artist Richard Seewald's fantastic *Robinson, der Sohn Robinson's*. The year has witnessed the 70th birthday of Gustav Frensen, author of the once world-famous *Jörn-Uhl*. His latest book is *Meino der Prahler*.

SHORTER FICTION. The *Novelle* has been popular and is, in a sense, the most interesting contemporary German literary form. There is, perhaps, no single distinguishable masterpiece or any collection one would wish to place beside Rudolf Borchardt's *Das hoffnungslose Geschlecht*, but there is much fine work. Elizabeth Langaesser's *Triptychon des Teufels* probes deeply into human nature, mirrored in sombre little dramas of the *Besatzungszeit*. Ruth Schaumann's *Siebenfrauen* offers charming miniatures in a form of great stylistic interest. Joseph Wittig's *Das verlorene Vaterunser* have this author's appealing meditateness. Isolde Kurz's *Die Nacht im Teppichsaal*, which has an Italian setting, is rather a *Novellenband* than anything else. Noteworthy also are Werner Beumelberg's *Wen die Götter lieben*, Georg Britting's *Das treue Eheweib*, and Gertrud von le Fort's *Das Reich des Kindes*. Paul Ernst's *Deutsche Geschichten* offers a selection from the tales of this recently deceased writer, who was a stalwart conservative and has, perhaps, been somewhat unduly neglected.

POETRY AND DRAMA. Lyrical verse decidedly new in content and mood is still in the making, and is in these times frequently circulated in manuscript or mimeograph form. Readers can form some idea of it through small current anthologies, among which *Die Gruppe* (an Austrian publication) is noteworthy. Volumes issued during the past year include Richard von Schaukal's *Gedichte: 1928-1933*, the work of an older Austrian poet, and G. von der Vring's *Das Blumenbuch*. Joachim Ringelnatz's *Gedichte* and Dr. Owlglass's *Stunde um Stunde* are satirical and sententious. Drama is in a state of transition and stagnation. The past year saw the production of *Schlageter*, a patriotic drama by Hans Johst, who is the official poet of the new régime. Gerhart Hauptmann has published *Die Goldene Harfe*, another mystical drama. Richard Strauss' *Arabella*, the new opera of 1933, is the final fruit of the long collaboration between the composer and Hugo von Hoffmannsthal. The production of radio drama has made some progress during the year, and some are attempting to revive the poetic play.

POLITICS AND ECONOMICS. Political literature has appeared in huge quantities, the baffling task of surveying which has become a minor contemporary necessity. There are books and brochures, symposia, and series. Several publishers have taken to issuing dozens of small volumes (e.g. *Maenner und Mächte*) which provide biographies of political leaders, patriotic harangues and theories either constructive or destructive. In addition there are many works of a larger format. The latest edition of *Mein Kampf*, Adolf Hitler's autobiography, carries the story past the threshold of victory. Second and quite as important is Oswald Spengler's *Jahre der Entscheidung*, a book distributed in no end of tens of thousands and definable as a conservative's reaction to the National-Socialist revolution. Aspects of the reigning German mentality may be seen in Joseph Goebbels' *Revolution der Deutschen*, a volume of addresses by the minister of propaganda and an indispensable

source-book; Otto Dietrich's *Mit Hitler in die Macht*, which is a close-up with incense added; R. W. Darré's *Das Bauerntum als Lebensquelle der Nordischen Rasse*, a dull but illuminating discussion of the peasant's title to the sun; Ewald Banse's *Geographie und Wehrwille*, by a famous professor of the martial spirit; K. L. von Oertzen's *Wehrpolitik*, a sound and interesting military treatise which is quite up to date; Wagner and Beck's *Hochschule für Politik der NSDAP*, which outlines what every young German ought to know about civic attitudes and responsibilities; and J. von Puttkammer's *Deutschland's Arbeitsdienst*. Somewhat more critical are Edgar J. Jung's *Sinnbedeutung der deutschen Revolution*, an intelligent and incisive little book by a representative of the younger generation; Walther Gebhart's *UM des Reiches Zukunft*, a brilliant discussion of the ideas, philosophical and otherwise, on the basis of which the new nationalism strove toward power; and Karl Rauch's *Schluss mit "junger Generation!"* which pleads for recognition of the value of experience in the conduct of political affairs. Paul Tillich's *Die Sozialistische Entscheidung*, superficially a little out of date, is worth going back to as the final word of a great Christian-Socialist. Richard Bahr's *Volk jenseits der Grenzen* rediscusses the problem of German minorities in the post-Versailles states. E. Voegelin's *Rasse und Staat* is, perhaps, the most important recent German publication on this much debated question. B. Laum's *Die Geschlossene Wirtschaft* is one of many publications dealing with the closed economic state. Konrad Heiden's valuable *Geschichte des Nationalsozialismus* and A. von Miltenberg's *Wilhelm der Dritte* have been forbidden by the censor.

RELIGION AND PHILOSOPHY. Since the Hitler movement professes to be a *Weltanschauung* as well as a political party, it is natural that religious debate should rage furiously. Most of the publications do not profess to be more than brochures, and the English reader is reminded of Stuart days. Emil Hirsch's *Das kirchliche Wollen der Deutschen Christen* is an indispensable summary of events which led to the unification of the Lutheran church under a National-Socialist bishop. Ernst Bergmann's *Die deutsche Nationalkirche* is a plea for an organized patriotic religion entrusted with assimilating the traditional confessions. Karl Barth's *Theologische Existenz heute!* is a passionate demurrer to recent events, destined to be remembered as a masterpiece of German theological prose. Paul Althaus' *Die deutsche Stunde der Kirche* is a great scholar's attempt to pour oil on troubled waters. More inclined to accept the synthesis of nationalism and religion but relatively individualistic are Friedrich Gogarten's *Einheit von Evangelium und Volkstum* and Wilhelm Stapel's *Die Kirche Christi und der Staat Hitler's*. Franz von Papen's *Appel an das deutsche Gewissen* is the nearest approach to a formulation of Catholic conservatism, while Erik Peterson, in *Die Kirche aus Juden und Heiden*, touches upon a burning question in the manner of a Catholic church historian.

In religious works the great success of the year has been F. M. Willam's *Das Leben Jesu im Lande und Volke Israel*, which deals so skillfully with the Palestine background that the author has been termed a conservative Renan. The first volumes of J. Schmidlin's *Papstgeschichten der neuesten Zeit* point toward the produc-

tion of another monumental historical work. Among the publications which have grown out of the Luther centenary is *Martin Luther, dargestellt von seinen Freunden und Zeitgenossen*, edited by A. S. Cohrs. Martin Grabmann has written *Die Geschichte der katholischen Theologie seit dem Ausgang der Väterzeit*, Karl Adams's *Jesus Christus* and Romano Guardini's *Im Spiegel und Gleichnisse* are widely read new books by Catholic writers.

Philosophy has in a measure wrestled with the problems underlying the present change. The following are among those which have attracted most attention: *Volk, Staat, Erziehung*, by E. Spranger, collected essays by a leading pedagogical writer; *Vom Sinn der Gegenwart*, by Hans Eibl; *Vom Ratsel der Zeit*, by Friedrich Muckermann; *Politische Kulturlehre*, by Gustav Steinboehmer; and *Die Rassenidee in der Geistesgeschichte*, by E. Voegelin.

There is no dearth of general philosophical literature. Some of these books may appeal to an audience outside the specialists: *Selbstdarstellung*, by Nicolai Hartmann, the leading Berlin thinker's interpretation of his work; Max Scheler's *Schriften aus dem Nachlass*, further essays by a deceased philosopher whose influence upon younger men has never been more discernible than it is now; Theodor Haecker's *Was ist der Mensch?*, a powerful essay in anthropological interpretation; and Bernhard Jansen's *Aufstieg zur Metaphysik. Spinoza* (vol. 2), by S. von Dumin-Borkowski, promises to be the most satisfactory biography of this philosopher. *Platon*, by K. von Hildebrandt, represents Plato as the reformer of his people. J. Pieper's *Grundformen sozialer Spielregeln* is an interesting essay in philosophical sociology. Gerhard Menz's *Kulturwirtschaft* deals illuminatingly with the relations between cultural and economic activity.

HISTORY. No notice can be taken of specialized historical monographs here. Among the more widely discussed books are: F. Schnabel's *Deutsche Geschichte im 19. Jahrhundert*, moderately conservative and well-written; E. Czech-Jochberg's *Deutsche Geschichte nationalsozialistisch gesehen*; Konrad Heiden's *Geschichte des Nationalsozialismus*, written early in the year; and Guenther Franz's *Der deutsche Bauernkrieg*. Herder's *Geschichte der führenden Völker* is progressing, new volumes including Hugo Hantsch's *Die Entwicklung Oesterreich-Ungarns zur Grossmacht*.

MEMOIRS. Several important volumes of memoirs have appeared. Gertrud Baumer's *Lebensweg durch eine Zeitenwende* is a prominent woman leader's commentary on several past decades of German political and cultural activity. In *Mein militärischer Werdegang*, Gen. Erich Ludendorff analyses his own soldierly career. Another military autobiography, concerned with events of the Wilhelmian era, is Generaloberst von Einem's *Erinnerungen eines Soldaten*. Carl Duisberg's *Meine Lebenserinnerungen* tells in a straightforward way the life-story of a many-sided chemist of international repute. Maria Weser's *Begegnung am Abend* is a memoir which outlines the author's relation with the psychologist Constantin von Monakow. Max Halle's *Scholle und Schicksal* is a volume of literary reminiscences.

ESSAYS AND LITERARY CRITICISM. The so-called "revolution" in the German conception of literature has as yet found no adequate expression. A symposium entitled *Des deutschen Dichters*

Sendung in die Gegenwart is a collection of brief and rather formless endorsements of the national revolution. Otto Miller's *Der Individualismus als Schicksal* is an essay on the spirit which, in the author's opinion, has characterized modern German literature. *Erinnerungen an Rainer Maria Rilke*, by Marie von Thurn und Taxis, is probably the most valuable of existing contributions to a biography of this poet and throws considerable light upon Rilke's most difficult lyrics. Emil Ermatinger's *Dichtung und Geistesleben der deutschen Schweiz* is a solid treatise on a part of literary history which has long awaited treatment. Christian Dietrich Grabbe, by Ferdinand J. Schneider, is the first adequate life of this South German author. Romano Guardini's *Der Mensch und der Glaube* is an interpretation of Dostoevski's personages from the religious point of view and at the same time an exceptionally instructive evocation of the Russian world view. *Die Dichtung Stefan Georges*, by E. Marwitz, is one more commentary on a poet now in vogue, whose death occurred as the year drew to a close. Friedrich Schreyvogel's *Vom Gluck der deutschen Sprache* is an essay in praise of German speech. *Führung und Geleit*, by Hans Carossa, has been widely hailed as the best essay volume of the year. There are any number of minor theoretical and biographical publications, many of which have political implications.

THE ARTS. Traditionalism is emphasized in the current German interpretation of the arts. Hans Weigert's *Die Kaiserdome am Mittelrhein*, with excellent pictures and an explanatory text, is one of the best of many similar publications. Reproducing works of art is a task which appeals to many, as witness the Vienna *Bruegel* (an extraordinarily fine volume), *Die Hausgalerie berühmter Gemälde* (a new and improved edition of what is almost a classic), and *Die Minnesinger* (an inexpensive Insel-Verlag reproduction of a part of the Manessische Handschrift). Hans Pfitzner's *Gesammelte Schriften* offers a complete edition of this composer's essays. Otto Schmitt's *Reallexicon zur deutschen Kunstgeschichte* has advanced a step further toward completion. Max Deri's *Die Stilarten* is a brief and compact treatise on the evolution of the arts, written in full awareness of modern trends in criticism. *Das Ruth Schaumann Buch* is an illustrated commentary on the plastic and graphic works of this artist. For the Wagner year, Fritz Zalisz and others wrote *Bayreuth im Profil*. A. von Ehrman's *Johannes Brahms* is a tribute to the memory of this composer.

TRAVEL. Important German books of travel are difficult to find. *Das rote Imperium*, by F. A. Kramer, is a journalist's view of life in present-day Russia and is characterized by objectivity and vividness of presentation. Friedrich Leyden's *Gross-Berlin* is a geographical study of this metropolis. Ernst Stolper's *Werkstudent im Wilden Westen* should interest Americans. Walther Penck's *Puna de Atacama* has to do with South American travels and experiences. W. Rammer's *Die Tierwelt der deutschen Landschaft* ought to be very helpful to many a more serious traveler through Germany.

TRANSLATIONS. Despite business and social conditions, foreign authors were very courteously treated by German publishers. Knut Hamsun, Sigrid Undset, Pearl S. Buck, Oliver Lafarge, and Felix Timmermans are among those whose latest works of fiction appeared in German ver-

sions. One of the great successes of the year was A. J. Woinowa's *Falsche Edelsteine*, a novel of Russian life. President Franklin D. Roosevelt was among the widely-read authors of the year, and in general there was, perhaps, even more interest in the United States than usual. Indeed, despite more or less official condemnations of "western democracy," literary concern with the East flagged while attention was riveted upon the western countries.

GERMANY. A republic which was established Nov. 9, 1918, as a federation of constituent republics but which in 1933 was in process of transformation into a unitary state. Capital, Berlin.

AREA AND POPULATION. The area and population of the Reich, by constituent republics, at the censuses of June 16, 1925, and June 16, 1933, are shown in the accompanying table.

GERMANY: AREA AND POPULATION

Constituent States	Area, sq. miles	Population, June 16, 1925	Population, June 16, 1933
Prussia ^a	113,036	38,241,253	39,958,073
Bavaria	29,343	7,411,589	7,703,998
Saxony	5,789	4,981,905	5,196,386
Wurttemberg	7,532	2,595,114	2,713,150
Baden	5,819	2,336,498	2,429,977
Thuringia	4,537	1,626,405	1,676,759
Hesse	2,970	1,358,445	1,426,380
Hamburg	160	1,128,788	1,181,548
Mecklenburg-Schwerin ..	5,066	687,599	708,077
Oldenburg	2,480	553,670	581,296
Brunswick	1,418	508,660	518,736
Anhalt	890	351,692	365,824
Bremen	89	332,547	366,425
Lippe	1,215	166,038	179,905
Lubeck	115	127,540	136,468
Mecklenburg-Strelitz ..	1,131	112,052	112,808
Schaumburg-Lippe ..	131	48,660	50,469
German Republic ^b ..	180,985	62,568,455	65,306,130

^a Including Waldeck, which was absorbed by Prussia Apr. 1, 1929.

^b Excluding the Saar (area, 738 square miles; population, about 770,030 in 1927).

Of the 1933 population, 31,699,487 were men and 33,606,643 women. The increase in population during the census period 1925-33 was 2,737,075, or an average of 4.4 for each 100 inhabitants. The male population increased by 5.0 per 100; the female population by 3.8 per 100. The excess of females resulting from the World War was thus being gradually eliminated. The number of cities of more than 100,000 population increased from 45 in 1925 to 52 in 1933 and the total population of these cities rose from 16,436,594 to 19,662,143. They comprised one-quarter of the population in 1925 and one-third in 1933. Estimated population of the 10 leading cities on Jan. 1, 1933: Berlin, 4,227,000; Hamburg, 1,124,000; Cologne, 741,000; Munich, 736,000; Leipzig, 717,000; Essen, 648,000; Dresden, 629,000; Breslau, 618,000; Frankfurt (on Main), 534,000; Dortmund, 533,000.

The movement of population in 1932, with 1931 figures in parentheses, was: Living births, 978,161 (1,031,770); deaths, 697,895 (725,816); marriages, 509,591 (515,403). The 1932 birth rate was 15.1 per 1000 inhabitants; the death rate, 10.8.

EDUCATION AND RELIGION. Primary education is free and compulsory between the ages of 6 and 14 years. In 1931-32 there were 52,959 public elementary schools, with 190,371 teachers and 7,590,466 pupils, and 661 private schools, with 48,760 pupils. Middle schools (Mittelschule),

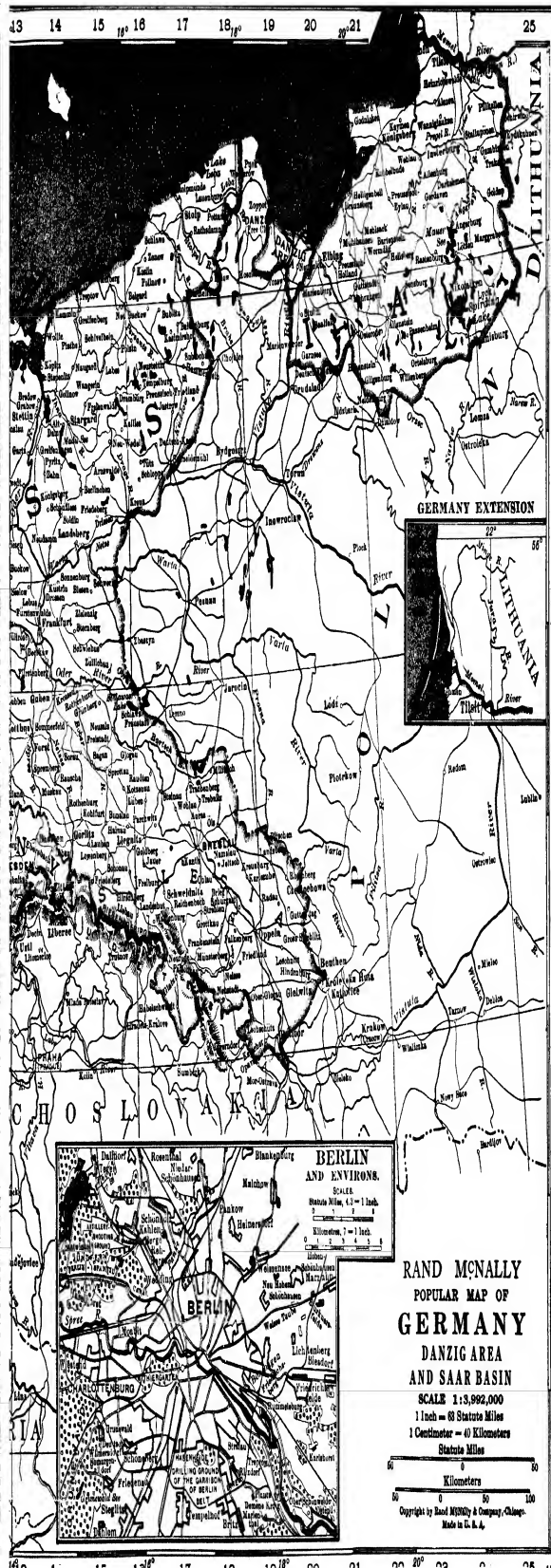
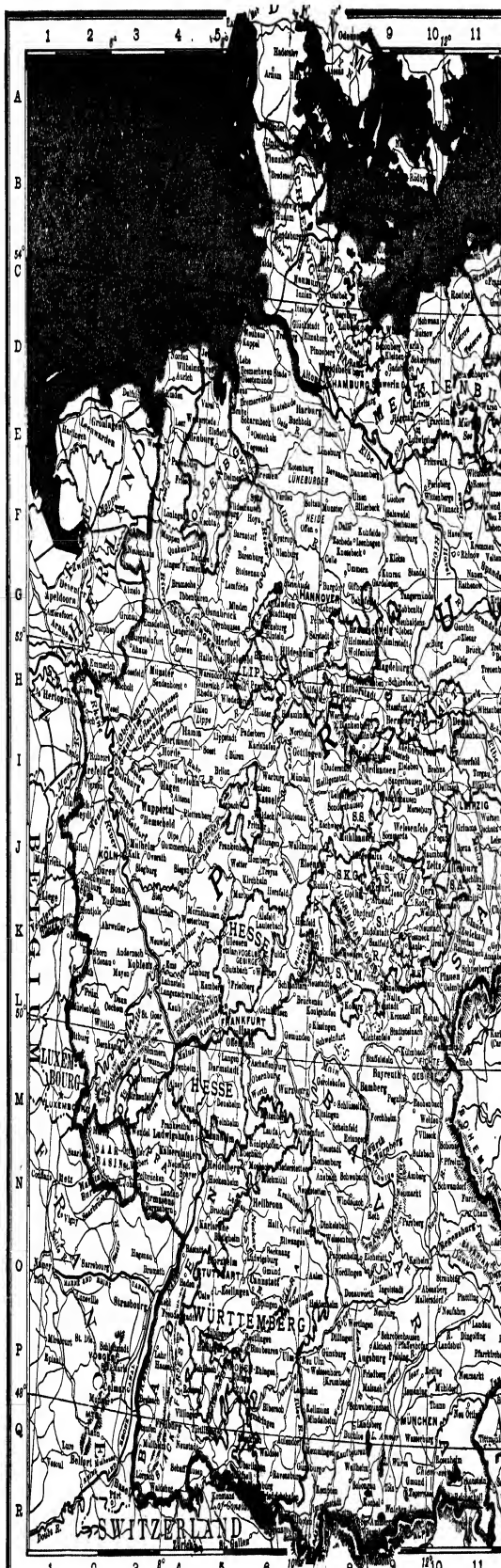
where higher primary education was provided in English and French, numbered 1471, with 229,618 pupils. For secondary education, there were 1365 boys' schools, with 477,383 pupils, and 784 girls' high schools, with 256,077 pupils, besides numerous technical and vocational institutions. The 23 universities had 5876 professors and teachers and 103,585 students in 1931. At the 1925 census, there were 40,014,677 Protestants (64.1 per cent of the total), 20,193,334 Roman Catholics (32.4 per cent), and 564,379 Jews (0.9 per cent).

AGRICULTURE. In June, 1932, there were 73,423,935 acres under cultivation, including 51,206,167 acres of arable land; 20,398,952 acres of grass, meadows and pasture; 206,952 acres of vineyards; and 1,611,867 acres of orchards, truck gardens, etc. Production of the chief crops in 1932, according to provisional figures, was (in metric tons): Wheat, 5,068,934; rye, 8,383,226; barley, 3,221,403; oats, 6,706,359; potatoes, 45,326,603; sugar beets, 7,467,235. Hay production in 1931 was 37,014,693 tons; wine, 68,469,792 gallons; tobacco, 23,180,805 kilos (kilo = 2.66 pounds); hops, 7780 tons; sugar (1931-32), 2,547,451 tons. Livestock on Dec. 1, 1932, included 3,393,000 horses, 19,122,500 cattle, 3,401,000 sheep 22,814,300 swine. Forests in 1932 covered some 31,635,443 acres (state forests, 10,328,563 acres; communal, 4,913,498 acres; private, 15,129,785 acres). The value of agricultural production in 1933 was estimated at 6,570,000,000 marks, compared with 5,840,000,000 marks in 1932 and 9,120,000,000 marks in 1928.

MINING AND METALLURGY. Germany is a leading mineral producer, the chief mining areas being in the districts of Westphalia, Rhenish Prussia, and Silesia (coal and iron), Central Germany (brown coal), the Harz (iron and copper), and the Westerwald (iron). Mineral and metallurgical production showed a steady decline from 1929 to 1932. The output in 1932, with 1931 figures in parentheses, was (in metric tons): Coal, 104,740,000 (118,640,000); lignite, 122,615,000 (133,311,000); coke, 19,128,000 (23,190,000); petroleum, 231,000 (229,000); pig iron, 3,933,026 (6,062,313); raw steel, 5,746,001 (8,291,250); copper ore, 881,000 in 1931; smelter copper, 50,600 (55,500); smelter lead, 95,200 (101,000); smelter zinc, 42,000 (45,300); rock salt, 2,087,000 (2,456,000); brine salt, 491,000 (501,000); potash (pure), 890,000 (1,078,000).

In 1933, the output in tons was steel, 7,585,722; pig iron, 5,266,770; rolling-mill materials, 5,453,230; coal, 109,920,000.

MANUFACTURING. Industrial production reached its lowest point during the world depression (1929-33) in the middle of 1932. The German index for the monthly average of industrial production (1928 = 100) declined from an average of 100.4 in 1929 to 90.1 in 1930, 73.6 in 1931, and 61.2 in 1932. After reaching a low point of 58.5 in August, 1932, the index number increased to 72 in December, 1933. The general industrial output declined some 39 per cent during the period 1929-32, as compared with a decline of 46 per cent in the United States and a world average decline of 30.6 per cent. The industrial decline was reflected in the fall in the national income from 76,100,000,000 Reichsmarks in 1929 to 46,700,000,000 Reichsmarks in 1932. On Jan. 31, 1933, the number of raw cotton-spinning spindles installed was 9,846,000; 85 per cent were



active in 1932. Cement production in 1932 was 2,795,000 metric tons (3,718,000 in 1931); paper and paper boards, 1,968,000 metric tons (2,171,000); wood pulp (dry weight), 1,642,000 metric tons (1,729,000); artificial silk (rayon), 26,760 metric tons (27,760); automobiles, 50,000 (70,000). Textiles, machinery, glass, porcelain, earthenware, clocks, wooden ware, toys, beer, tobacco products, rolling-mill products, musical instruments, and footwear are other leading manufactures. The 1925 census showed 1,852,737 industrial establishments, employing 12,704,135 workers. For economic conditions in 1933, see under *History*.

COMMERCE. Merchandise imports and exports for the period 1930-33 are shown in the accompanying table.

GERMAN IMPORTS AND EXPORTS
[In 1,000 Reichsmarks]

Year	Merchandise imports	Merchandise exports	Surplus of exports
1930	10,393,149	11,328,244	935,095
1931	6,727,078	9,205,918	2,478,840
1932	4,666,500	5,739,168	1,072,668
1933 *	4,203,600	4,880,000	676,400

NOTE.—Reichsmark = \$0.2382 at par; average exchange rate, \$0.2375 in 1932 and \$0.2363 in 1931.

* Preliminary.

Bullion and specie imports in 1932 were 368,493,000 Reichsmarks; exports, 450,974,000 Reichsmarks. Leading export items, in order of value, in 1932 were (in 1000 Reichsmarks): Iron and steel, 835,138; chemicals, 360,144; coal, 236,453; dyes, varnishes, etc., 204,763; paper, 199,581; copper, 144,256; cotton goods 134,572 glass and glassware, 123,371; woolen goods, 101,252. Among the chief import items were (in 1000 Reichsmarks): Raw cotton, 291,266; wool, 230,384; coffee, 145,335; mineral oil, 143,637; wheat, 109,084; butter, 106,551. The leading export markets in 1932, with the value of the goods shipped, were (in million Reichsmarks): the Netherlands, 632.8 (954.6 in 1931); France, 482.5 (834.1); United Kingdom, 446.0 (1133.6); Belgium and Luxemburg, 301.5 (463.5); United States, 281.2 (487.5); Czechoslovakia, 250.0 (423.9). The principal sources of imports in 1932 were (in million Reichsmarks): United States, 591.8 (791.4 in 1931); the Netherlands, 273.1 (383.6); United Kingdom, 258.5 (453.3); France, 189.9 (341.6); Italy, 181.3 (268.4); Belgium and Luxemburg, 146.3 (222.1).

FINANCE. The national budget for the fiscal year ended Mar. 31, 1932, closed with a deficit of 1,530,000,000 Reichsmarks, with expenditures of 9,509,000,000 and revenues of 8,906,000,000 Reichsmarks. The 1932-33 budget closed with a deficit of about 610,000,000 marks, giving an accumulated deficit on Mar. 31, 1933, of 1,880,000,000 marks. The budget for the fiscal year 1933-34, as passed by the Reichstag, called for a balanced account of 5,927,499,050 marks, compared with estimates balancing at 8,219,245,100 marks for the preceding year. The apparent 2,000,000,000-mark decrease in the 1933-34 budget was due chiefly to a new system of accounting. Preliminary returns on the 1933-34 budget indicated that it was maintained in approximate balance.

The national debt on Dec. 31, 1932, amounted to 12,247,000,000 Reichsmarks (foreign, 3,065,300,000 Reichsmarks; domestic, 9,181,700,000 Reichsmarks), compared with 12,137,300,000 Reichsmarks on Mar. 31, 1932. At the end of

1933, the total foreign debt (public and private) was placed at about 19,000,000,000 Reichsmarks, a decline of 13,000,000,000 from the high point of 32,000,000,000 Reichsmarks reached at the end of 1930.

COMMUNICATIONS. At the beginning of 1932, railway lines extended 36,257 miles, of which 33,447 miles were state owned and operated. In 1932, the state lines carried 243,120,000 metric tons of freight (excluding goods transported without charge), compared with 288,600,000 tons in 1931. Passengers transported (including military) in 1931 numbered 1,578,000,000. There were in 1931, 7689 miles of inland waterways, with a fleet of 18,931 vessels of 6,688,189 tons, which carried 86,893,000 tons of goods during the year. The German air lines in 1931 carried 98,167 passengers and 2230.8 tons of freight, the number of miles flown being 6,424,068. Highways totaled 217,479 miles, of which 74,564 miles were macadam. A programme for a comprehensive network of automobile highways coördinated with railways was adopted in 1933.

SHIPPING. The German merchant marine on June 30, 1932, aggregated 4,164,000 gross tons (steam, 3,502,000 tons; motor, 640,000; sailing, 22,000). Idle steam and motor shipping tonnage on July 1, 1933, aggregated 703,000 gross tons (1,103,000 gross tons on July 1, 1932). According to provisional figures, 24,000,000 gross tons of shipping entered German ports during 1932 with cargo and in ballast (27,384,000 in 1931) and 20,000,000 gross tons cleared (23,269,000 in 1931). See *SHIPPING, MERCHANT*.

GOVERNMENT. The Weimar (republican) Constitution of July 31, 1919, while not formally cancelled, was actually abolished after the advent of the Hitler government in 1933. The Reichstag on Mar. 4, 1933, amended the Constitution so as to give the government complete power over all machinery of state (see *History*). For provisions of the Weimar Constitution, see the 1932 YEAR BOOK. President in 1933, Field-Marshal Paul von Hindenburg, who was reelected Apr. 10, 1932, for a seven-year term. Chancellor at the beginning of 1933, Gen. Kurt von Schleicher, who headed a nonpartisan cabinet appointed Dec. 4, 1932.

HISTORY

Riding the irresistible tide of German nationalism and economic discontent, Adolf Hitler swept into power early in 1933. With great political acumen and ruthless energy he won the bulk of the German people to his cause, crushed his opponents, and established a highly centralized Fascist state upon the ruins of the Republic. His war upon the Jews and anti-Fascists provoked numerous foreign protests and boycotts of German goods. His aggressive foreign policy brought Europe closer to the brink of war and caused the most profound realignment of a decade in European international politics. The foreign diplomatic and moral support which the German Republic had won were alienated almost completely. Hitler's Third Reich faced a ring of enemies more extensive and more powerful than that which confronted Germany at the outbreak of the World War.

COLLAPSE OF VON SCHEICHER'S MINISTRY. The situation in Germany at the beginning of 1933 was relatively encouraging. Under the conciliatory régime of Chancellor von Schleicher, political passions appeared to have subsided and there

were some signs of economic improvement. The government's position was basically insecure, however. Five major elections in less than a year had failed to end the parliamentary and governmental deadlock, but had increased the general impatience with the parliamentary system. Coalition government in many of the states of the Reich had become impossible and previous Cabinets, without majorities in their respective Diets, were provisionally administering these states. The Schleicher presidential Cabinet, like the Papen Ministry before it, was opposed by the overwhelming majority of the Reichstag. It was responsible directly to the aged President of the Republic, and depended for its support upon the Reichswehr, of which General von Schleicher retained control as Minister of Defense.

The unexpected resignation of the Schleicher Ministry on Jan. 28, 1933, 57 days after it assumed office, was directly attributed to Colonel von Papen, the previous Chancellor. Von Papen succeeded in winning the support of the German Nationalist leader Hugenberg, the reactionary agrarians, and part of the great industrialists for a coalition government headed by Hitler. He then convinced President von Hindenburg that the Schleicher government did not deserve his continued confidence. The President accordingly forced von Schleicher to give way to Hitler's National Socialist-German Nationalist coalition by the expedient of refusing to dissolve the hostile Reichstag.

HITLER WINS THE CHANCELLORSHIP. The resignation of von Schleicher represented a defeat for most of the industrialists, who counted upon him to hold Hitler's National Socialists in check until a revival of prosperity undermined the Nazi power. It was an apparent victory for von Papen and his Nationalist associates. Despite Hitler's repeated demands for complete control of the government, von Papen had induced him to enter a cabinet in which the three Nazi members were counter-balanced by six Nationalists and conservatives. The line-up of the cabinet formed by Hitler on January 30 was: Chancellor, Adolf Hitler; Vice-Chancellor and Reich Commissioner for Prussia, Franz von Papen; Aviation and Acting Prussian Minister of the Interior, Hermann Goering (Nazi); Interior, Wilhelm Frick (Nazi); Agriculture and Commerce, Alfred Hugenberg (Nationalist); Labor, Franz Seldte (Nationalist); Defense, General von Blomberg; Posts and Communications, Count von Eltz-Rubenach; Foreign Affairs, Baron von Neurath; Finance, Count Schwerin von Krosigk; Commissioner for Re-employment, Dr. Gereke. All except the Nazi and Nationalist members were nominally non-party men, but with the exception of General von Blomberg, who had close personal ties with the Nazis, the other non-party members were in sympathy with Hugenberg's Nationalist party. Von Papen and his associates undoubtedly believed that with their majority in the Cabinet they would be able to control Hitler and his party in the interests of a conservative policy.

THE REICHSTAG ELECTION. Hitler's cabinet, controlling definitely only 247 votes in the Reichstag, was dependent upon the toleration or support of the Catholic parties for a majority. Hitler made overtures to the Centrist leader, Monsignor Kaas, on January 31. The Centrists attempted to extract definite pledges from Hitler regarding observance of the Constitution, economic and financial policy, and social legislation.

The Nazi leader immediately broke off negotiations and on February 1 announced the dissolution of the Reichstag, with new elections on March 5. The Prussian Diet was dissolved on February 6, after President von Hindenburg had appointed von Papen head of the State government in place of the Social Democratic-Centrist government headed by Otto Braun. The Prussian elections also were scheduled for March 5.

Ruthless suppression of the opposition combined with effective Nazi propaganda gave the government a decisive victory at the polls, 52.5 per cent of the electorate voting for the coalition ministry. The Nazis, polling about 44 per cent of the total vote, increased their representation in the Reichstag by 92 and their popular vote by more than 400,000. The standing of the parties in the Reichstag following the election, with the previous standing in parentheses, was: National Socialists, 288 (196); Hugenberg Nationalists, 52 (51); Catholic Centre, 73 (69); Bavarian People's party, 19 (20); State party, 5 (2); Social Democrats, 120 (121); Communists, 81 (100); scattered, 7 (24); total, 647 (583). The Nazis made small gains at the expense of the other parties; their great increase in strength was due chiefly to the large number of first voters, especially German youth for whom Hitler had become the leader who was to revitalize Germany and break her chains. The government coalition also won a majority in Prussia.

During the campaign the government parties retained the national radio system for their exclusive use, worked up a great Communist scare, and attributed all of Germany's difficulties to the Republican governments. On February 28, an incendiary fire partially destroyed the Reichstag building. The government, accusing five alleged Communists of the crime, utilized the incident to inaugurate a virtual reign of terror against opposition parties. An emergency decree was promulgated suspending all constitutional guarantees. By jailing hundreds of Communist leaders, banning all Communist and Socialist papers, and suspending many liberal publications which questioned the Communists' responsibility for the fire, the government silenced the opposition forces during the last week of the campaign. In Prussia and other Socialist-controlled States there was wholesale ousting of Socialist local and provincial officials and their replacement by Nazis and Nationalists. The actual voting, however, took place in an orderly manner.

The Reichstag fire had much the same effect upon the German electorate as the Zinoviev letter had in the British general election of 1925. It was widely charged that the fire was set by the Nazi leaders for political purposes. The incident was investigated by an unofficial international legal commission in London, which reported September 20 that the available evidence exonerated the four Communists held by the German police and strongly implicated "leading personalities of the National Socialist party." The fifth of the accused prisoners, Marinus van der Lubbe, was 1.04 a Communist, the report stated. The trial of the five prisoners opened in Leipzig September 21.

After hearing some 250 witnesses, the justices of the Reich Supreme Court on December 23 convicted van der Lubbe, who had admitted his guilt. The four Communists were acquitted. The identity of van der Lubbe's accomplices remained a mystery. Expert testimony had been introduced

to show that he could not possibly have started the fire single-handed.

THE "TOTALITARIAN STATE." The election had left Hitler still dependent upon the German Nationalists for a majority in the Reichstag. But with his power and prestige greatly increased, he proceeded ruthlessly toward his goal of a one-party state, a dictatorship in which liberalism, class-strife, and Jewish influence were to be eradicated, individualism subordinated, women relegated to the home, and the nation welded into a unified whole. The eventual aim was to restore Germany's position as a leading world power and to regain the territory and population lost as a result of the World War.

Hitler's first move was to terminate his parliamentary dependence upon his Nationalist allies by excluding the Communists from their seats in the Reichstag. Recognizing the futility of opposition, the Centrists and other moderate parties now joined the government groups in granting Hitler dictatorial powers for four years. This legislation, in the form of five constitutional amendments, was rushed through the newly convened Reichstag on March 23 by a vote of 441 to 94. The opposing votes were all cast by Social Democrats. The Reichstag was then permanently adjourned. The sole restrictions which it imposed upon the Chancellor were (1) that the remaining rights of the President might not be diminished, and (2) that the Reichstag and Reichsrat must not be abolished as "institutions," an indication that the Nazis had no intention of restoring the monarchy.

From this time Hitler carried forward his reorganization and "coördination" of Germany without regard for the wishes or protests of the non-Nazi members of the cabinet. Controlling the Reichswehr through Minister of Defense Blomberg, the Prussian police through Goering, and his own Nazi Storm Troops, he possessed an armed force which no other German group could hope to oppose. The *Stahlhelm* veterans' organization, or Nationalist private army, was merged with the Nazi Storm Troops partly by persuasion and partly by force. Herr Hugenberg's Nationalist "Green Shirt" private army was forcibly dissolved and the leaders arrested. The Socialist *Reichsbanner*, the Boy Scouts, and innumerable semi-military organizations met a similar fate, their funds and headquarters being confiscated. Every organization capable of taking part in civil war which did not fully accept the Nazi programme was eradicated and great prison camps established for the incarceration of their recalcitrant leaders and members. A Nazi secret police, modeled on the Soviet OGPU, was established under Goering.

Much the same procedure was followed in "co-ordinating" the other political parties, the labor unions, industry, the press, the churches, fraternal organizations, the schools and all cultural institutions and societies. A law of April 8 abolished parliamentary government in the various states and placed them under regents appointed by the Chancellor. The century-old German particularism was scrapped over night. In Prussia, a back-stage struggle for control took place between the Nazis and Nationalists. It was decided on April 11 when Hitler appointed his lieutenant, Goering, as Premier of Prussia in place of von Papen. Bavaria, long noted for its opposition to Federal domination, was forced to yield by an

ultimatum and the action of Nazi Storm Troopers.

Hitler's allies among the political parties as well as his opponents capitulated one after another with scarcely a show of resistance. Communists had been proscribed since the fire in the Reichstag building. The powerful Social Democratic party was dissolved by the government June 22 on grounds of high treason. On June 27, Herr Hugenberg resigned from the Cabinet and his Nationalist party "voluntarily" dissolved. Early in July the State, or Democratic, party, the Bavarian People's party, and the German People's party—the latter once led by Gustav Stresemann—were liquidated. Former Chancellor Brüning signed the decree dissolving his Catholic Centre party on July 5, thus leaving the National Socialists the sole political party.

A Nazi "committee of action" occupied the buildings and offices of the Socialist trade unions on May 2. The trade union leaders were arrested, the bank accounts of unions and their leaders impounded, and Nazis placed in control of the union banks and cooperatives. The Catholic and republican trade unions unconditionally capitulated to the Nazis the same day. Merged in one great Nazi union, these organizations were effectively "harmonized" with the government. To end conflicts between employers and employees and establish the principle of authority in the labor movement, Nazi district "trustees" were appointed to establish wage rates in their respective districts. Besides the original trade unions, organizations were established to include all persons, except Jews, engaged in any form of economic activity. These were to be incorporated within the general state structure.

Industry and agriculture were similarly assimilated. Hitler's adherents ousted the Nationalist leaders from control of the agricultural associations. The powerful Reich Federation of Industry and the *Langsamerverein*, representing the great iron and steel interests, were obliged to reorganize their executive boards so as to give Hitler's representatives a controlling voice. The press was brought under Nazi domination by the drastic censorship laws and the suspension for long terms of journals which dared to criticize the government.

PROTESTANTS RESIST HITLER. Hitler moved somewhat more cautiously, but no less vigorously, in assaulting another Nationalist stronghold—the Lutheran Church. Hoping to retain their freedom in spiritual matters, the Lutherans and other Protestant denominations voluntarily merged their 29 separate church organizations into a single German Evangelical Church. They elected the Rev. Frederick von Bodelschwingh, a non-political clergyman and welfare worker, as their Bishop. Nazi elements in the church, headed by the Rev. Ludwig Mueller, a Nazi army chaplain, and Dr. Joachim Hossenfelder, immediately contested Dr. von Bodelschwingh's election. They were supported by Hitler's lieutenant, Goering, who announced that as Premier of Prussia he exercised the powers of the former King of Prussia as supreme Bishop of the Prussian state. Goering appointed August Jaeger as Reich Church Commissioner for Prussia and the latter immediately began to fill the leading subordinate ecclesiastical posts with Nazi German Christians.

No longer able to exercise his functions as Bishop, Dr. von Bodelschwingh resigned. Dr. Mueller proclaimed himself head of the Evangeli-

cal Church Federation and virtual dictator of the Prussian churches. The church was deeply stirred by this threat to its spiritual independence and numerous appeals to President von Hindenburg caused his intervention in the dispute. After a conference with Hitler at Neudeck, the President wrote the Chancellor an open letter expressing his concern at the dissension within the church and expressing confidence in Hitler's wise statesmanship to negotiate a peaceful settlement. The Chancellor called a halt upon his over-zealous disciples. Herr Jaeger was dismissed, non-Nazi pastors and church officials whom he had ousted were restored, and it was agreed that a new church constitution should be drafted and church elections held on July 23.

The new constitution granted the demand that the Reich Bishop should be elected by the National Synod rather than appointed by the Chancellor. The Bishop, who must be a Lutheran, was to be assisted by a cabinet of three, each representing one of the three leading non-Lutheran Protestant groups. These representatives were to have jurisdiction over matters of faith in their respective denominations. The constitution envisaged an independent, self-governing church, having no official connection with the Prussian or Reich governments, and capable of maintaining close relations with German Protestants throughout the world. The coördination of the new church with the Nazi régime was effected by the election of a Nazi majority in the National Synod on July 23. The delegates then elected Dr. Mueller as Reich Bishop. The church election was marked by the same kind of Nazi pressure as that applied in the national election. Various restrictions were placed upon the adherents of Dr. von Bodelschwingh and Hitler, himself a Roman Catholic, urged the election of those who were "ready to stake themselves for the nation's freedom."

The election of July 23 revealed strong opposition to the Nazi plans within the Protestant churches. This opposition crystallized in a manifesto issued on September 27 coincident with the inauguration of Dr. Mueller at Wittenberg. Signed by 22 pastors, representing 2000 Lutheran clergymen, the manifesto protested vigorously against the methods and programme of the German Christians. A League of Opposition Clergy was formed, which won increasing support as the Nazi radicals revealed their plans for reorganization of the church. The Nazis first introduced the so-called Aryan clause, expelling all persons of Jewish blood from church offices. On November 13 they adopted resolutions urging elimination of the Old Testament, revision of the New Testament, abolition of the Crucifix, and exclusion of non-Aryans not only from clerical positions but from church membership. On this programme the German Christians themselves were divided into an extreme radical and moderate wing—the latter under Bishop Mueller.

The opposition clergy displayed such determination and strength in opposing the Nazi programme that an irreparable schism in the Lutheran church appeared imminent. To avoid this Chancellor Hitler forced his adherents to moderate their demands. Dr. Mueller's consecration as Bishop was indefinitely postponed and he relinquished his office as "protector" of the German Christians. The German Christians were dissolved as a political party and reconstituted (December 8) as an organization for reform of the

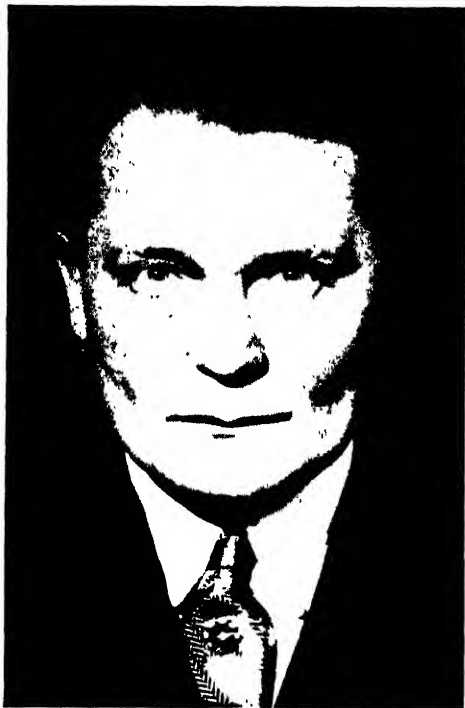
church along "Aryan-Nordic" lines. Throughout the struggle the dissenting pastors had affirmed their acceptance and support of Hitler's régime in the political field. But by their successful resistance to his plans for coördinating the church with the state, the Lutheran pastors administered the first check to the "nazification" of Germany.

CONCORDAT WITH ROME. Hitler triumphed where Bismarck had been defeated in the struggle between the state and political Catholicism. The powerful Catholic Centrist party, with its associate, the Bavarian People's party, was dissolved on July 5. A concordat between the Reich and the Vatican fixing the status of the Catholic Church in Germany was initiated in Rome July 8 by Cardinal Pacelli and Vice-Chancellor von Papen, signed on July 20, and ratified September 10. The agreement combined the substance of previous concordats between the Church and the state governments of Prussia, Baden, and Bavaria. The Church pledged itself to refrain from political activities, while the Reich agreed to permit Catholic lay and clerical associations, provided they confined themselves to religious activities. An interpretative agreement, drawn up by the Pope in an effort to demarcate the dividing line between politics and Catholic faith and morals, was submitted to the Hitler government, but not acted upon, previous to ratification.

The dissolution of the Centre party and the signing of the concordat followed serious clashes between Nazis and Catholics. The Catholic bishops in a pastoral letter of June 9 opposed the suggested "coördination" of German Catholicism with the state, and criticized the Nazis' racial discrimination and violation of individual liberty. A great national convention of Roman Catholic mechanics, held early in June in Munich, was broken up by the Nazi police, a number of Catholic priests and delegates were roughly handled by Nazi Storm Troopers, and the Archbishop of Munich was forcibly prevented from holding mass in the convention hall. In a speech at Erfurt June 18, Hitler warned non-Nazi Catholics and others that if they resisted his programme their children would be taken away from them and reared "as needful for the Fatherland."

As the year drew to a close, friction between the German Catholics and the Hitler Government again became acute. The Pope and the German bishops charged the government with failure to apply the concordat. In November Hitler sent two successive representatives—the latter Herr Goering—to Rome in an effort to reach an agreement on the interpretation of the concordat. They returned unsuccessful. Heartened by the Pope's support and by the Protestant opposition to Nazi attempts at coördination, Catholic spokesmen renewed their attacks upon the Nazi racial and religious principles. Cardinal Faulhaber on December 4 called upon the Protestants to make common cause with the Catholics in defending Christianity against paganism and exclusive nationalism. In his Christmas message (December 23) Pope Pius denounced the Nazi programme for sterilization of the unfit. His words were reiterated by Cardinal Faulhaber and other German prelates in their Christmas sermons. The cardinal attacked the Nordic racial doctrine of the Nazis as a "myth."

ANTI-JEWISH MEASURES. Anti-Semitism had been a basic part of the Nazi programme for more than a decade before Hitler's triumph. A



Wide World

GEN. HERMANN WILHELM GOERING
Reich Minister for Air, Premier of Prussia



Arme

ADOLF HITLER
Chancellor of Germany



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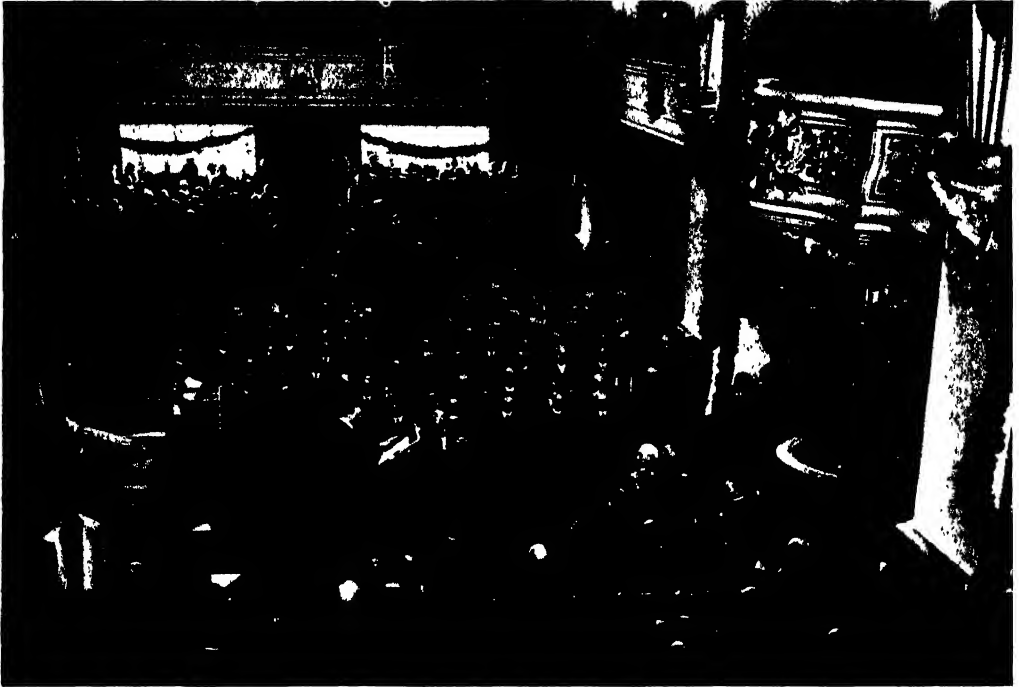
DR. JOSEPH GOEBBELS
Minister of Propaganda and National Enlightenment



European

R. WALTER DARRÉ
Minister of Food and Agriculture

GERMANY



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LAUNCHING OF NATIONAL SOCIALIST DICTATORSHIP

Chancellor Hitler making his address before President von Hindenburg at the opening of the Reichstag in Potsdam Garrison Church, Mar 21, 1933



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THE CLOSE OF THE NAZI CONGRESS

Adolf Hitler (left) standing before the Memorial to the Dead at the closing of the Nazi Congress at Nuremberg, Aug. 30-Sept 1, 1933

racial and not a religious prejudice, it was based on the theory that no Jew is a German and therefore no Jew could be a German citizen or hold public office. Throughout their long struggle for power, Hitler and his lieutenants placed particular stress upon anti-Jewish propaganda. They accused the Jews of lack of patriotism, war profiteering, of joining with Communists and Socialists in "stabbing in the back" the German army in 1918, of monopolizing the professions, of ruthlessly extracting money from poor people through their control of the great banks, newspapers, and department stores.

With Hitler's victory in the election of March 5, the Nazis commenced the systematic eradication of all Jewish influences in Germany. The details of Hitler's anti-Semitic programme are given in the article JEWS.

HITLER'S ECONOMIC PROGRAMME. The reorganization of German industry commenced soon after Hitler had received dictatorial powers from the Reichstag. He appointed an Economic Commissar for the Reich who supervised the coordination of the Federation of German Industries with the National Socialist régime. A Nazi representative assumed the responsibility of eliminating hostile elements and filling key positions with trusted men. Agricultural, commercial, shipping, banking and mining associations were "cleansed" in the same fashion. The individual or corporate businesses comprising these associations were then brought into line by the appointment of Nazi managers or commissars. Nazi labor organizations frequently seized control of a business without asking the permission of their party officials. When the entire business and industrial structure of the Reich had been brought under Nazi control, the party leaders gradually reasserted their authority over the radical Nazi "labor cells." The authority of the old trade unions, now under Nazi control, was partially restored. The appointment of Dr. Hjalmar Schacht as president of the Reichsbank placed that institution under conservative leadership.

Chancellor Hitler outlined his economic programme in an address during a huge Nazi labor demonstration held in Berlin May 1. He proposed the introduction of a year's compulsory manual labor for male citizens; agricultural relief through reforms calculated to restore agriculture to its primary place in the nation's economic system; unemployment relief through a huge public works programme; reduction of interest rates; and the stimulation of private industrial initiative by relaxation of rigid union wage scales and revision of existing cartel commitments. The agricultural programme was inaugurated by excluding imports of agricultural products, a moratorium on the agricultural indebtedness, and a reduction of the interest rate charged to farmers.

An unemployment relief measure promulgated May 31 called for the issuance of a billion marks in Treasury notes, the proceeds to be used in public works, the settlement of more people on the land, and river improvements. To remove women from industry and revive Germany's declining birth rate, the law provided loans of 1000 marks to newly married couples, repayable without interest at the rate of 1 per cent a month. A special tax on bachelors and spinsters was levied to defray the costs of this scheme.

The Nazi economists strongly hoped that a fundamental improvement of economic conditions

would result from the elimination of non-Nazi elements in business enterprises and the operation of industries with the national interest in view. The improvement failed to develop, however. While a steady reduction in unemployment was reported, this was due partly to the non-profitable public works and the replacement of Jews and other non-Nazis in industry. The Berlin Bourse, after an optimistic advance following Hitler's installation as Chancellor, suffered a gradual recession. By September, Bourse securities had declined 40 to 50 per cent below the level reached in April and the government was forced to intervene to check the development of a financial crisis.

Toward the end of June the government determined to check the trend toward socialism manifest among the Nazi "labor cells." Dr. Kurt Schmitt, a leading insurance magnate, was appointed Reich Minister of Economics to succeed Dr. Hugenberg. In a series of pronouncements issued by Hitler and his economic advisers early in July it was declared that in commerce and industry only individual initiative could be relied on to revive and reconstruct Germany economically. Hitler's compulsory labor plan was abandoned in favor of a voluntary system under which some 250,000 young men were enlisted in "labor battalions." Except for a few special cases Nazi commissars were withdrawn from the various business enterprises of which they had assumed control. A general economic council to advise the government on all economic problems was appointed July 15, its members including such leading industrialists as Krupp von Hohen, von Siemens, Voegler, Bosch, and Thyssen. Five days later the Reich Minister of Agriculture assured the large Junker landowners that the government would not subdivide their estates so long as these were economically healthy. On August 24, however, the Junkers voted to subdivide part of their estates, particularly in East Prussia, to increase the German population on the land.

At the first formal session of the Grand Economic Council September 19-21, it was announced that the government's primary economic aims were to stimulate consumption and productive investments. Immediate steps envisaged, according to Dr. Schmitt, were the energetic promotion of employment-creating projects, the increase of credit fluidity, and the reorganization of communal finance, particularly the reduction of the debt service. The Minister of Economics announced that from January to the middle of September about 2,000,000 unemployed had been put back to work. Part of the funds for the prosecution of the government's programme were obtained as a result of the partial moratorium declared June 8 upon interest and amortization payments on Germany's long-term foreign debt. The surplus of exports over imports, which, with foreign loans, had previously enabled Germany to meet these payments, decreased about 40 per cent for the year 1933. The "standstill agreements" of 1931 and 1932 on the foreign short-term debt was extended, with slight modifications, on February 28, for another year.

One aspect of the German economic recovery programme aroused vigorous protests from foreign holders of German government bonds. At the end of September, Dr. Schacht announced the conditions under which the partial moratorium on its long-term foreign debt would go into effect. The

German government agreed to pay 50 per cent of the service on its bonds in cash. The remainder was paid in scrip, which was redeemable at only half its value at the Gold Discount Bank. The Gold Discount Bank in turn sold the scrip to German exporters at 55 per cent of its face value. Within Germany the scrip had full value in the purchase of goods or payment of wages. On the basis of the 45 per cent profit made through the purchase of scrip, the German exporters were able to reduce their prices and compete more effectively abroad. In short, German goods were dumped abroad at the expense of foreigners holding German public bonds. This arrangement continued in force to the end of December, 1933. On December 19, Dr. Schacht announced that the interest payments abroad would be further reduced to 30 per cent of the amount due, the remaining 70 per cent to be paid in scrip redeemable at half its value. Meanwhile the German government had been steadily buying up its bonds abroad at the bargain prices resulting from its partial default. It was estimated that during 1933 Germany repatriated from the United States alone bonds worth \$250,000,000 at par for a cash payment of about \$60,000,000.

On September 21 the government attacked the problem of communal finances with a law for the refunding of short-term domestic communal debts. Creditors were given the alternative of accepting a five-year moratorium or a substantial reduction in interest. The communes ran up a deficit estimated at some 200,000,000 reichsmarks during the fiscal year 1932-33 and the accumulated deficit at the end of 1933 was about 1,000,000,000 reichsmarks. Another economic measure passed by the Cabinet Dec. 15, 1933, established a government oil and fat monopoly. Later a central agency was created for fixing prices and controlling the distribution of both domestic and imported butter, cheese, and eggs. At the same time the government followed a cautious policy in introducing innovations in the economic system. The dismissal of women job holders was checked in certain occupations when this policy was shown to have had adverse effects upon domestic trade. In the effort to stimulate business activity main reliance was placed upon the spreading of work and the government's extensive public works programme. A survey at the end of the year indicated that business in general was better. The general wage level had gone down, but the number of unemployed had been reduced to 4,057,000 from 5,773,000 on Dec. 31, 1932. The estimated national production in 1933 was from 2,000,000,000 to 2,500,000,000 marks higher than in 1932.

UNREST IN NAZI RANKS. The distinct trend away from socialism and the collaboration with the great industrialists revealed in Hitler's economic programme caused much unrest in the radical wing of the National Socialist party. Open demonstrations of dissatisfaction among sections of the Storm Troops and the radical Nazi "labor cells" caused Hitler to imprison hundreds of his followers in the prison camps established for Communists, Socialists and other non-Nazis. It was estimated in August that 35,000 persons were confined in concentration camps. The discontent in the Nazi ranks was quickly stamped out by their leader's drastic action. Hitler's warning that the Nazi revolution was over and that any attempt at a second revolution would be "ruthlessly suppressed," was supplemented by a series of great Nazi rallies and demonstra-

tions designed to solidify the Nazi ranks and direct the attention of the German people to the necessity of unity against the nation's foreign foes. Gigantic demonstrations were held at Düsseldorf May 28 and at Nuremberg August 30, in addition to constant local parades and rallies which kept the populace in a high pitch of nationalistic fervor. Dr. Paul Joseph Goebbels was appointed head of a new Ministry of Propaganda and Popular Enlightenment. An able organizer and publicity expert, who had done much to build up the Nazi power in Prussia, he used the full resources of the government to flood Germany with Nazi propaganda. At the end of the year, the general opinion of foreign correspondents in Germany was that Hitler was firmly seated in power and that the Nazi régime would prove as stable as had the revolutionary governments in Russia and Italy.

OTHER LEGISLATION. By a number of laws and decrees issued during the last part of the year, Hitler's government sought to give permanent form to its plans for the Third Reich. A law of October 1 provided for the creation of a "peasant aristocracy" based on inalienable ownership of the ancestral estate and its inheritance by one principal heir. Cultural activities in Germany were placed upon a national basis by the organization in November of a Chamber of Culture, embracing seven sub-Chambers, including music, graphic arts, letters, etc. The Chambers were given the status of public corporations and all intellectual workers were expected to join them and submit to the guidance of the Reich Minister of Propaganda in adopting "an attitude of responsibility for the nation. . . ."

All vestiges of democratic government in Prussia were eliminated by six laws promulgated December 18, which were to serve as a basis for similar reforms in the other states. The laws centralized governmental functions and introduced the Nazi principle of leadership into the smallest local units. The sterilization of persons afflicted with any one of nine hereditary diseases was decreed in another law, effective Jan. 1, 1934. It was estimated that 400,000 feeble-minded and diseased persons would be sterilized under the law. A decree of December 28 restricted to 15,000 the number of students matriculating in universities in 1934 (matriculations in 1932 numbered 24,700). Admission was to be on a strictly selective basis after examination by advisory bodies and one woman was to be admitted for every ten men.

The principle of the one-party state was formally incorporated in German law by a decree of Dec. 1, 1933. Simultaneously, Hitler's Brown Shirts lost their private status and became part of the military forces of the Reich. This change was formalized by the appointment of Col. Ernst Roehm, commander-in-chief of the Storm Troops, and Rudolf Hess, deputy leader of the National Socialist party, as Cabinet members without portfolios. The Storm Troops numbered 2,500,000 on Dec. 7, 1933, according to Colonel Roehm. Hitler's determination to make the Third Reich entirely Nazi was demonstrated by the dissolution on November 23 of two monarchist organizations working for the restoration of the Hohenzollerns.

NAZI FOREIGN POLICY. The foreign policy of the Nazi régime, as stated in the official programme (Twenty-Five Points) of the party, called for the union of all Germans in one great Germany, abrogation of the Versailles and St. Germain treaties, and "land and territory (col-

onies) sufficient for the feeding of our people and for settlement by our surplus population." As interpreted by Hitler in his autobiography and by other authorized Nazi spokesmen, the fulfillment of the party's foreign policy meant a great Germanic state, including not only Germany and Austria but territories populated by Germanic minorities in Denmark, Poland, Danzig, Czechoslovakia, Belgium, Italy, and France. It meant the restoration of former German colonies distributed among France, Great Britain, Japan, the Union of South Africa, Australia, and New Zealand. Hitler's book envisaged wars against France and the Soviet Union, with the aid of Great Britain and Italy, in order to crush Germany's arch-enemy (France) and to provide room for Germany's surplus population to the east. The Nazis also sought the restoration of Germany's 1914 status as the world's leading commercial nation and a great military and naval power.

REACTIONS TO HITLER'S TRIUMPH. The triumph of a government in Germany with avowed policies menacing the security of every neighboring state resulted in a profound readjustment of European diplomatic alignments. Preceding years had witnessed the gradual evolution of the European states toward two opposing combinations, with France, Poland, and the Little Entente supporting, and Germany, Italy, the Soviet Union, Austria, Hungary, and Bulgaria opposing, the European structure erected by the peace treaties. With the triumph of Hitlerism, the anti-Versailles bloc abruptly disintegrated. While remaining on fairly friendly terms with Berlin, Mussolini was forced to oppose the Nazi effort to capture Austria. He had no desire to see a greater Germany fronting Italy on the north, demanding the cession of German-speaking sections of the Italian Tirol, and competing with Italy for predominance in the Balkans. Sentiment in Austria (q.v.), which had previously favored union with Germany, was alienated by Nazi tactics and terrorism in Germany. Hungary, like Italy, disliked the prospect of a greater Germany on its borders which sought the incorporation of nearly 500,000 German-speaking Hungarians.

Czechoslovakia, Yugoslavia, and Rumania, which were threatened with extinction or mutilation by Hitler's programme, formed a closer alliance and prepared to resist Nazi domination of Austria. The Soviet Union, aroused by the anti-Communist drive in Germany and fearful that a German war of territorial aggression was impending, effected a rapprochement with France and Poland and formed friendlier relations with the Little Entente. Poland, suspicious of Nazi designs upon Upper Silesia and the Corridor, landed troops in Danzig following the German election of March 5. The French, who saw their security as well as their hegemony in Europe menaced by resurgent Germany, drew tighter their bonds with Poland and the Little Entente, pushed to completion a great line of fortifications along the Franco-German border, and called a halt to further concessions to Germany. Belgium likewise undertook the fortification of its German border.

Nazi activities and demonstrations along the Swiss border, their effort to enlist German-speaking Swiss in the cause of a greater Germany, and the revelation of an alleged Hitlerite plan for the invasion of France by way of Swit-

zerland, aroused much alarm in the latter republic. Similar Nazi activities along the Dutch and Danish borders forced the governments of Holland and Denmark to forbid the wearing of Nazi uniforms and emblems and to take various measures calculated to check Nazi propaganda. In many other countries of Europe and in the United States, the methods and aims of the Hitler régime alienated much of the sympathy which the German Republic had won in the struggle to free Germany of the Versailles restrictions. A debate in the British House of Commons April 13 reflected the hostility of British opinion. Sir Austen Chamberlain, former Conservative Foreign Minister, was applauded from both sides of the House when he said that the new German spirit was "the worst of the old Prussianism with the added savagery of national pride and exclusiveness." Alfred Rosenberg, Hitler's adviser in foreign affairs, failed dismally in his effort to soften British antagonism during a visit to London in May.

The resentment aroused in the United States by the Hitler régime's illiberal treatment of Jews, Socialists, and other anti-Fascists was increased by the numerous attacks made upon American citizens in Germany. Many were assaulted on the streets for failing to give the Hitler salute. Others, chiefly American Jews, were beaten in their homes. The American Consul General in Berlin on Oct. 12, 1933, issued a list of 29 cases in which Americans had been attacked by Nazis. In response to representations by Ambassador Dodd in Berlin, Chancellor Hitler in October was reported to have issued strict orders prohibiting assaults on foreigners. The anti-Nazi sentiment aroused in the United States was reflected in the boycott of German-made goods and services declared by the American Federation of Labor on October 13. On November 20 the Amateur Athletic Union of the United States voted almost unanimously to boycott the 1936 Olympic games at Berlin if the Hitler government persisted in excluding Jews from sports. Charges that the German Ministry of Propaganda had sent agents to the United States to spread Nazi doctrines among Americans of German blood were investigated by Samuel Dickstein, chairman of the Committee on Immigration of the House of Representatives. Nazi organizers, headed by Heinz Spanknoebel, gained control of the United German Societies in New York City following the withdrawal of 10 of the 70 odd organizations. Later a warrant was issued for Herr Spanknoebel's arrest on the charge of representing a foreign government without notifying the American State Department. He disappeared before the warrant could be served.

DANZIG, THE SAAR, ETC. European alarm at the Hitler sweep in Germany was increased when the Nazis, by much the same electoral tactics they had used in Germany, gained control of the Danzig government in the elections for the Volkstag on May 28. The Nazis displaced the Nationalists by capturing 51 per cent of the votes. While close cooperation between the governments of the Reich and of the supposedly independent régime in Danzig was thus established, the surprising result was temporarily more friendly relations between Danzig and Poland (see **POLAND** and **DANZIG** under *History*). In the Saar, whose return to Germany or retention by France was to be determined by plebiscite in 1935, Nazi terrorism directed at officials and others hostile to the Hitler régime in Germany caused the League of

Nations governing commission to actively suppress it. It was reported that the overwhelming majority of the population had gone over to the Nazi cause.

GERMANY AND DISARMAMENT. The aggressive, uncompromising leadership of the new Germany stiffened the attitude of the German delegation to the Geneva Disarmament Conference when that body reassembled April 25. This attitude led to a crisis early in May when Germany's objection to counting the Storm Troops or Steel Helmets as military effectives led to an impasse in the conference. Foreign Minister von Neurath intimated that Germany intended to rearm regardless of the outcome of the conference. Lord Hailsham, the British War Minister, replied that Germany would be liable to sanctions under the Versailles treaty if she withdrew from the conference. In this tense atmosphere Hitler announced that the Reichstag had been summoned for May 17 to hear his statement on foreign policy. It was widely feared that the Chancellor would seize the occasion to defy the powers and proclaim Germany's intention to rearm. President Roosevelt forestalled the Chancellor by his appeal of May 16 to the rulers of the world asking peace, urging the abolition of offensive weapons, and skillfully bringing pressure upon Germany to moderate her aims.

The Chancellor's speech before the Reichstag the next day was surprisingly moderate. He cordially approved President Roosevelt's proposal for a world non-aggression pact, denied that Germany wished to change the map of Europe by force or to "Germanize" alien peoples, and accepted the principle of international supervision of armaments. While the Chancellor's exposition of Germany's pacific intentions was received with skepticism in European diplomatic circles, his moderate tone and the more cooperative attitude adopted by the German delegate to the Disarmament Conference served to postpone the crisis.

The German delegation, however, continued to insist upon arms equality with the other powers, a demand which was consistently refused by France. Efforts to reach a compromise formula continued throughout the summer. Early in October the representatives of France, Britain, Italy, and the United States submitted new proposals to Germany which went only part way in meeting Hitler's demand for equality. On October 6 the German government officially requested samples of all weapons allowed to other powers under the disarmament proposals but denied to Germany in the Treaty of Versailles. The four other powers united in opposing this demand for German rearmament. Reporting on their conversations to the Bureau of the Disarmament Conference on October 14, the British Foreign Secretary suggested revision of the draft disarmament convention along lines which gave Germany a contingent promise of arms equality at the end of eight years. The German demand for a limited number of "defensive" weapons immediately was rejected.

On the same day (October 14) the German government unexpectedly announced its withdrawal from the Disarmament Conference and from the League of Nations. The refusal of the Allied powers and the United States to concede arms equality or to materially reduce their own armaments was given as the reason for this action. A plebiscite was called for November 12 to obtain popular approval of this policy. Chancellor Hit-

ler, in a speech explaining his government's action, declared Germany did not want rearmament but equality with the other powers. He denied that his régime contemplated war against neighboring countries and expressed the hope that France and Germany might "ban force from their common life." But he insisted that Germany could not accept "the perpetuation of a discrimination unbearable to us. . . ."

The plebiscite held on November 12 on the issue of Germany's withdrawal from the Disarmament Conference and the League gave Hitler an overwhelming vote of confidence. Out of 43,525,529 votes counted, 40,583,430 approved the government's course, 2,952,100 opposed it, and 789,999 ballots were defective. At the same time the electorate voted into office a solidly Nazi Reichstag. All candidates were selected by the government and no opposition candidates appeared on the ballots. The vote for the government list was 39,621,437; defective ballots, equivalent in many cases to negative votes, numbered 3,348,125; total, 42,969,562. The new Reichstag met, organized and adjourned on December 12, the entire procedure taking seven and one-half minutes. There were no speeches. General Goering was reelected President and immediately adjourned the Reichstag subject to his call.

HITLER GROWS CONCILIATORY. Having convincingly demonstrated the determination of the German people to attain arms equality, with or without the consent of the powers, Hitler now sought to calm the fears which his policies had aroused in neighboring countries. Negotiations were opened with Poland for a non-aggression pact and the Nazis demonstrated that they had no plans for an immediate war to recover the Polish Corridor. In an interview with a representative of *Le Matin* on November 21, the Chancellor stated that Germany did not desire the reconquest of Alsace-Lorraine and that the question of the Saar alone divided France and Germany. On November 24 he reiterated to the French Ambassador in Berlin his willingness to undertake negotiations for a settlement of the arms question and other issues with France. On December 19 it was announced that the French government had received full written German proposals for a settlement of their common difficulties. They included the offer of a ten-year non-aggression pact. Up to the end of 1933 these moves had failed to eradicate the deep-seated suspicion of the ultimate aims of the Hitler régime held in France.

THE AUSTRIAN CRISIS. While the threat to Europe's peace at Geneva was arousing alarm, a new crisis was developing in Austria as a result of a vigorous drive by German and Austrian Nazis to seize political control. The effort encountered a stubborn obstacle in the person of the Austrian Chancellor, Dr. Engelbert Dollfuss. Supported by the Catholics, Socialists, and Jews in Austria and by Italy, France, and Great Britain, Dr. Dollfuss expelled prominent German Nazi propagandists from Austria and banned the Nazi movement within the country.

On August 6, France and Great Britain jointly protested to the Berlin government against its efforts to overthrow the existing Austrian government. Italy had already made a "private" and "friendly" remonstrance to the Reich concerning Hitlerite propaganda in Austria. The Anglo-French protest was based upon Germany's alleged violation of the Four-Power Pact (see *ITALY under History*) and Article 80 of the Versailles

Treaty, both of which guaranteed Austria's independence. On August 7, Germany curtly denied their charges and declared that their interference in Austro-German affairs was "inadmissible." Two days later Mussolini informed the French and British governments that they need make no further representations to Berlin, as Hitler had promised him to end the anti-Dollfuss propaganda emanating from Germany. The propaganda thereafter was somewhat modified, but not ended. To withstand the steady pressure from the Nazis and their sympathizers, Chancellor Dollfuss was forced into closer political and economic relations with Italy and to establish a dictatorship in Austria. Temporarily, however, he inflicted a serious check upon the expansion of Nazi power and prestige (see AUSTRIA under *History*).

See FRANCE, ITALY, GREAT BRITAIN, POLAND, CZECHOSLOVAKIA, BELGIUM, SWITZERLAND, THE NETHERLANDS, DENMARK, SWEDEN, LITHUANIA, LATVIA, and the UNION OF SOVIET SOCIALIST REPUBLICS under *History*; LITTLE ENTENTE; LEAGUE OF NATIONS; DISARMAMENT; MUSIC; TRADE UNIONS.

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GEX AND UPPER SAVOY. See SWITZERLAND under *History*.

GIBRALTAR. A crown colony of Great Britain consisting of a peninsula (3 miles long and $\frac{3}{4}$ mile wide) joined to the south coast of Spain by a sandy isthmus. The "Rock" of Gibraltar (1396 feet high) commands the entrance to the Mediterranean Sea. Total area, $1\frac{1}{8}$ square miles; total population (1931 census), 21,372, of whom 3218 belonged to the military and 541 to the naval forces. The estimated civil population on Jan. 1, 1933 was 16,609 of whom 15,143 are fixed residents. These figures do not include some 1500 British subjects and 4500 aliens living in the nearby Spanish town of La Linea who enter Gibraltar every day. In 1932, civil population births numbered 346; deaths, 245. There were 13 government aided schools for primary education with a total of 2627 students registered in 1932-33. There are four secondary schools and several private English schools.

The commerce of the port is chiefly the supply of coal, fuel oil, and stores to ships and transit of cargo to Spain and Morocco. During 1932, 4091 vessels aggregating 8,674,558 tons entered the port which is a British naval base. Cables connect with the Continent, Tangier, eastern Mediterranean ports, and England. Government revenue for 1932 amounted to £239,209; expendi-

ture, £151,038; public debt, nil. The colony is administered by a governor, who is also the general officer commanding the garrison. He is assisted by an executive council of four official and three unofficial members. General Sir C. Harington succeeded Gen. Sir A. J. Godley as governor during October, 1933.

GIFTS AND BEQUESTS. See PAINTING; UNIVERSITIES AND COLLEGES.

GILMORE, GEORGE WILLIAM. An American theologian, died at Mere Point, near Brunswick, Me., Aug. 22, 1933. Born in London, England, May 12, 1858, he was brought to the United States in childhood, attending Princeton University from which he received the A.B. degree in 1883. On his graduation from the Union Theological Seminary in 1886 he was sent to Korea by the United States Commissioner of Education, at the request of the King of Korea, to found at Seoul the Royal Korean College. After teaching in that institution for three years he returned to the United States, settling in Brooklyn, N. Y., where he was engaged in literary work and taught at the Brooklyn Polytechnic Institute.

Called to the Bangor Theological Seminary in 1893, Dr. Gilmore served as instructor of the English Bible until 1895 and as professor of Biblical history and lecturer on comparative religion until 1899. He next held the chair of Old Testament language and literature and the history of religion at the Meadville Theological School. In 1905 he was appointed associate editor of the *New Schaff-Herzog Encyclopedia of Religious Knowledge* (12 vols.), and managing-editor of the last six volumes, and from 1911 to 1923 held a similar position with the *Homiletic Review*, a magazine for Protestant ministers discussing from the standpoint of religion, theology, and philosophy every phase of the minister's work. He resigned the position of editor three months previous to his death.

Besides contributing to the *Dictionary of Religion and Ethics* Dr. Gilmore wrote *Korea from Its Capital* (1892); *The Johannean Problem* (1895-96); *Literature of Theology* (1896); *Animism—Thought Currents of Primitive Peoples* (1919); and *Sketch of Recent Exploration in Bible Lands* (1923). Among his translations from the German were *Jesus as Problem, Teacher, Personality, and Force*, by Bornemann, Veit, Schuster, and Forster (1910) and *The Apostles Creed and the New Testament*, by Johannes Kunze (1912). He prepared *Bibliography of Missions* (with Samuel Macauley Jackson, 1891) and edited *The Church, the People, and the Age* (with Robert Scott, 1913); *Selections from the Classics of Devotion* (1916); and Coburn's *Archaeological Discoveries* (1922-24).

GIRL SCOUTS. A nonsectarian movement for girls from 10 to 18, started in Savannah, Ga., in 1912 by Mrs. Juliette Low and adapted from the Scouting programme begun in England in 1907 by Lord Baden-Powell. For a description of the programme of this organization see THE NEW INTERNATIONAL YEAR BOOK for 1932.

The active, paid-up memberships in the Girl Scouts as of Oct. 31, 1933, totaled 307,360, inclusive of Brownies (girls between 7 and 10) and leaders. In 1933, 70 training courses for leaders were given in 19 approved camps. About 100 were given in colleges and universities.

The official organ for girls is *The American Girl Magazine*, and for leaders, *The Girl Scout Leader*, each a monthly publication. The officers

elected at the national convention held in Milwaukee, Wis., Oct. 11-13, 1933 were: Honorary president, Mrs. Franklin D. Roosevelt; chairman of the board of directors, Mrs. Nicholas F. Brady; president, Mrs. Frederick Edey; secretary, Mrs. Julius H. Barnes; treasurer, Mrs. Edgar Rickard. Miss Josephine Schain is national director. National headquarters are at 570 Lexington Avenue, New York City.

GIZEH. See **ARCHAEOLOGY.**

GLASS BILL. See **BANKS AND BANKING.**

GLIDERS. See **AERONAUTICS.**

GLOBE CIRCLING FLIGHT. See **AERONAUTICS.**

GOFF, GUY DESPARD. An American lawyer and senator, died at Thomasville, Ga., Jan. 7, 1933. He was born at Clarksburg, W. Va., Sept. 13, 1867, and after attending the Kenyon Military Academy (later Kenyon College) was graduated from Harvard University with the LL.B. degree in 1891. After practicing law in Boston for a short time he moved to Milwaukee, Wis. There his successful prosecution of several graft cases, while prosecuting attorney for Milwaukee Co., secured his appointment in 1911 as United States Attorney for the Eastern District of Wisconsin. In 1915 President Wilson appointed him a special assistant to the United States Attorney General for the prosecution of special cases in the Northwest. During the World War he served as an assistant, in the administration of the draft act, to Gen. Enoch H. Crowder, Judge Advocate General of the United States Army, holding the rank of colonel while representing General Crowder at the staff headquarters of the American Expeditionary Forces in France. He also accompanied the American Forces in Germany.

On his return to the United States Mr. Goff became general counsel to the United States Shipping Board. President Harding, on taking office in 1921, persuaded him to become assistant to Attorney General Harry M. Daugherty a post he held for 14 months. His special duty was handling cases submitted by the War Department, the Bureau of Internal Revenue, and the Shipping Board. In 1924, having transferred his legal residence to his native State, West Virginia, he was elected to the United States Senate on the Republican ticket. His committee assignments included foreign relations, territories and insular possessions, interstate commerce, judiciary, privileges and elections, claims, and mines and mining. In 1928 he was West Virginia's "favorite son" for the presidency at the Republican National Convention in Kansas City, Mo.

GOLD. Thirteen Western States in 1933 yielded in recovered metal 1,799,597 fine ounces of gold compared with 1,835,103 ounces in 1932, according to an advance summary of the U. S. Bureau of Mines. These figures indicate a decrease of 35,506 ounces of gold. Alaska in 1933 yielded 520,418 ounces of gold as compared with 493,860 ounces in 1932. Production of gold in 1933 in the 13 western states and Alaska came mainly from well-established and well-developed mines in old districts.

Although Great Britain went off the gold standard in September, 1931, and was followed within a year by 41 other countries, the United States remained on the gold standard to April, 1933. As long as the United States remained on the gold standard, no matter how many extra shillings over 85 per cent fine ounce were paid in the foreign

market, gold would bring in United States money only \$20.67 per fine ounce, less commission, insurance, and freight. When the United States went off the gold standard and the value of the dollar dropped, sales of gold on the foreign market, if not prohibited, would have brought more of our depreciated dollars than \$20.67. Gold producers protested, therefore, and the Empire Star Mines, Inc., of California, made a test case by attempting to ship via the New York custom house. This led to an announcement by the newspapers on July 27, 1933, of a decision by the Attorney-General, that gold in ore, concentrates, unretorted gold amalgam, and unrefined cyanide precipitates could be shipped abroad, whereupon within the next several weeks some gold in unrefined form from the Empire North Star of California and the Homestake of South Dakota was exported.

The Attorney General's decision allowed 75 per cent of the United States gold mine production to be shipped to foreign markets and forced 25 per cent to remain here at the old price; the President on August 29 issued an order, coupled with an anti-hoarding clause, that the United States government would act as agent through the United States Mint to obtain the world price for newly-mined gold. This arrangement continued until October 25 when the Reconstruction Finance Corporation began buying United States newly-mined gold at prices above the world price; the purchase of foreign gold began at a later date. This price reached \$34.06 on December 18 and so remained to the end of the year. The gradually increasing price for gold after August, 1933, resulted principally in increased production of marginal ore in California and Colorado, slightly increased the output of the already profitable Homestake mine, and added a dredge-boat each in Idaho and Montana. The extra price, received in notes payable on Feb. 1, 1934, not only encouraged the established gold producer but brought rather handsome extra returns. The increased value over the \$47,958,973 (calculated at the legal coinage value of \$20.671835 per fine ounce), represented by the 2,320,015 fine ounces produced by the 13 States and Alaska, amounted between August and December 31 to approximately \$9,000,000. On Jan. 1, 1934, the Reconstruction Finance Corporation announced that it had to that date set aside \$100,000,000 for gold buying and had spent less than \$20,000,000 absorbing domestic newly-mined supplies.

The production from the thirteen western States

	1933		1932	
	Fine ounces	Value *	Fine ounces	Value *
Arizona ..	75,813	\$1,567,194	66,790	\$1,380,665
California ..	592,400	12,245,995	569,167	11,765,726
Colorado ..	242,008	5,002,749	317,928	6,572,154
Idaho	61,208	1,265,282	46,885	969,207
Montana ..	51,102	1,056,872	40,602	839,318
Nevada ..	105,000	2,170,543	129,720	2,681,547
New Mexico	25,964	536,724	23,208	479,753
Oregon ..	20,200	417,571	19,861	410,568
S. Dakota ..	510,058	10,543,835	480,838	9,929,459
Texas ....	.....	.....	9	179
Utah	108,841	2,249,943	185,256	2,795,997
Washington	4,800	99,225	5,082	105,057
Wyoming ..	2,203	45,540	257	5,305
Total ..	1,799,597	37,200,978	1,835,103	37,934,935
Alaska ...	520,418	10,758,000	493,860	10,209,000
Total ..	2,320,015	47,958,978	2,328,968	48,143,935

* Based on legal coinage value of \$20.671835 per fine ounce.

is shown in the table on page 320. Eastern States are omitted from the tabulation: in 1932 their combined output was about 1100 ounces, almost half of it produced in North Carolina.

World gold production for the year, according to preliminary estimates of *American Metal Market*, New York (Feb. 2, 1934), amounted to 24,282,000 ounces as against 24,226,000 in 1932. In the accompanying table this authority tentatively places Russian output on the basis of the previous year, but has received intimations that Russian production in 1933 may have reached 2,400,000 ounces. Hence the total for the year may be ultimately raised by almost 500,000 ounces.

GOLD PRODUCTION OF THE WORLD
[In thousands of fine ounces]

	1933	1932
United States *	2,537	2,449
Canada	2,945	8,044
Mexico	648	564
Colombia	368	248
Other South America	477	434
British India *	335	330
Japan *	438	897
Queensland	90	23
Western Australia	637	606
Other Australasia *	419	357
South Africa	11,025	11,559
Belgian Congo	250	243
Rhodesia	642	581
British West Africa	335	293
Russia *	1,920	1,900
Elsewhere *	1,200	1,178
Total	24,282	24,226

* Includes Philippines. * Includes New Zealand and New Guinea. * Chiefly Siberia. Estimated at average rate of 1932. * Includes West Indies, Central America, Europe, and Asiatic and African lands not separately reported. * Principal mines only, but nearly complete. † Revised estimate for year not allocated monthly. ‡ Conjectural

GOLD COAST. British territory in West Africa between the French Ivory Coast and Togoland on the Gulf of Guinea; comprising the Gold Coast colony (23,937 sq. miles), Ashanti (24,379 sq. miles), Northern Territories (30,486 sq. miles), and the British mandate of Togoland (13,041 sq. miles). Total area, including British Togoland, 91,843 square miles; total population, including British Togoland, 3,163,560 (1931 census) of whom 3182 were non-Africans. The distribution of the African population in 1931 was Gold Coast Colony, 1,571,362; Ashanti, 578,078; Northern Territories, 717,275; Togoland (British mandate), 293,671. The chief towns are Accra, the capital, with 59,895 inhabitants in 1931; Kumasi, 36,284; Koforidua, 19,634; Cape Coast, 17,685; Tamale, 12,941; Winniba, 10,990; Saltpond, 6396; Keta, 6392.

In 1931-32, the Colony, Ashanti, New Territories, and British Togoland had 29 government schools, and 340 assisted schools (including 2 secondary schools and 6 training colleges) which are controlled by the various missions, and a college at Achimota. There were 42,743 enrolled pupils in the government and assisted schools in 1931-32. In addition there are a large number of non-assisted schools under control of different religious bodies.

Agricultural and mineral products and chief exports are cacao, kola nuts, palm kernels, timber, rubber, manganese, gold, and diamonds. Including bullion and specie, imports for 1932 totaled £5,605,219 and exports £7,892,905. In 1932, cacao shipments were valued at £5,511,360; gold, (raw), £1,236,591; diamonds, £536,946; manga-

nese, £123,627; timber, £37,389; copra, £20,077; palm kernels, £80,283. Shipping entered and cleared in the foreign trade aggregated 3,547,905 tons in 1932. The port of Takoradi has the only harbor providing complete shelter for ships of over 30-feet draft between Nigeria and Sierra Leone. Livestock (1932) in the Gold Coast colony, Ashanti, and Northern Territories numbered 684,200 sheep and goats, 156,500 cattle, 86,810 pigs, 17,030 donkeys, and 4340 horses. Along the coast fishing is carried on by many of the coast inhabitants and a large amount of dried fish is shipped by rail into the interior. There were 500 miles of railway open to traffic on Mar. 31, 1932. Roads suitable for automobiles in the Gold Coast colony, Ashanti, and New Territories total 6264 miles.

For the fiscal year ending Mar. 31, 1933, actual revenue amounted to £2,670,786; actual expenditure, £2,673,482; public debt, £12,961,000; sinking fund, £2,017,875. The Gold Coast is administered by a governor assisted by an executive, and a legislative council. Ashanti and the Northern Territories are each locally administered by a chief commissioner. Togoland is under the administration of the governor of the Gold Coast, and the various statistical figures are included in the general total for the Gold Coast. Governor of the Gold Coast in 1933, Sir T. S. W. Thomas.

GOLDEN GATE. See BRIDGES.

GOLD STANDARD. See INTERNATIONAL BANKING; ECONOMIC CONFERENCE, WORLD; UNITED STATES under *Administration*; FINANCIAL REVIEW; FRANCE; GREAT BRITAIN; SOUTH AFRICA, UNION OF.

GOLF. Without exception every major masculine golf title changed hands in 1933. Gene Sarazen, United States and British open champion of the year previous, lost both crowns and captured another one. He lost his national title to Johnny Goodman. Omaha amateur, more famous as the youth who eliminated Bobby Jones from the national amateur in 1929 at Pebble Beach, and his British one to a fellow American, Densmore Shute of Philadelphia. Playing over the difficult North Shore Country Club links at Chicago in June, Goodman scored a fine 287, one stroke above the record and led Ralph Guldahl, St. Louis professional, by a lone shot. Craig Wood was two strokes back of Guldahl. In the British championship Sarazen failed to match the pace set by two other members of the Ryder Cup team, which had lost to the British professionals a few days previous, Shute and Wood. Shute beat Wood in the play-off.

The sensation of the season was George T. Dunlap, Jr., former Hill School and Princeton University star, and former holder of the Intercollegiate title. Dunlap threw over his Metropolitan amateur title and journeyed to England in June to try for the British amateur crown. He played beautiful golf at ancient Hoylake and in the fifth round eliminated C. Ross Somerville, Canadian and 1932 winner of the United States amateur champion. In the semi-final Dunlap was put out by the Hon. Michael Scott, fifty-five year old veteran Englishman, who eventually succeeded John de Forest as titleholder. Upon his return to the United States Dunlap kept in trim and in early September ran through a fine field at Kenwood Country Club, Cincinnati, to capture the national amateur, succeeding Somerville by downing Max Marston, former champion, in the final, 6 and 5. The amateur presented the fiercest

competition of the season with Goodman, open champion and consequently heavy favorite for the amateur championship, bowing to H. Chandler Egan, who won the amateur in 1904 and 1905, in the first round. Somerville defending champion, was eliminated in the third round by W. Lawson Little of California, 2 and 1.

Sarazen regained a bit of his glory by downing Willie Goggin, of San Francisco, in the final of the P.G.A. in Chicago in the fall. Charles Ferrara, San Francisco ironworker, won the national public links title at Portland, Ore., in August and two other United States players lifted the Canadian titles. Joe Kirkwood won the Canadian open and the amateur crown went to Scotty Campbell, another of the growing army of good golfers from San Francisco.

Yale's forces won their third consecutive intercollegiate team title, in the June tournament at Buffalo, but were unable to furnish the individual winner. Walter Emery, sophomore from the University of Oklahoma won the title, downing Rodney Bliss of Cornell in the final, 2 and 1.

Macdonald Smith, veteran, won the Western open and Jack Westland, 1931 runner-up for national amateur honors, took the Western amateur crown. Mark Stuart, of Fox Hills, had an easy time in conquering the field in the Metropolitan amateur, at Pomonok, and Willie Macfarlane, former national open champion, nipped Paul Runyan by one stroke at Winged Foot to take the Metropolitan open.

In the women's ranks titles stayed in the possession of the 1932 winners. Miss Enid Wilson inaugurated the title retaining habit by winning the British championship for the third successive season and Miss Virginia Van Wie followed suit by retaining her 1932-won national women's title in September at Exmoor, Chicago. In the final Miss Van Wie eliminated Miss Helen Hicks, of New York. Miss Hicks previously had played truly remarkable golf in winning the Metropolitan women's and New York State women's titles. In the New York State, played at Plandome, L. I., she had posted two rounds, one match and the other medal, of 71 and 70 respectively. Miss Lucille Robinson, won the women's Western title, defeating Miss Van Wie in the final round.

GOUCHER COLLEGE. A nonsectarian college for women in Baltimore, Md., founded in 1885. The enrollment for the first semester of the year 1933-34 was 665. The faculty had 91 members. The endowment funds of the college amounted to \$2,448,390. The library contained 60,700 volumes. President, David Allan Robertson.

GRAHAM LAND. See FALKLAND ISLANDS.

GRAND ARMY OF THE REPUBLIC, THE. A patriotic order formed in 1866 at Decatur, Ill., among a number of former soldiers who had served in the Civil War. Its purpose is to "enjoy a companionship made sacred by common sufferings and sacrifices." Its corner stones, "Fraternity, Charity, and Loyalty," demand the care and protection of sick and helpless comrades and their widows and orphans, the upholding of all comrades in their worthy endeavors, and loyalty to the flag and laws of the Republic. Affiliated with the Grand Army of the Republic are its auxiliary, the Woman's Relief Corps, and the allied bodies, the Ladies of the G. A. R., Daughters of Union Veterans of the Civil War, Sons of Union Vet-

erans of the Civil War, and the auxiliary to Sons of Union Veterans.

The maximum strength of the organization was in 1890 when it had a membership of 409,487. On Jan. 1, 1933, there were 1651 active local posts with a membership of 10,138. The sixty-seventh national encampment was held in St. Paul, Minn., Sept. 17-22, 1933, while Rochester, N. Y., was selected for the encampment in 1934. The officers elected for 1933-34 were: Commander-in-chief, Russell C. Martin; senior vice commander-in-chief, Thomas H. Peacock; junior vice commander-in-chief, Edwin H. Lincoln; surgeon-general, E. B. Garrett; chaplain-in-chief, the Rev. J. King Gibson; quarter-master-general, Samuel P. Town; and adjutant-general, D. B. Wolcott. National headquarters are at 1816 South Figueroa Street, Los Angeles, Calif.

GRAND CENTRAL GALLERIES. See PAINTING.

GRAND NATIONAL. See HORSE RACING.

GRASSHOPPERS. See ENTOMOLOGY, ECONOMIC.

GREAT BRITAIN. Official designation for the political union embracing England, Scotland, and Wales. In conjunction with Northern Ireland, the Isle of Man, and the Channel Islands, it forms the United Kingdom of Great Britain and Northern Ireland. For statistical purposes, the Isle of Man, the Channel Islands, and in some cases Northern Ireland are included under Great Britain. See BRITISH EMPIRE; IRELAND, NORTHERN.

AREA AND POPULATION. The estimated population of Great Britain proper on June 30, 1932, was 45,084,000, compared with 44,791,000 estimated for June 30, 1931. The area and census population as of 1921 and Apr. 27, 1931, are shown in the accompanying table.

AREA AND POPULATION OF GREAT BRITAIN

Divisions	Area in sq miles	Population	
		1921	1931
England (including Monmouthshire) .	50,874	35,681,019	37,789,738
Wales	7,466	2,205,680	2,158,193
Scotland	30,405	4,882,497	4,842,554
Isle of Man	221	60,284	49,338
Channel Islands . .	75	90,230	93,061
Total	89,041	43,176,521*	44,932,884

* Including 256,811 persons in the Army, Navy, and Merchant Marine abroad.

In 1931, the population of England and Wales was 80 per cent urban and 20 per cent rural; that of Scotland, 77.3 per cent urban and 22.7 per cent rural. Live births in England and Wales during 1932 numbered 613,972; deaths, 484,083; marriages, 306,132; for Scotland the respective totals were 91,001, 66,045, and 33,177. The 1932 birth rate per 1000 inhabitants in England and Wales was 15.3; in Scotland, 18.6. Death rates were 12 and 13.5, respectively. Permanent British emigrants to non-European countries in 1932 numbered 26,988 (34,310 in 1931); immigrants of British nationality into Great Britain numbered 75,595 in 1932 and 71,382 in 1931. Destinations of British emigrants in 1932 were: United States, 23,731 (27,320 in 1931); Canada and Newfoundland, 33,911 (38,003 in 1931); Australia, 9174 (9014 in 1931); British South Africa, 16,707 (19,491); and India and Ceylon, 11,263 (10,430). The 1933 birth rate of 14.4 per 1000 was the lowest on record; death rate, 12.3.

At the 1931 census, Greater London had an

area of 443,455 acres and a population of 8,203,942, of which 74,850 acres with a population of 4,397,003 comprised the registration City or municipal and parliamentary City of London. Populations of the other leading cities in 1931, with 1921 figures in parentheses, were: Glasgow, 1,088,417 (1,034,174); Birmingham, 1,002,413 (922,167); Liverpool, 855,539 (805,046); Manchester, 766,333 (735,774); Sheffield, 511,742 (511,096); Edinburgh, 438,998 (420,264).

EDUCATION. Ordinary public elementary schools in 1931 numbered 20,869 for England and Wales, with an average attendance of 4,930,076. These included 9677 Church of England schools and 1177 Roman Catholic schools. In Scotland, there were (1930-31) 2924 primary schools with an average attendance of 504,066. The enrollment in secondary and technical schools in 1930-31 was 492,578 for England and Wales (1957 schools) and 155,389 for Scotland (251 schools). The 11 English universities had 37,166 students in 1931-32; the four Scottish universities, 11,453 students; and the University of Wales, 3512 students.

AGRICULTURE. Only 7 per cent of the British working population gains a livelihood from agriculture. In 1932 the cultivated area in England and Wales was 25,200,082 acres; in Scotland, 4,022,217 acres. In the same year there were 12,493,000 acres of arable land, 17,448,000 acres of permanent pasture, and 15,764,000 acres of rough grazing land. Production of the chief crops in 1932, with 1931 figures in parentheses, was: Wheat, 42,208,000 bushels (37,128,000); barley, 34,016,000 bushels (35,608,000); oats, 109,696,000 bushels (104,856,000); beans, 4,216,000 bushels (4,336,000); peas, 1,584,000 bushels (1,888,000); potatoes, 4,450,000 tons (3,154,000); turnips and Swedes, 13,322,000 tons (12,416,000); mangold, 4,358,000 tons (4,549,000); hay, 7,755,000 tons (8,918,000). The figures are in Canadian bushels of 34 pounds and British tons of 2240 lbs. Large increases in the wheat and sugar beet acreages were shown in the 1933 returns of the Ministry of Agriculture. Livestock in Great Britain in June, 1932, included 1,067,170 horses, 7,591,278 cattle, 26,411,842 sheep, and 3,349,883 swine. The 1931 census showed 460,319 farm holdings in Great Britain of 1 acre and more. Holdings of from 1 to 5 acres numbered 87,452; 5 to 50 acres, 212,385; 50 to 300 acres, 152,041; and over 300 acres, 14,441.

MINING AND INDUSTRY. The output (in 1000 units) of the principal mining and metallurgical industries in 1932 (1931 figures in parentheses) was: Coal, 209,244 long tons (219,459); pig iron, 3576 long tons (3773); steel ingots and castings, 5256 long tons (5203); cotton deliveries to spinners (years ended July 31), 2598 bales (2010); new vessels launched, 188 gross tons (502). The 1931 production of other minerals was (in 1000 long tons): Iron ore, 7626; salt, 1889; China clay and related clays, 763; oil shale, 1733; limestone, 13,761; sandstone, except silica stone, 3529; slate, 243; igneous stone, 11,112. The 1931 output of alcoholic spirits was 42,616,000 proof gallons; of beer, 16,377,000 barrels. Board of Trade index numbers, based on volume of production, with 1924 as 100, were as follows for 1932 and 1931, respectively: Iron and steel and their manufactures, 66.2 (65.9); nonferrous metals, 96.3 (100.1); engineering and shipbuilding, 88.6 (94.9); textiles, 95.1 (77.0); chemical and allied trades, 98.1 (95.2); leather and boots and shoes,

96.4 (99.3); food, drink, and tobacco, 97.6 (103.7); gas and electricity, 147.0 (142.4); all manufacturing groups, 97.2 (96.7); mines and quarries, 77.5 (81.6).

Pig iron production in 1933 totaled 4,123,600 tons; steel, 7,006,500 tons. The number of blast furnaces in operation increased steadily from 62 in January to 81 on December 31.

Comparative statistics of the industrial censuses of 1930 and 1924 showed the following (1924 figures in parentheses): Gross industrial output, £3,160,000,000 (£3,587,100,000); value created by industrial processes, £1,431,800,000 (£1,526,200,000); average number of employees, 6,784,100 (7,140,600); net output per person employed, £211 (£214); mechanical power available, 26,521,700 horse power (20,512,400). For industrial developments in 1933, see *History*.

FISHERIES. The catch of the British fisheries in 1932 was 975,550 tons, valued at £15,061,758, according to provisional figures. This compared with 989,678 tons, valued at £15,904,316, in 1931. Shellfish, not included in the total, were valued at £432,905 in 1932. For the entire United Kingdom, there were 14,079 fishing boats (5390 sailing and 8689 steam and motor), aggregating 278,551 net tons, registered on Dec. 31, 1931. Regular fishermen employed in sea fishing were estimated at 52,443.

COMMERCE. As shown in the accompanying table, British foreign trade during 1932 continued the decline in evidence since 1929. Toward the end of 1933, a distinct recovery was recorded.

BRITISH FOREIGN TRADE, 1929 TO 1933*
[In thousands of pounds sterling]

Calendar Year	Imports ^b	Reexports		Total exports ^c	Excess of imports
		Exports of British products ^d	Imports of foreign products ^d		
1929 ..	1,220,765	729,349	109,702	839,051	381,714
1930 ..	1,043,975	570,755	86,835	657,590	286,385
1931 ..	861,253	390,622	63,868	454,489	406,764
1932 ..	703,183	365,138	50,914	416,052	287,081
1933 ..	676,160	367,430	49,140	416,570	259,590

* Not including bullion and specie movements. ^b C. i. f. value. ^c F. o. b. value. ^d Provisional figures.

The distribution of British imports and exports among the chief countries trading with Great Britain and Northern Ireland is shown in the accompanying table compiled from the *Statesman's Year Book* for 1933. The 1932 figures are provisional.

UNITED KINGDOM: IMPORTS AND EXPORTS
[In thousands of pounds sterling]

Countries	British imports from		British produce exported to	
	1931	1932	1931	1932
United States	104,009	83,672	18,246	15,098
Germany	64,163	30,410	18,412	14,581
Argentine Republic ..	52,744	50,870	14,785	10,663
Australia	45,679	46,192	14,528	20,025
France	40,922	19,023	22,552	18,460
Irish Free State	36,547	26,531	30,511	25,774
Denmark and Faroe Islands	46,696	40,556	8,661	9,864
Netherlands	35,199	22,001	13,702	12,108
Belgium	33,190	15,990	10,026	8,745
Canada	32,841	43,146	20,551	16,409
British India	36,711	32,315	32,289	34,091
New Zealand	37,775	37,485	11,196	10,360
Sweden	17,342	13,425	7,744	6,887
Italy	15,149	10,825	9,917	8,637
South Africa	13,120	15,580	21,857	18,109

The principal import items in 1932 were: Meat, £81,885,000; grain and flour, £58,046,000; wool and woolen rags, £33,578,000; raw cotton and

cotton waste, £31,111,000; wood and timber, £25,602,000; oil seeds, oils, fats, gums, etc., £22,570,000; manufactures of oils, fats, and resins, £31,050,000; paper and cardboard, £13,089,000; non-ferrous metals and manufactures, £14,702,000. All imports of food, drink, and tobacco were valued at £374,680,000; raw materials, etc., at £164,462; and manufactured articles at £157,076,000. Cotton yarns and manufactures, valued at £62,845,000 in 1932, were the chief export item. Others were: Coal, £31,634,000; machinery, £29,529,000; iron and steel manufactures, £28,045,000; woolen, worsted yarns and manufactures, £24,004,000; ships, aircraft, and other vehicles, £20,744,000; chemicals, drugs, and dyes, £17,378,000; apparel, £11,830,000. The value of domestic manufactured articles exported in 1932 was £275,602,000; of raw materials, etc., £43,626,000; and of food, drink, and tobacco, £32,328,000.

The Board of Trade estimated that Great Britain, which had a credit balance of payments of £28,000,000 in 1930 with relation to other countries, had a debit balance of £104,000,000 in 1931 and of £59,000,000 in 1932. Gold imports in 1932 were valued at £152,179,014 and exports at £134,309,408. In 1933 the debit balance declined to £4,000,000, partly due to the reduction in debt payments to America. The estimated income from overseas investments was £155,000,000 and the income from shipping services to foreigners £65,000,000.

FINANCE. Ordinary revenue for the fiscal year ended Mar. 31, 1933, totaled £744,791,000, or £22,009,000 less than the budget estimate. Including £17,239,000 for sinking fund but excluding the war debt payment to the United States, ordinary expenditures were £748,114,000, leaving a deficit of £3,323,000. The payment to the United States amounted to £28,950,349, of which £19,864,874 was for interest and £9,091,475 for repayment of capital, increasing the apparent deficit to £32,279,000. However, if net sinking fund payments of £23,674,000 were deducted from this deficit, the real deficit amounted to £8,605,000. All receipts into the Exchequer, including ordinary and extraordinary items, totaled £827,031,000 and all expenditures from the Exchequer £859,310,000. The income-tax and surtax yielded £13,750,000 less than anticipated in 1932-33, the Customs and Excise nearly £12,000,000 less. Estate Duties, however, produced £77,140,000 or £1,140,000 more than estimated. There was a saving in interest on the national debt of £13,695,000 due to conversion operations.

In the budget for 1933-34, total revenue was estimated at £782,316,000 (£848,898,000 estimated for 1932-33); total expenditure, £781,025,000 (£848,102,000 estimated for 1932-33). The other chief items in the 1933-34 budget, with 1932-33 estimates in parentheses, were: Total taxation £676,147,000 (£754,910,000); Customs duties, £107,965,000 (£174,570,000); income tax, £228,750,000 (£260,000,000); debt service, £224,000,000 (£308,500,000); defense expenditure, £108,946,000 (£104,364,000); health, labor, and insurance, £155,045,000 (£141,294,000). No war debt or sinking fund payments were budgeted in 1933-34.

The British national debt stood at £7,642,000,000 on Mar. 31, 1933, as compared with £7,433,000,000 one year earlier. Of the increase of £209,000,000 during the year, £150,000,000 represented borrowing for the exchange-stabilization fund in the form of gold, gold exchange, or ster-

ling and was not a real increase in the debt. The actual increase of £59,000,000 was incurred through (1) repayment of £33,798,000 representing the balance of franc and dollar credits obtained by the British government during the financial crisis of Sept., 1931; (2) the payment of £23,175,000 in the form of a 1-per cent bonus to holders of the 5-per cent internal war loan who converted their bonds into the new 3½-per cent war loan; and (3) payment of £2,666,000 in interest on national savings certificates, in excess of the provision in the permanent debt charge.

SHIPPING. Vessels registered as belonging to the United Kingdom on Jan. 1, 1932, numbered 17,972, of 12,274,157 net tons, compared with 18,064 vessels, of 12,453,887 net tons, registered a year earlier. Of the 1932 total, 13,012 vessels, of 11,812,335 tons, were steam and motor vessels. Idle shipping tonnage in the ports of Great Britain and Ireland on July 1, 1933, aggregated 3,207,000 gross tons, compared with 3,470,000 gross tons on July 1, 1932. The net tonnage of all vessels entering ports of the United Kingdom with cargoes during 1932 totaled 56,060,000, while the net tonnage of vessels clearing was 53,389,948. London, Liverpool, Hull, Manchester, Southampton, Glasgow, and Harwich, in the order named, were the busiest ports in 1930.

RAILWAYS. The railways of Great Britain, which had 20,408 miles of line at the beginning of 1932, are divided into four main systems as follows: London, Midland and Scottish, 8464 miles; London and North-Eastern, 6464 miles; Great Western, 3765 miles; and the Southern, 2129 miles. During 1931 all four systems carried 1,156,300,000 passengers (excluding season ticket holders), and 268,400,000 tons of freight. Passengers carried in 1932 numbered 1,119,198,000. In 1932, the gross receipts of the four systems (£140,992,000) declined by £15,292,414 as compared with 1931, a decline partially offset by economies aggregating £8,725,358.

OTHER COMMUNICATIONS. Public highways in 1932 extended 177,256 miles (151,807 miles in England and Wales, and 25,449 miles in Scotland). Planes of civil airlines in 1931 flew 1,604,000 miles, carrying 25,211 passengers and 774 tons of cargo. In 1932 the total in and out traffic at Croydon Airport, serving London, was 70,162 passengers (44,944 in 1931). Radiotelephone service between Great Britain and India was inaugurated at the end of April, 1933, thus completing the last important link in Imperial telephone communications. There are more than 3650 miles of canals in England and Wales.

ARMY AND NAVY. See **MILITARY PROGRESS**; **NAVAL PROGRESS**.

GOVERNMENT. The United Kingdom is a limited monarchy, with an unwritten constitution, under which final legislative, judicial, and administrative authority is vested in a Parliament of two houses, acting through a cabinet drawn from its members. The House of Commons consists of 615 members, elected by male and female suffrage on the basis of one member for every 70,000 of the population. The House of Lords, with a voting strength of about 740 members, consists of peers who hold seats (1) by hereditary right; (2) by creation of the sovereign; (3) by virtue of office; (4) by election for life, as with Irish peers; or (5) by election for the duration of Parliament, as with Scottish peers.

The composition of the House of Lords in 1933

was: Conservative, 488; Liberals, 80; National Liberals, 4; Labor, 12; National Labor, 8; Bishops, 26; Royal Peers, 36; politics not stated, 115; total, 769. In the House of Commons the government groups controlled 521 out of 615 members. The government parties were: Conservative (Stanley Baldwin), 470; National Liberal (Sir John Simon), 35; National Labor (Ramsay MacDonald), 13; Independent Nationals, 3. Opposition groups, with 61 seats, included: Labor (George Lansbury), 49; Independent Labor (Maxton), 5; Independent Liberals (Lloyd George), 4; and Independents, 3. Another Liberal faction of 33 members, headed by Sir Herbert Samuel, occupied a neutral position.

The National government, appointed Nov. 5, 1931, and reconstructed in November, 1931, and October, 1932, was composed as follows: Prime Minister and First Lord of the Treasury, J. Ramsay MacDonald (National Labor); Lord Privy Seal and Lord President of the Council, Stanley Baldwin (Conservative); Chancellor of the Exchequer, Neville Chamberlain (Conservative); Home Affairs, Agriculture and Fisheries, Sir John Gilmour (Conservative); Lord Chancellor, Lord Sankey (National Labor); War, Viscount Hailsham (Conservative); Foreign Affairs, Sir John Simon (National Liberal); Secretary of State for India, Sir Samuel Hoare (Conservative); Dominion Affairs, J. H. Thomas (National Labor); Colonies, Sir Philip Cunliffe-Lister (Conservative); Air, Marquis of Londonderry (Conservative); Scotland, Sir Archibald Sinclair (Liberal); Health, Sir Edward Hilton Young (Conservative); President of the Board of Trade, Walter Runciman (Liberal); First Lord of the Admiralty, Sir Bolton M. Eyres-Monsell (Conservative); Education, Lord Irwin (Conservative); Labor, Sir Henry Betterton (Conservative); Works, W. Ormsby-Gore (Conservative).

HISTORY

THE ECONOMIC REVIVAL. Definite improvement in British business and economic conditions during 1933 gave encouragement and added prestige to the National government and its conservative policies. The coalition Ministry headed by Ramsay MacDonald had been formed in August, 1931, to check an acute financial crisis and to reverse the course of the steadily deepening economic depression. To do so, it broke sharply with Britain's previous policies. Protection replaced free trade. A system of tariff preference within the Empire was established at the Ottawa Conference of 1932. The budget was brought into approximate balance by strict economies, a reduction of social services, and further increases in taxation. Exports were stimulated by controlled depreciation of the pound. Negotiations were opened for reciprocal tariff agreements between Britain and its leading customers. In general, the National government embarked upon a policy of modified economic nationalism, convinced that the traditional policy of free trade and internationalism was no longer feasible in a world of rising tariffs and other restrictions upon commercial intercourse.

The economic revival of 1933 was believed by the National government and its adherents to be the direct result of these policies. The budget for the fiscal year ended Mar. 31, 1933, showed a real deficit of only £8,605,000, while a surplus was estimated for 1933-1934. In the first nine months of 1933-34 ending December 31, the treas-

ury statement showed the country in the soundest financial position in many years. Expenditures were the lowest in a decade as a result of economies and the decline in unemployment insurance payments. On the other hand, increased business activity and higher tariffs had substantially increased the revenue. On Oct. 11, 1933, Walter Runciman, president of the Board of Trade, declared that Britain had regained its former position as the leading financial country of the world.

During the first half of 1933, British exports declined 11.2 per cent and exports 7.3 per cent from the 1932 levels. In the latter part of the year, both imports and exports showed a definite gain. The upturn in British industries became evident during the spring and summer. Industrial production in the second quarter advanced to 90.1 per cent of the 1928 output, compared to 82.7 per cent in the third quarter of 1932. By September, 1933, the average price of securities on the London Stock Exchange was 25 per cent higher than in September, 1932. The number of unemployed was reduced by nearly 500,000 during the year. After operating at 10 per cent of capacity most of the year, the shipyards on the Clyde received a rush of orders in November and December. The gold reserve of the Bank of England increased from £120,500,000 in January to nearly £192,000,000 in December. Almost all statistics at the year end showed business activity increasing and buying power expanding.

TARIFF AGREEMENTS. In pursuance of its tariff policy, the government concluded commercial treaties during the year with Denmark, Sweden, Norway, Finland, Estonia, Germany, and Argentina. Negotiations for similar treaties were under way with Lithuania, Latvia, Poland, and Uruguay. In the agreements signed, the British government went beyond tariff protection and laid the basis for a system of rigid controls over foreign trade. Provision was made for the future restriction of agricultural imports into Britain, it being stipulated in each treaty that if such restrictions were placed in effect specified quotas would be assigned to each country. Similar provisions were included in the Scandinavian agreements with respect to fish imports.

Typical of these agreements was the Danish treaty, signed April 24, for a period of three years. In it Great Britain undertook not to impose a tariff on Danish bacon, promised Denmark a percentage of all foreign bacon imported, and agreed not to raise the existing tariff on Danish butter and eggs. In return for these negative benefits, Denmark agreed to take 80 per cent, instead of 60 per cent, of its total coal imports from Great Britain; to take 75,000 tons of steel and iron goods annually from Great Britain, instead of the normal 50,000 tons; to take its jute and salt from Great Britain; not to raise its tariff on a long list of articles imported from Britain, etc.

The German treaty provided for larger German purchases of British coal in return for lower British duties on German toys, pianos, clocks, etc. The treaty with Sweden, signed May 15, went into effect July 7 for three years. The British agreed to leave certain Swedish exports on their free list and to reduce their tariff on others. In return, Sweden promised to buy 47 per cent of her coal in Great Britain, to reduce duties on a long list of British produce, and not to impose new duties on others. The Norwegian agreement,

effective July 7, contained similar provisions and gave Britain the right to supply 70 per cent of Norway's annual coal imports. The Anglo-Argentine convention, signed at London May 1, was followed by a commercial treaty concluded at Buenos Aires September 26. Argentina extended Britain preferential treatment in the matter of remittances, promising that the full amount of sterling exchanged obtained from the sale of Argentine products in the United Kingdom would, after certain deductions, be made available for the payment of British exporters to Argentina. As a result of this series of treaties, an increase of 4,000,000 tons annually in British coal exports was anticipated, besides other benefits.

About 1000 American branch factories in Canada were affected when Great Britain on Jan. 30, 1933, announced that after April 1 Dominion products would be required to have a 50 per cent Empire content, instead of 25 per cent, to receive the British imperial preference.

MONETARY POLICY. The government during 1933 made no move toward returning to the gold standard, which it was forced to abandon during the financial crisis of September, 1931. A sudden increase in the gold holdings of the Bank of England made a return to gold possible, if the government had so desired. On Jan. 20, 1933, the Bank's reserves stood at £120,544,000, the lowest since 1920. Ten weeks later they had increased to £186,857,000, the highest recorded. Despite this abundance of gold, the government sought to keep the pound depreciated with reference to the dollar, franc, and other gold currencies, both as an aid to British exports and as a stimulus to prices in the country. During the first months of the year, the British employed the Exchequer's exchange equalization fund to stabilize the pound sterling at \$3.40 to \$3.45. The abandonment of the gold standard by the United States on April 19 and the subsequent depreciation of the dollar, made it impossible to maintain this ratio, despite an increase in the equalization fund from £150,000,000 to £350,000,000 at the end of May. By July 19, the pound was quoted at \$4.865, or approximately the same ratio as obtained previous to September, 1931. The average exchange rate for August was \$4.5027; for December, \$4.075; for the year 1933, \$4.2197 (paper dollars).

To prevent the disturbance to trade caused by fluctuations in the exchange ratio between the pound and the French franc, the Chancellor of the Exchequer announced April 28 that a £30,000,000 loan floated in London, would be advanced to the French Treasury and converted into French currency "when and as it needs francs and in accord with the Bank of England." The loan was designed both to prevent the rise of sterling with relation to foreign currencies and to check the drain on the French gold supply caused by the conversion of franc credits into gold by the British equalization fund. The attempt to "peg" the pound at 85 gold francs encountered increasing difficulties during July and August, owing largely to the fluctuations of the dollar. At the end of August the pound again depreciated to 82 francs.

OTHER ECONOMIC POLICIES. Despite the rise of exports in the second half of 1933, attributed to the government's international economic policies, the Cabinet in September agreed that world conditions made it difficult to reabsorb all of Britain's unemployed in the export trades. The fail-

ure of the World Economic Conference (see ECONOMIC CONFERENCE, WORLD), and the trend toward economic nationalism in America, France, Germany, and other countries blocked the restoration of international trade on a pre-depression scale. Accordingly the Ministry undertook to stimulate employment in domestic industries. The principal measures adopted with this end in view were (1) the agricultural marketing act, (2) slum clearance, and (3) subsidization of a new industry for the extraction of oil and gasoline from coal.

The agricultural marketing bill, passed by Parliament in July, 1933, supplemented a similar measure passed in 1931. It was designed to permit the organization and development of marketing schemes for British agricultural products. In order to regulate the supply of products offered on the British market, the act conferred on the government broad authority to control imports of agricultural products and the sale of domestic production. Provision was also made for the establishment of development boards to promote the cultivation of secondary agricultural crops. Through diversification and the improvement of the basic position of agriculture, it was hoped to induce part of Britain's army of unemployed to return to the land. However, the desperate strait of the farmers was evidenced by a widespread agitation against payment of the tithe.

Another law effected a fundamental change in the government's housing policy in England and Wales. It ended the Exchequer subsidies granted to aid in the construction of working-class houses, except those to which the government was already committed. Over the 13-year period ended Mar. 31, 1932, these subsidies aggregated £100,951,000. The government explained the abandonment of the housing policy by saying that cheaper money and lower building costs now made it possible for the small wage earner to buy a home without government aid. In place of housing, the government concentrated on slum clearance, with the aim of eliminating all slum areas from England and Wales by the end of 1938. The demolition of 210,000 houses and new quarters for more than 1,000,000 persons, costing £95,000,000, were contemplated.

On November 8 the government introduced a bill which drastically reorganized the unemployment insurance system and evoked widespread protests among the working classes. The measure increased the rate of weekly contributions from the worker and lowered the weekly payment to the unemployed. On the other hand an additional 4,000,000 workers were to be brought within the system and the benefit period was extended from six months to a year. It was expected that these changes would produce an annual surplus of £5,500,000 for the reduction of the insurance fund's £115,000,000 indebtedness. In addition, a new board was provided to give vocational training to the uninsured unemployed and to administer relief.

Compulsory rationalization of the West Yorkshire coal fields, with the closing of unprofitable pits, was begun under the auspices of the Coal Mines Reorganization Commission in December, 1933. Similar action was planned in other fields. The merger under government auspices of the White Star and Cunard shipping lines was under way toward the end of the year. The ministry announced December 13 that negotiations had advanced sufficiently to justify a £6,000,000 gov-

ernment loan for the completion of the super-liner *Princess Elisabeth*, the Cunard Line's great vessel, work on which had been halted by the depression.

The completion on September 5 of the great electric grid built by the Central Electricity Board as part of its national transmission scheme ended a 5½ year project costing £27,000,000, which had given direct or indirect employment to some 200,000 workers. The project involved the construction of 26,265 towers and 4000 miles of transmission lines connecting the major electric generating plants in England, Scotland, and Wales.

DOMESTIC POLITICS. While by-elections during the year showed a continued falling off in the Conservative party's popularity, that party and its policies more than ever dominated the National government. Serious divisions within the party ranks were revealed on a number of occasions, at times reflecting the conflict of interest between the industrial and banking elements and at others the division on the issues of India, defense, and disarmament. At the annual Conservative party conference held at Birmingham in the first week of October, a resolution voicing "grave anxiety over the inadequacy of imperial defense" was unanimously adopted. Pacifism, internationalism, and the League of Nations were violently assailed. A serious split developed over the National government's policy of granting extensive reforms to India. The die-hard opposition to this policy, led by Winston Churchill and Lord Lloyd, was defeated (737 to 344) only after Neville Chamberlain announced that the government would regard the result as a vote of confidence. As in previous years, the moderate group, led by Stanley Baldwin and Mr. Chamberlain, retained control of the party.

In contrast to the growing nationalism evidenced in the Conservative party was the attitude of Labor. This party, which normally controls some 8,000,000 voters, voted at the annual conference at Hastings October 4 to take no part in any future war. If necessary, it was decided to declare a general strike to prevent Britain from entering any war unless her territory was actually invaded. Upon the party's return to power, it promised to pass legislation legalizing pacifism. Fervent demands for peace and disarmament were heard in the debates. The conference followed the example of the Trades Union Congress in voting to boycott the Hitler régime in Germany, offering sanctuary to Jews and other refugees from the Reich, and placing itself on record as unalterably opposed to all dictatorships, whether of the Right or Left.

A by-election in East Fulham, fought on the issue of "peace or war," resulted in a decisive Labor victory. The Conservative defeat reflected the popular belief that the government's policies would eventually drag the country into another European war. In the municipal elections held in 257 boroughs on November 1, the Laborites registered a net gain of 206 seats, compared with a loss of 241 seats in the municipal elections of 1931.

Like the Conservatives and Liberals, the Laborites were faced with deepening internal schisms precipitated by the stress of the times. A radical wing of the Parliamentary Labor party continued to demand that Labor seize dictatorial control if and when it again was voted into power. Meanwhile the Left wing of the Inde-

pendent Labor party, which withdrew from the Parliamentary (majority) party, was split into two new factions on the issue of establishing a working agreement with the Communist International of Moscow.

The Liberals remained split into three separate groups under the leadership of Sir John Simon, Sir Herbert Samuel, and David Lloyd George, respectively. The Simon and Samuel groups joined forces with the Conservatives and MacDonald Laborites in 1931 to form the National government. On Sept. 28, 1932, Sir Herbert Samuel resigned from the National government in protest against the Ottawa agreements. On Nov. 16, 1933, he made the long-expected announcement that his 33 followers in the House of Commons would desert the government benches and "resume the fullest independence." Dissatisfaction with the government's disarmament, unemployment, and housing policies were given as the reason for the Liberals' switch to the Opposition ranks. The defection of the Liberals, which coincided with the opening of a new session of Parliament, had little significance except as a reflection of the government's increasing popularity. The government retained a majority of 514 votes out of the 615 seats in the Commons.

FOREIGN RELATIONS. The contradictory policies on war and defense espoused by the Conservative and Labor parties were significant in view of developments on the Continent. The withdrawal of Japan and Germany from the League of Nations, and that of Germany from the Disarmament Conference, coupled with the failure of the World Economic Conference, convinced a large section of British opinion that the effort to establish peace on a permanent basis had definitely failed. The prospect of war between Germany and France in the near future led to a searching consideration of British policy in the event of a crisis similar to that of 1914. The advent of the Hitler régime in Germany and its subsequent policies led to a general revulsion of sentiment in Great Britain, which previously had been inclined to support the German demand for modification of the terms of the Versailles Treaty. There was general denunciation of Hitler's policies from all classes and parties, but a sharp division of opinion as to whether Britain should intervene in support of the Locarno treaty if a conflict occurred.

The policy adopted by the Labor party flatly rejected such intervention. Mr. Baldwin, however, speaking for the government, declared unequivocally before the Conservative party conference October 6 that Great Britain would fulfill her pledge under the Locarno pact. Similarly, during the disarmament crisis of March, 1933, the Minister of War, Lord Hailsham, threatened Germany with the application of the military sanctions if she rearmend in defiance of the Versailles Treaty. The debate on the German situation in the British House of Commons April 13 aroused an official protest from Berlin against "unwarranted meddling in the internal affairs of the Reich."

The developments of 1933 in Germany strengthened the entente between Britain and France which had been renewed in a tenuous form at the Lausanne Conference in 1932. The British government joined France in opposing Hitler's policy in Austria (q.v.) and worked in close coöperation with France and the United States in attempting to reach an agreement at the Disarmament Conference. Following Germany's with-

drawal from the conference on October 14, the German Foreign Minister, Baron von Neurath, denounced the British Foreign Minister, Sir John Simon, for "casting suspicion on Germany" in the preceding negotiations. He said that with the assent of France and the United States, Sir John had scrapped the MacDonald disarmament plan and in its place submitted a new one discriminating exclusively against Germany. These accusations the British Minister emphatically denied.

While the British assumed an attitude more and more openly opposed to Hitler's international policies, as the latter were revealed, they had earlier in the year joined with Italy in attempting to bridge the gulf between Germany and France on the disarmament and other questions. The fruit of this effort was the MacDonald disarmament plan, presented at Geneva March 16, and the Four-Power pact formulated by Mussolini, with Prime Minister MacDonald's approval, during conversations between the two statesmen in Rome on March 18 and 19. For summaries of these two proposals, see DISARMAMENT and ITALY under *History*, respectively.

ANGLO-AMERICAN RELATIONS. Anglo-American relations remained cordial during 1933, despite the irritations of the war debt issue and the adverse effects upon British economy of the depreciation and wide fluctuations of the dollar. In response to President Roosevelt's invitation, Prime Minister MacDonald paid a second official visit to the United States, arriving in New York April 21 and leaving April 26. He was the President's guest at the White House while the two discussed the whole range of British-American problems. The war debts were discussed on April 25 and an unsuccessful effort made to negotiate a final settlement. In a joint statement issued April 26, they announced their agreement on general measures for world economic recovery. As a result of their conversations and those subsequently held by President Roosevelt with the representatives of other nations, the World Economic Conference was convened for June 12.

Against the desires of Mr. Roosevelt and the American delegation to the Economic Conference, Mr. MacDonald mentioned the war debt issue in his opening address. He said that while the issue could not be dealt with in the conference itself, it "must be dealt with before every obstacle to general recovery has been removed, and it must be taken up without delay by the nations concerned."

In place of the semi-annual payment of \$75,950,000 due the United States June 15, Great Britain made a payment June 13 of \$10,000,000 "as an acknowledgement of the debt, pending a final settlement." Suggesting that further war debt negotiations be postponed until after the close of the conference, President Roosevelt announced on June 14 that he did not consider the British action as a default. The negotiations for a war debt settlement were reopened in Washington October 10 by a British financial mission headed by Sir Frederick Leith-Ross, economic adviser to the British government. An agreement proved impossible and the discussions were adjourned indefinitely in November. On Dec. 15, 1933, Britain made another "token" payment of \$7,500,000 in place of \$117,070,765. See REPARATIONS AND WAR DEBTS.

Throughout the disarmament negotiations at Geneva and in the European capitals during

1933, the American government gave its wholehearted support to the MacDonald disarmament plan. It acted in close cooperation with the British and French governments at the Disarmament Conference during the weeks that preceded Germany's withdrawal from the conference and the League on October 14. In the meantime the British government showed concern at the naval building programme inaugurated by President Roosevelt. While admitting that the United States had a legal right to build up to the quotas fixed in the Washington and London naval treaties, the British pointed out that the construction of four 10,000-ton 6-inch-gun cruisers contracted for might prevent a reduction in the size of cruisers at the 1935 naval conference. They suggested that the construction of these new types of ships be postponed during the life of the Disarmament Conference or pending further discussions. The American government announced September 26 that it could not consider this suggestion.

ECONOMIC CONFLICT WITH JAPAN. The British were not unsympathetic with the basic reason for the increase in the American fleet. Japan's withdrawal from the League of Nations, the growing truculence of her militarists, and the announcement that Japan would seek parity with Great Britain and the United States at the 1935 naval conference alarmed the British as well as the Americans. Moreover, the British awoke with a start during the year to find that their hold on the cotton textile and rayon markets throughout India, Malaya, and Africa was being seriously shaken by a flood of cheaper competitive products from Japanese factories. Barred from the Chinese market by the boycott, Japanese textiles and other goods were forced into other Oriental, African, and even South American markets at an accelerated pace. The British manufacturers, with their relatively high wage scales, were unable to compete with the Japanese products, made with poorly paid but efficient labor and marketed with the aid of a greatly depreciated currency.

The British moved by tariffs and other devices to protect their markets. India and British West Africa abrogated their commercial treaties with Japan and raised their tariffs. New duties on imports from Japan were imposed by the Straits Settlements, Egypt, Kenya, Australia, and Zanzibar, at British instigation. The Japanese retaliated by boycotting Indian cotton, threatening to boycott Australian wool, and encouraging the anti-British political movements in India and other dependencies with Pan-Asiatic propaganda. Violent denunciations of the British tariff policy by high military, naval, and government officials appeared in the Japanese press and periodicals.

Major Cyril Fullard Entwistle, stating the British view in the House of Commons, said that if Japan's aggressive trade policy was not checked it meant the collapse of the industrial structures of Great Britain and other exporting nations. "Either Japan must be compelled to foot up to the standard of living maintained by Western nations or the importation of Japanese manufactures must be totally prohibited," he asserted.

In an effort to reach an economic understanding on the trade war issue, British and Japanese representatives conferred at Simla, India, commencing in September. These negotiations, later transferred to Delhi, were approaching completion at the end of the year.

RELATIONS WITH THE SOVIET UNION. The National government on Oct. 17, 1932, had given the required six months' notice for the abrogation of the Anglo-Russian trade treaty concluded by the Labor government in 1930. Negotiations for a new treaty were under way between the two governments when on Mar. 11 and 12, 1933, the Soviet government arrested six British engineers of the Metropolitan-Vickers Company on charges of espionage, bribery, and sabotage of the Soviet electrical industry. On March 16, the British Ambassador in Moscow demanded the immediate and unconditional release of the prisoners on the ground of insufficient evidence. When the Soviet government proceeded with arrangements to try the accused the British suspended negotiations for the new trade treaty March 20 and on April 5 a law authorizing an embargo on all Soviet goods was rushed through the House of Commons.

On April 19 a Soviet court convicted five of the engineers. Three of them were deported from the Soviet Union for five years and two were sentenced to three and two years in prison, respectively. The British people, who had been aroused to a high pitch of excitement at the prospect of the execution of the engineers, greeted the verdict with relief. The same day the British government prohibited, as of April 26, the importation of Soviet petroleum, timber, raw cotton, grain, and butter, amounting to about 80 per cent of the British imports from the Soviet Union. The Soviet government replied (April 20) by prohibiting all purchases of British goods and all chartering of British vessels.

In announcing the embargo, the British Foreign Minister stated in Parliament that it would be removed whenever the two British engineers—William H. Thornton and William L. MacDonald—were released. The rift was healed on this basis July 1, after several conversations in London between Maxim Litvinov, the Soviet Foreign Minister, and Sir John Simon. Great Britain raised its embargo on Soviet goods and the Soviet government released the two British engineers and cancelled its counter-embargo. Negotiations for a trade agreement were then renewed.

THE PERSIAN SETTLEMENT. Another threatening dispute was peacefully settled when on Apr. 29, 1933, the Anglo-Persian Oil Company and the Persian government agreed upon a new petroleum concession replacing the D'Arcy concession of 1901. The abrogation of the D'Arcy concession by Persia on Nov. 27, 1932, precipitated a serious conflict between the two governments. The matter was submitted to the League of Nations by Great Britain and on Feb. 3, 1933, it was agreed that the oil company and the Persian government should enter direct negotiations for a new concession. See *PERSIA*.

IMPERIAL AFFAIRS. The process of forging new and closer economic links among the mother country and the Dominions, inaugurated at the Ottawa Conference of 1932, was further developed during 1933, despite the obstacles encountered. There was much dissatisfaction with the Ottawa Agreements, particularly in Great Britain, where the Labor party and a section of the Liberal party were prepared to denounce these treaties if they returned to power. The British complained because in the year ended Mar. 31, 1933, Canadian exports to Britain increased by more than \$10,000,000, as compared with the previous year, while Canadian imports from Britain decreased by \$20,000,000. Canada, how-

ever, continued to press the National government for further preferences, such as the exclusion of Soviet timber and other raw materials in favor of similar Canadian products. The Dominions likewise sided with the United States at the World Economic Conference, urging Great Britain to follow the Roosevelt economic programme for raising commodity prices.

While the Conservatives dominating the National government considered the American programme too ambitious to emulate, they did reach an agreement with the Dominions on general policy, issued in a declaration of July 27. The declaration approved a joint policy of price-raising without monetary manipulation and envisaged the ultimate restoration of the gold standard. It called for cooperation in maintaining stable exchange rates within the empire and with such other countries as might decide to join the sterling bloc. Each government was left free to decide whether or not it would undertake public works programmes to stimulate industrial activity.

Meanwhile there had been published on June 8 the report of the Imperial Committee on Economic Consultation and Cooperation. It recommended the integration of various imperial economic organizations and their reorganization to include representatives of the Dominions as well as of Great Britain. In accordance with the committee's recommendation, the British government abolished the Empire Marketing Board on September 30 and transferred its functions to the permanent Imperial Economic Committee. The latter body was made independent of any one government and was empowered to deal with the Dominion governments directly.

The field of Imperial political relations also was explored by the first British Commonwealth Relations Conference, which met at Toronto, Canada, commencing September 10. This unofficial body, composed of eminent representatives of the various units of the empire, considered the general principles of the Commonwealth's foreign policy. A nine-point statement submitted by the chairman, Sir Robert Borden, former Prime Minister of Canada, emphasized close coöperation with the United States as a vital element in foreign policy. Support of international agencies, such as the League of Nations, and efforts to limit armaments, eliminate war, maintain justice and liberty in every country, etc., were recommended. The status of the Dominions in the event of a declaration of war by Great Britain was discussed, the general view being that war could not be made without the consent of all units of the Commonwealth. Plans were discussed for improving inter-Imperial and particularly inter-Dominion communications.

The Anglo-Irish trade war continued to inflict serious damage upon both countries (see *IRISH FREE STATE*, under *History*). Progress was made toward the enactment of the promised political reforms for India (see *INDIA* under *History*). The mother country made additional efforts to help Newfoundland (q.v.) out of its financial morass. See *SOUTH AFRICA*, *CANADA*, *AUSTRALIA*, *NEW ZEALAND*, and the various colonies and dependencies for their relations with Great Britain. Also see *LEAGUE OF NATIONS*, *DISARMAMENT*, *REPARATIONS AND WAR DEBTS*, and *GERMANY*, *FRANCE*, *ITALY*, *UNITED STATES* under *History* for other aspects of Great Britain's international relations.

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GREAT LAKES-TO-GULF WATERWAY.

See CANALS.

GREECE. A Balkan republic. Capital, Athens. The area is 50,270 square miles and the population on Dec. 31, 1931 was estimated at 6,483,000 (6,204,684 at census of 1928). The urban population in 1928 was 2,058,510 (in towns over 5000). The estimated population of Athens in 1931 was 468,000. In 1928 Piraeus (Peiraievs) had 251,328 inhabitants, Saloniki, 236,524; Patras, 61,278. In 1928-29 the elementary schools enrolled 684,424 pupils, secondary schools 104,789, and universities 7135. The 1928 census showed 1,962,330 illiterates over 10 years of age.

PRODUCTION. Greece is a predominantly agricultural country, specializing in the production of tobacco and currants for export. Arable land in 1931 totaled 4,206,000 acres (13 per cent of the total); meadow and pasture, 2,877,000 acres; forests, 5,946,000 acres. Production of the chief crops in 1932 (thousands of units, bushels except as specified), with 1931 crops in parentheses, was: Wheat, 16,941 (11,228); rye, 2438 (1800); barley, 9862 (7146); oats, 6910 (5274); corn, 7370 (6248); potatoes, 2849 (2306); currants and raisins (pounds), 425,660 (222,225); figs (pounds), 44,092 (34,856); grape must (gallons), 78,601 (51,391); olive oil (gallons, 1932-33 season), 34,643 (30,042); tobacco (pounds), 57,987 (95,274). Livestock in 1931 included 868,000 cattle, 423,000 swine, 7,072,000 sheep, 838,000 horses, mules, and asses.

Mineral production (metric tons) in 1932 was: Crude chromite, 12,500; emery, 25,000; iron ore, 150,000; iron pyrites, 80,500; crude magnesite, 70,000; lignite, 200,000; smelted lead, 7200. Industrial production in 1932 was valued at 6,080,000,000 drachmas (\$78,432,000). Cotton yarn, wool fabrics, soap, leather, and cigarettes were the leading manufactured articles.

COMMERCE. Greek imports and exports during 1930-32 are shown in the accompanying table from the 1933 *Commerce Yearbook*.

GREECE: IMPORTS AND EXPORTS

	Thousands of drachmas		Thousands of dollars *	
	Imports	Exports	Imports	Exports
1930	10,525,245	5,985,686	136,828	77,814
1931	8,759,191	4,203,591	112,994	54,226
1932	7,867,867	4,759,218	65,303	39,502

* Dollars converted at average exchange rates, viz., \$0.0180 in 1930, \$0.0129 in 1931, and \$0.0083 in 1932.

The chief imports in 1932 were: Fish, \$12,113,000; chemical and allied products, \$3,859,000; machinery, \$3,677,000; iron and steel, \$3,447,000; coal, \$2,974,000; cotton piece goods, \$2,778,000; sugar, \$2,090,000. Leading exports were: Leaf tobacco, \$15,121,000; currants, \$8,566,000; olive oil, \$4,230,000; raisins, \$2,212,000; wine, \$1,350,000. The United States furnished 13.8 per cent of the 1932 imports (9.6 in 1931); United Kingdom, 13.6 per cent (13.2); Germany, 9.6 (12.2).

The United Kingdom took 23.4 per cent of the total 1932 exports (15.0 in 1931); Italy, 16.5 per cent (16.5); Germany, 14.5 (14.0); and the United States, 10.2 per cent (17.2).

FINANCE. Provisional returns for the fiscal year ended Mar. 31, 1933, showed a deficit of 600,000,000 drachmas on expenditures of 9,621,000,000 drachmas. In 1931-32 actual receipts were 11,071,000,000 drachmas, against total obligations incurred of 11,865,000,000 drachmas. The provisional 1933-34 budget estimated receipts at 7,967,000,000 drachmas, and expenditure at 8,292,000,000, with a deficit of 325,000,000 drachmas. The public debt on Dec. 31, 1932, including the railway debt, totaled 43,164,170,000 drachmas (\$561,134,000 at the stabilization rate of \$0.012977).

COMMUNICATIONS. In 1932 there were 825 miles of State railways and about 775 miles of private lines. During the year ended Mar. 31, 1932, all lines carried 7,000,000 passengers and 1,600,000 metric tons of freight. Highways extended about 8610 miles. The Greek merchant marine on Dec. 31, 1932 comprised 558 vessels (of 30 or more tons) aggregating 1,430,418 gross tons. During 1932, 2983 ships of 5,104,066 net registered tons entered the ports. Regular air service between Athens and Saloniki was inaugurated July 10, 1931, and between Athens, Agrinion, and Jannina on Nov. 23, 1931. Up to the end of 1932, these lines carried 10,950 passengers, 222,500 pounds of baggage, 235,700 pounds of freight, and 17,550 pounds of mail.

GOVERNMENT. The Constitution of June 3, 1927, provided that the President should be elected for five years by the Chamber and Senate. The Chamber in 1933 comprised 250 members elected for four years by universal suffrage. Of the 120 Senators, 92 were elected by direct suffrage, 10 by the Senate and Chamber conjointly, and 18 by trade, industrial and scientific organizations. President in 1933, Alexander Zaimis, elected Dec. 14, 1929. The Ministry formed Nov. 4, 1932, was headed by Pantagiotis Tsaldaris (Popular party). For changes in 1933, see *History*.

HISTORY

DOMESTIC POLITICS. The political stability of the Greek government had been impaired by the election of Sept. 25, 1932, in which the Liberals (Venizelists) defeated the Popular (Royalist) party of Pantagiotis Tsaldaris, but failed to secure a majority in the Lower Chamber. A coalition cabinet formed by Tsaldaris lasted only ten weeks (to Jan. 13, 1933) and then the veteran political leader, Eleutherios Venizelos, formed a new cabinet, which secured a majority of only two. Unable to carry on the government with such a narrow margin of safety, Premier Venizelos on January 24 secured the Senate's consent to call new elections for March 5. Contrary to expectations, the Premier's six-party government coalition was defeated by the three-party Opposition bloc, headed by Tsaldaris, the Opposition winning a majority of 135 out of the 248 seats.

Announcement of the results was followed by an attempted *coup d'état* by Gen. Nicholas Plastiras, leader of a similar military coup which forced the abdication of King Constantine in 1922. Plastiras arrested Tsaldaris, General Kondylis and other Opposition leaders, forbade newspapers to publish the election returns, and proclaimed a dictatorship. Failing to win the support of the public or of the army, General Plastiras fled on

March 6 and a temporary emergency cabinet under General Othonos assumed power at the instance of President Zaimis. Constitutional government was restored and on March 10 the Othonos group resigned in favor of a cabinet formed by Tsaldaris. Ex-Premier Venizelos, who interceded with President Zaimis in an effort to secure amnesty for the participants in the Plastiras coup, was charged with inciting the coup in a bill of impeachment introduced in the Chamber by Gen. John Metaxas on May 12. Impeachment proceedings were opposed by Premier Tsaldaris, however, and were dropped.

Constant friction and recrimination between Venizelos and his political opponents continued, making constructive action by the government to meet the economic crisis almost impossible. This friction culminated on June 6 in an attempt to assassinate Venizelos. The aged statesman, who had been seven times Premier of Greece during the previous 23 years, escaped, although his wife and his chauffeur were wounded. Venizelos capitalized this incident in connection with a by-election in Saloniki district held July 2. Regarded as a test of strength, the election resulted in the victory of the Venizelos candidate over the government's nominee.

While the political parties engaged in partisan warfare, the economic depression deepened, due to the restriction of foreign markets for Greek currants, raisins, wines, and tobacco. The growing unrest due to economic hardship was reflected in strikes and riots, usually attributed to Communists. Discontent was rife among many government employees, whose salaries were in arrears. The Minister of Finance on April 22 announced that during 1933, as in 1932, Greece would pay not more than 30 per cent of the service charges on its foreign debts. After extensive negotiations the British Council of Foreign Bondholders and the League Loans Committee (London) accepted the Greek offer to pay 27½ per cent of the interest for the fiscal year 1933-34 and 35 per cent in 1934-35.

FOREIGN AFFAIRS. The rapprochement between Greece and Turkey inaugurated by Premier Venizelos in 1930 bore fruit during 1933 in the signing at Ankara September 14 of a ten-year non-aggression pact. The pact pledged both countries (1) to mutually guarantee the inviolability of their common frontiers; (2) to follow a common line of action in international questions, and (3) to defend the common and individual interests of each other at international meetings. The hope was officially expressed that the other Balkan countries would sign the pact, thus promoting peace in the Near East. Premier Tsaldaris and Foreign Minister Maximos received enthusiastic receptions at Istanbul and at Ankara, where they signed the pact. They also reached an agreement with the Turkish representatives on all outstanding questions with respect to the exchange of populations and the minorities in Istanbul and Thrace. It was decided to appoint a special mixed commission to coordinate the economic policies of the two countries, and seek common markets abroad.

With the help of the Turks, Premier Tsaldaris attempted unsuccessfully to secure Bulgaria's inclusion in a general Balkan pact (see *BULGARIA* under *History*). The proposal for a customs union of the Balkan states headed the agenda of the Fourth Balkan Conference held in Saloniki early in November. It was reported that prelimi-

nary conversations were held looking toward a four-power Balkan pact to include Greece, Turkey, Rumania, and Yugoslavia. A temporary trade agreement with the Soviet Union was signed in Athens, Sept. 8, 1933.

Following two unsuccessful efforts to extradite Samuel Insull, Chicago utilities operator, to stand trial on Illinois and Federal charges, the United States government on Nov. 4, 1933, denounced the five-year extradition treaty with Greece which entered into effect Nov. 1, 1932 (for background, see the article *LAW* in 1932 under *Extradition* in the 1932 *NEW INTERNATIONAL YEAR BOOK*). The American note expressed astonishment at the Greek Appeal Court's verdict in rejecting the State Department's request for Insull's extradition. While defending the action of the Greek courts, the Athens government sought to appease American displeasure by ordering Insull to leave Greece at the expiration of his police permit on Dec. 31, 1933.

OTHER EVENTS. A severe earthquake devastated the island of Kos, one of the Dodecanese group in the Aegean Sea, on April 23. Most of the houses on the island were destroyed and preliminary reports placed the dead at 200 and injured at 600.

GREENLAND. A colonial possession of Denmark, second in size among the islands of the world. The estimated area, covered for the most part with a thick layer of ice, is 839,782 square miles; the settled area under Danish administration is 46,740 square miles and the population (Jan. 1, 1931) numbered 16,819 (16,495 natives and 324 Europeans, mostly Danes). The settled area along the southern coasts is divided into the administrative districts of North, South, and East Greenland, with 7238, 8489, and 883 inhabitants, respectively. Julianehaab, with 3532 inhabitants, is the chief settlement. Godthaab and Godhavn on the west coast are the administrative centres for South and North Greenland, respectively. In East Greenland, Angmagssalik is the chief post. Trade, which is chiefly in cryolite, furs, skins, and oil, is a monopoly of the Danish government. Exports to Denmark (1931). 5,747,000 crowns; imports from Denmark, 2,672,000 crowns (crown equals \$0.2680 at par). Budget estimates for 1930-31 balanced at 4,457,000 crowns. Administrative authority rests with a director residing in Copenhagen. Director in 1933, J. Daugaard-Jensen.

HISTORY. The controversy between Denmark and Norway over the possession of parts of Eastern Greenland was settled by a decision of the World Court on Apr. 5, 1933. The Court ruled in Denmark's favor, holding that Norway's declaration of sovereignty, issued July 10, 1931, was illegal and in violation of Norway's treaty obligations to Denmark. Norway then withdrew the five representatives which had been sent to administer "Eric the Red's Land." See *NORWAY* and *DENMARK* under *History*; also *POLAR RESEARCH*; *AERONAUTICS*.

GREGORY, THOMAS WATT. An American lawyer and cabinet official, died in New York City, Feb. 25, 1933. He was born at Crawfordsville, Miss., Nov. 6, 1861, and was graduated from the Southwestern Presbyterian University at Clarks-ville, Tenn., in 1883. On receiving the LL.B. degree from the University of Texas in 1885 he was admitted to the Texas bar and practiced in Austin where during 1891-94 he was assistant city attorney. From 1900 to 1908 he was a member of the firm of Gregory and Batts and from 1908 to

1914 of Gregory, Batts and Brooks. He also acted during 1899-1907 as a member of the board of regents of the University of Texas and in 1904 and 1912 was a delegate to the Democratic National Conventions.

With his partner, Robert L. Batts, Mr. Gregory achieved national prominence for his success in prosecuting violators of the Sherman Anti-Trust Act. In 1909 he was counsel for the State of Texas in its case against the Waters-Pierce Oil Co., a subsidiary of the Standard Oil Co. The decision of the Texas tribunal that the old company was to be fined \$1,900,000 and was to be dissolved under its then existing form was upheld by the United States Supreme Court after the case had been carried from court to court. In 1913 he acted as special assistant to the United States Attorney-General in the investigation and prosecution of the New York, New Haven and Hartford Railroad Co., charged with monopolizing the transportation facilities of New England in its absorption of competing lines. Under the agreement which was reached with the Federal government the company relinquished control of the Boston and Maine Railroad and surrendered the interests of its Boston and Albany subsidiary in trolley lines and coastwise shipping.

In 1914 President Wilson appointed Mr. Gregory United States Attorney-General, succeeding James C. McReynolds who was made an associate justice of the United States Supreme Court. He distinguished himself during the World War by the successful methods which he adopted in prosecuting violators of the Espionage Act, especially in preventing or suppressing propaganda by German and Austrian agents. There was also entrusted to the Department of Justice the enforcement of the Sedition, Sabotage, Trading-with-the-Enemy, and Selective Service Acts, the seizure of enemy property valued at \$800,000,000, and the superintendence of the American Protective League with branch organizations in nearly every city. On his resignation in 1919 Mr. Gregory resumed his law practice, first in Washington as a member of the firm of Gregory and Todd and then in Houston, Texas. He was a member of President Wilson's Second Industrial Conference during 1919-20.

GRENADA, grê-nâ'dâ. A British insular possession 70 miles north of Trinidad, forming, with the islands of St. Lucia, St. Vincent, and the Grenadines, the Windward Islands group of the British West Indies. Area, including the island of Carriacou, 133 square miles; population (Jan. 1, 1933 estimate), 78,662. The capital is St. George's. In 1932, there were 60 primary schools with 13,330 students enrolled and 4 secondary schools with an average attendance of 259 students.

The chief products are cacao, spices, lime juice, and cotton. For 1932, imports were valued at £259,743 and exports at £198,130. Cacao represented £101,231 of the exports; nutmegs and mace, £59,949; lime oil, £10,720. Total revenue was £201,480 and total expenditure £155,343 for the year 1932. The net indebtedness on Jan. 1, 1933 amounted to £169,955. Grenada is under the Governor of the Windward Islands, whose headquarters are at St. George's, Grenada, but it has its own legislative council. Half of the Grenadine Islands are included with Grenada, and half with St. Vincent.

GREY OF FALLODON, EDWARD GREY, 1ST VISCOUNT. A British statesman, died at Christon

Bank, Northumberland, Sept. 7, 1933. Born at Oxford, Apr. 25, 1862, he was educated at Winchester and at Balliol College, Oxford, and on the death of his grandfather, Sir George Grey, in 1882 succeeded to the baronetcy. Three years later he was elected Liberal member for the Berwick-on-Tweed division of Northumberland, representing that constituency in the House of Commons until 1916. When Lord Rosebery became Foreign Secretary in Gladstone's cabinet in 1892 he was selected as Under-Secretary for Foreign Affairs and representative of the Foreign Office in the House of Commons. After the fall of the Liberal government in 1895 he continued as a follower of Lord Rosebery, supporting the national cause during the Boer War and opposing a continuance of the alliance between the Liberals and the Irish Nationalists. Also, he served during this period on a commission to investigate the condition of the colonies of the British West Indies. In 1902 he was admitted to the Privy Council.

Lord Grey was appointed in 1905 Secretary of State for Foreign Affairs in the cabinet of Sir Henry Campbell-Bannerman. At this post he rapidly rose to be one of the most commanding figures in European diplomacy, dominating the councils of the Powers more completely than had been done by any British Secretary subsequent to the Crimean War. He strengthened the Anglo-French *entente* through the Algeiras Conference of 1906 which, in accordance with his instructions to the British representatives, decided that France should be granted certain customs rights on Morocco's Algerian frontier, and Spain similar privileges in the Riff country. There were held also at this time the secret conversations between French and British military and naval experts for cooperative action in case of war with Germany, which he countenanced on the understanding that they should not bind the British government. In 1907 he reached two important agreements with Spain and Russia. In accordance with the first Great Britain and Spain pledged themselves to maintain the *status quo* in the region of the Strait of Gibraltar. In accordance with the second there was concluded with Russia a convention for the economic partition of Persia, Great Britain recognizing Russia's influence in the northern zone and Russia recognizing that of Great Britain in the southern zone. His appointment of James Bryce as Ambassador to the United States in 1907 proved a happy move toward cementing Anglo-American friendship.

On Asquith's appointment as Prime Minister in 1908 Lord Grey continued as Foreign Secretary, having to deal, after that date, with a more aggressive foreign policy on the part of the Central Powers. When Austria-Hungary formally annexed the provinces of Bosnia and Herzegovina, which she had administered since the Treaty of Berlin of 1878, he demanded that the matter be submitted to a conference of the Powers for approval, but found himself powerless to enforce this demand on account of Germany's readiness to support her ally with arms. In 1911 a Moroccan crisis threatened when the German cruiser *Panther* was sent to Agadir on the pretext of protecting German interests against the menace of French influence in Morocco. He firmly opposed Germany's expansion in that part of Africa through obtaining from France unwarrantable concessions and in November of that year brought about the Franco-German accord by which France ceded to Germany, as compensation

for recognition of her right to establish a protectorate in Morocco, about 100,000 square miles in northern French Congo, touching the German Kameruns. In recognition of this service, which had narrowly averted a European war, he was made the following year a Knight of the Garter, the first commoner to be so honored since the distinction was conferred on Sir Robert Walpole in 1726.

Lord Grey rendered another important service in connection with the Balkan Wars of 1912-13, instituting, in an attempted mediation of the clashing interests of Bulgaria, Greece, Montenegro, and Serbia, the London conference of representatives of the Great Powers. In July, 1914, however, when a quarrel arose between Austria and Serbia, occasioned by the assassination at Sarajevo of the heir to the throne of Austria-Hungary, his appeals to Germany and Austria to submit the matter to arbitration were of no avail. The outcome of the Balkan Wars had been a bitter disappointment to those countries. Not only had their protégée Turkey been practically driven from Europe, but the creation of a greater Serbia and the strengthening of Greece and Bulgaria checked the plans of Austria to reach the Ægean Sea at Saloniki. In conjunction with Russia and Italy, though, Great Britain successfully persuaded Serbia to go as far as possible to conciliate Austria, but as Serbia would not agree to complete submission Austria, on the expiration of the 48-hour time limit, declared war against that country. Grey also proposed a conference in London of the Ambassadors of the Powers, similar to the conference on Balkan affairs of the previous year, but Germany objected to this method of settlement. Likewise she temporized when asked if she would respect Belgium's neutrality and made no response to his last desperate effort for peace when he offered to promote some arrangement by which Germany and Austria would be assured against any aggression on the part of France, Russia, or Great Britain.

Following Germany's declaration of war against France on August 3 Lord Grey delivered in the House of Commons one of the most important speeches in English history, setting forth the reasons for Great Britain's entry into the World War. During the early part of the war he exerted his efforts to cementing the bonds between the Allies, which he accomplished largely through the secret treaties of 1915-16. He also facilitated the entry of Italy on the side of the Allies, and refuted with authority the intermittent assertions of the German Chancellor that responsibility both for the origin and for the continuance of the war rested with England, not Germany.

In 1916 failing eyesight and the succession of Lloyd George as Premier caused Lord Grey to tender his resignation after 11 years in office, the longest consecutive period that any Secretary had held the portfolio of foreign affairs. He was created a viscount the same year. By 1919 his condition was sufficiently improved to enable him to act as temporary Ambassador to the United States in connection with the peace settlement. He was prominent among the founders of the Royal Institute of International Affairs in 1920 and served, with Viscount Cecil, as joint president of the League of Nations Union. From 1922 to 1924 he was leader of the Liberal party in the House of Lords, and in 1927 was chosen president of the Liberal Council. Also, he achieved eminence in educational circles, being elected president of

Armstrong College, Newcastle, in 1918, and chancellor of Oxford University in 1928. After his retirement he wrote *Twenty-Five Years, 1892-1916* (2 vols., 1925), an account of his years in the public service; *Falloodon Papers* (essays, 1926); and *The Charm of Birds* (1927), with woodcuts by Robert Gibbings.

GRIFFIN, REAR ADMIRAL ROBERT STANISLAUS, U.S.N., RET. An American naval officer, died in Washington, D. C., Feb. 21, 1933. Born at Fredericksburg, Va., Sept. 27, 1857, he entered the United States Naval Academy as a cadet engineer in 1874, graduating in 1878. Successively promoted from assistant engineer to chief engineer, he was transferred, after serving during the Spanish-American War on the gunboat *Mayflower*, to the line as a lieutenant. In 1904 he became fleet engineer of the North Atlantic fleet, and the following year was assigned to the bureau of steam engineering of the Navy Department, where he was made assistant chief in 1908. In 1913 he was appointed chief of the bureau and three years later engineer-in-chief of the Navy, with the rank of rear admiral.

During the period of expansion of the Navy Admiral Griffin was responsible for most of the improvements in naval engineering matériel and practice. There were also reconditioned under his direction during the World War the seized German liners, such as the *Vaterland* (*Leviathan*), whose engines had been damaged by their crews. Several of these were utilized as transports for troops and supplies of the American Expeditionary Forces. For his services he was decorated with the Distinguished Service Medal and was made a commander of the French Legion of Honor. He retired in 1921.

In 1908, 1912, and 1913 Admiral Griffin was president of the American Society of Naval Engineers. He was also the author of numerous articles on technical subjects connected with marine engineering.

GRINNELL COLLEGE. A coeducational, nonsectarian institution of higher learning in Grinnell, Iowa, founded in 1846. The enrollment for the autumn of 1933 was 550, while that for the summer session was 50. There were 55 faculty members. The productive funds amounted to \$2,063,000. The library contained 95,000 volumes. President, John Scholte Nollen, Ph.D., LL.D.

GUADELOUPE, gə'de-lōp' (French gwà'dlōp'). A French West Indian colony in the lesser Antilles, comprising the main islands of Guadeloupe proper (Basse-Terre) and Grande-Terre separated by a narrow channel named Rivière Salée, and the five dependent islands of Les Saintes, Désirade, St. Barthélemy, St. Martin, and Marie Galante. Total area, 688 square miles; total population (1931), 267,407. Basse-Terre, the capital on the island of Guadeloupe proper, had 9268 inhabitants in 1931; Pointe-a-Pitre, the chief town and port, had 30,465.

The chief products are bananas, sugar, cacao, rum, and vanilla. In 1931, imports were valued at 188,933,000 francs (franc equaled \$0.0392 at par); exports, 138,814,000 francs. The budget for 1932 was estimated to balance at 66,220,864 francs. The outstanding debt on Jan. 1, 1933 was 3,812,282 francs. There were, in 1931, 344 miles of roads. A governor is at the head of the government, assisted by an elected council. The colony is represented in the parliament of France by a sena-

tor and two deputies. Governor in 1933, M. Choteau.

GUAM. An insular possession of the United States; the largest and most populous island in the Mariana group in mid-Pacific. Area, 210 square miles; population on June 30, 1933, 19,770, including 18,477 natives, the U. S. naval personnel of 559, and non-natives residing in Guam numbering 764. The native population increased 180 during the preceding year. Capital, Agaña, with about 8500 inhabitants.

Enrollment in the 30 schools of all types on June 30, 1933, was 3764. There were 152 native teachers. On Jan. 1, 1933, a new policy providing for replacement of all American teachers with native teachers was adopted. Education is compulsory for children from 7 to 12. English, Spanish, and Chamorro are the languages spoken. Cacao, coffee, copra, corn, rice, sugar, sweet potatoes, fruit, and kapok are produced and some copra and coconut oil are exported. Trade is chiefly with the United States and the Philippines. During the fiscal year 1932-33 imports were \$379,120 and exports \$52,196. A total of 55 vessels entered and cleared Apra Harbor during the year.

An epidemic of measles, with 3063 known cases, raged from June, 1932, to January, 1933, causing 152 deaths. A new set of civil and criminal codes and procedure in the judiciary system was completed during 1933, to become effective in 1934. The Guam Museum, containing relics of the ancient Chamorro civilization and of Spanish days, was formally opened Nov. 1, 1932. The island suffered little from the economic depression. Guam is a U. S. naval station, of which the governor, who is appointed by the President, is commandant. There is a native Congress, with advisory powers. Commandant Edmund S. Root, U. S. Navy, served as Governor until June 21, 1933, when he was relieved by Capt. George A. Alexander, U. S. Navy.

GUATEMALA, gwä'tä-mä'eä. A Central American republic. Capital, Guatemala City.

AREA AND POPULATION. With an area of 42,364 square miles, Guatemala had a population estimated at 2,095,242 in 1932 (2,004,900 at the 1921 census). About 27 per cent of the people live in incorporated towns. In 1931 births numbered about 100,300; deaths, 46,600. Populations of the chief towns (1921 census) were: Guatemala, 115,447 (1932 estimate, 141,482); Quezaltenango, 18,684; Zacapa, 5087; Cobán, 4643; Mazatenango, 4609; Escuintla, 4595. The elementary school enrollment was 88,219 in 1932; secondary, 674; university, 619. About 80 per cent of the people are illiterate.

PRODUCTION. Agriculture is the principal occupation. Coffee, the chief crop, comprised 70 per cent of the total exports in 1932; bananas, about 24 per cent. Sugar is the other export crop. Corn, wheat, rice, and potatoes are raised for domestic consumption. Coffee production in 1932-33 was 98,390,000 pounds (96,211,000 in 1931-32). Live-stock in 1931 included 387,000 cattle, 147,000 sheep, 16,000 goats, 87,000 swine, and 91,000 horses, mules, and asses. The forests produce hardwoods and chicle. Mineral production was: Gold, 10,332 ounces in 1932 (13,146 in 1931); lead, 368,000 pounds in 1932 (373,000 in 1931); salt, 20,000,000 pounds in 1931. Industrial establishments are confined chiefly to coffee-cleaning plants and sugar mills.

COMMERCE. Including the value of parcel-post

trade, general imports in 1932 were valued at \$7,468,000 (\$12,971,000 in 1931) and exports at \$10,661,000 (\$15,167,000 in 1931). The principal overseas imports in 1932 were cotton fabrics, wheat flour, cotton yarn and thread, gasoline and naphtha, machinery and tools. The chief exports of domestic products, by quantity and value, were (1932): Coffee, clean, 97,407,000 pounds, \$7,203,000; coffee, in shell, 3,093,000 pounds, \$183,000; bananas 5,248,000 bunches, \$2,624,000; gold, \$155,000; chicle, 651,000 pounds, \$141,000; cattle hides, 805,557, \$109,000. Exports in 1932 were distributed as follows: United States, 37.2 per cent (35.4 in 1931); Germany, 28.3 (33.1); United Kingdom, 4.9 (2.1). Of the 1932 overseas imports, the United States supplied 51.7 per cent (54.9 in 1931); Germany, 12.2 (12.7); the United Kingdom, 10.7 (8.9).

FINANCE. Government financial reports, which omit a number of small transactions, showed actual receipts in the fiscal year ended June 30, 1932 of 9,220,000 quetzales and expenditures of 9,876,000 quetzales (excluding obligations incurred but not paid of 1,086,087 quetzales). The 1932-33 budget estimates balanced at 7,980,000 quetzales. The public debt on Dec. 31, 1932, totaled 19,136,000 quetzales (external, 11,477,000; internal, 4,171,000; floating, 4,488,000). The government suspended amortization payments on the public debt early in 1932, but continued to make interest payments. The unit of currency is the quetzal (par value, \$1).

COMMUNICATIONS. Guatemala in 1932 had about 790 miles of railway line, of which 509 miles were operated by the International Railways of Central America. There were 1396 miles of highway in 1929. Air services linked Guatemala City with most of the chief cities of the Americas. In 1932, 1000 vessels of 2,175,700 net registered tons entered the ports of Guatemala.

GOVERNMENT. The Constitution of Jan. 1, 1928, vests executive power in a president elected for six years and ineligible for reelection for 12 years. Legislative power rests in the National Assembly of 69 members, elected for four years by universal suffrage. A council of state of seven members, three elected by the National Assembly and four appointed by the President, has large advisory powers besides supervising public contracts and concessions. President in 1933, Gen. Jorge Ubico, who assumed office Feb. 14, 1931.

HISTORY. The principal event in Guatemalan history during 1933 was the peaceful and definite settlement of the century-old boundary dispute with Honduras. Guatemala and Honduras agreed to arbitrate this dispute by a treaty signed in Washington, July 16, 1930. A Special Boundary Tribunal was established under the treaty, with Charles Evan Hughes, Chief Justice of the United States, as president. The other two members were Dr. Luis Castro Urefia of Costa Rica and Dr. Emilio Bello Codesido of Chile. Guatemala and Honduras were represented before the tribunal by Dr. Carlos Salazar and Dr. Mariano Vasquez, respectively. The decision of the tribunal was announced Jan. 23, 1933, at a public session of the Pan American Union in Washington. The boundary, as fixed, runs from the summit of Cerro Montecristo on the Salvadorean boundary to the point where the Motagua River enters the Gulf of Honduras, the disputed area being divided essentially on the basis of the status quo of actual occupation. For a discussion of legal points involved in the tribunal's decision, see the *Bulletin*

of the Pan American Union, April, 1933, p. 311-314.

Guatemala's judicial and civil codes were revised and modernized during 1933, the new codes going into effect June 30. The judicial code was revised by the decree law of May 19; the civil code by the decree law of May 21. One provision of the civil code required foreign companies and partnerships doing business in Guatemala to establish a branch or agency with a duly employed agent, to keep books of accounts in Spanish in Guatemala, and to submit to the courts and laws of that country in all controversies arising out of such business.

GUIANA. See **BRITISH GUIANA**; **FRENCH GUIANA**; **SURINAM**.

GYDNIA. See **POLAND**.

GYMNASTICS. Alfred Jochim, of the Swiss Turn Verein, Jersey City, had things his own way in 1933 gymnastic circles, winning several Metropolitan titles and then taking the national all-around championship at Chicago. In the nationals he won four individual titles,—calisthenics, parallel bars, side horse, and long horse—to succeed Frank Haubold as champion. Out of a possible 390 points, Jochim scored 347. Edward Henning of the Germania Turn Verein of Baltimore captured the national club swinging; Randall Brydan of Southern California, the rope climb; Arthur Gilmore of Long Island City the flying rings; and Jack Hoest of Los Angeles the title on the horizontal bar.

Miss Consuelo Caruccia of the Germania Turn Verein of Baltimore captured the women's national all-around, taking the individual calisthenics title and amassing a total in the all-around of 188.5 out of a possible 210. Miss Vera Steppich of the New York Turn Verein took both the parallel bars and flying rings individuals and Miss Roberta Franck of the Philadelphia Turn Verein, took side horse honors.

For the second time in a row the United States Naval Academy won the intercollegiate title.

HADRAMAUT, THE. See under **ARABIA**.

HAITI, ha'ti. A republic in the West Indies, occupying the western third of the island of Haiti or Hispaniola. Capital, Port-au-Prince. The Dominican Republic or Santo Domingo comprises the remainder of the island. See **DOMINICAN REPUBLIC**.

AREA AND POPULATION. Haiti has an area of 10,204 square miles. The population (1929) was estimated at 2,550,000, or about 250 per square mile. The population is largely Negro, but there are large numbers of mulattoes, descended from former French settlers, and some 3000 white foreigners. The estimated population of Port-au-Prince in 1929 was about 80,000; 1927 estimates gave the towns of Cape Haitien and Aux Cayes 12,500 each, Gonaives, 10,000, St. Marc 8000, and Jacmel 7500. The language of the educated classes is French and that of the masses a dialect known as Creole French.

EDUCATION. The bulk of the population is illiterate. In 1930-31, there were 1129 schools of all descriptions, with 92,355 pupils.

PRODUCTION. Agriculture is almost the sole support of the island's population and coffee is the crop on which the prosperity of the people largely depends. The shrinkage in coffee exports from 90,712,000 pounds, valued at \$17,916,000, in 1927-28 to 51,050,771 pounds, valued at \$5,267,045, in 1931-32, greatly depressed the already low standard of living of the masses. In

1932-33 exports rose to 91,840,700 pounds, valued at \$7,250,430. Cotton, sugar, and cacao are other important crops, while the cultivation of sisal and pineapples is increasing. Logwood, cashew nuts, and bananas also are exported. For exports of the other leading products in 1932-33, see *Commerce*. Mining is commercially unimportant and manufacturing is confined to the production of sugar, alcohol, rum, and molasses, tobacco products, vegetable lard compounds, canned fruit, etc. Agricultural labor is obtainable at from 20 to 40 cents per day.

COMMERCE. For the fiscal year ended Sept. 30, 1933, exports amounted to 46,650,366 gourdes (\$9,330,000), as against 36,106,394 gourdes (\$7,221,279) in the previous year, or an increase of 29 per cent. Imports were valued at 38,333,943 gourdes (\$7,666,788), compared with 37,305,551 gourdes (\$7,461,110) in 1931-32, an increase of 3 per cent. The 1932-33 exports of coffee increased 80 per cent in quantity and 38 per cent in value over the 1931-32 exports. The other chief export items in 1932-33 were: Cotton, 12,862,262 pounds valued at \$926,972; sugar, 66,467,136 pounds, \$444,219; sisal, 8,221,525 pounds, \$228,150; logwood, 31,084,185 pounds valued at \$130,712. France took 54.18 per cent of the value of all exports in 1932-33, the United Kingdom 11.48 per cent, and the United States 6.26 per cent. The United States supplied 62.22 per cent of the imports and the United Kingdom 12.70 per cent.

FINANCE. Revenues during the 1932-33 fiscal year amounted to 37,305,299 gourdes (1 gourde equals \$0.20), against 28,024,000 gourdes in 1931-32, an increase of 33.1 per cent. The 1932-33 revenues were greater than in any years of the present century, except for the period 1925 to 1930. In spite of an extensive public works programme, financed entirely from revenue, expenditures from revenue in 1932-33 were but 33,258,808 gourdes, compared with 32,888,112 gourdes in 1931-32. The 1932-33 surplus of 4,046,491 gourdes nearly equaled the 1931-32 deficit of 4,864,370 gourdes. The unobligated treasury surplus as of Sept. 30, 1933, amounted to 15,180,000 gourdes. The gross public debt on Sept. 30, 1933, stood at 66,901,000 gourdes, as against 72,626,000 gourdes a year earlier.

COMMUNICATIONS. The two privately-owned railway systems have a total of 158 miles of line. Communication is mainly by highways, which extended 1072 miles in 1931. Motor highways had a length of 935 miles in 1932. A total of 595 vessels of 1,296,000 net tons entered the ports in 1931-32.

GOVERNMENT. The Constitution of July 21, 1932 provided for a two-chambered national legislature elected for four years and a president, elected for six years and ineligible for reelection. The President in 1933 was Sténio Vincent, elected Nov. 18, 1931, by the 36 Deputies and 15 Senators sitting as a National Assembly. The 1932 Constitution provides for 20 Senators. Under the American-Haitian treaty concluded Sept. 16, 1915, to expire in 1936, the constabulary, finances, public health, public works, and agriculture of Haiti were placed under the supervision of American advisers appointed by the President of Haiti on recommendation of the President of the United States. The administration of public health, public works, and agriculture was turned over to Haitian officials in 1931, the United States retaining control of finances and the con-

stabulary. American Minister in 1933, Norman Armour, appointed Aug. 13, 1932.

HISTORY. A new agreement for the withdrawal of American control in Haiti was signed in Port-au-Prince Aug. 7, 1933 by Foreign Minister Blanchet and the American Minister. It replaced the treaty of Sept. 3, 1932, which was negotiated by the government of President Vincent but unanimously rejected by the National Assembly Sept. 21, 1932. Taking the form of an executive agreement, the new understanding did not require ratification by the Haitian National Assembly. It provided for the complete Haitianization of the local constabulary by Oct. 1, 1934, and for the unconditional withdrawal of the American marines within the following 30 days. In the previous agreement, withdrawal of the American marines was provided for at the end of 1934, but only on condition that serious disturbances did not previously arise. The new convention provided also that the President of Haiti might ask an American military mission to remain in Haiti, subject to much greater native control than was contemplated in the 1932 agreement. The mission was to be limited to seven officers, with powers defined by the Haitian President. Either party might request its withdrawal, upon 60 days' notice.

The financial provisions of the 1933 agreement differed little from those in the previous agreement, and consequently evoked hostility in some Haitian circles. An American fiscal representative was authorized to collect the Customs and to inspect the Internal Revenue Service until the outstanding foreign bonds are paid off, probably in 1944. Regulations which some observers considered more stringent than those already in existence were imposed upon the financial administration of the Haitian government by the agreement. Under the financial arrangement, also effective Oct. 1, 1934, the present American Financial Adviser-General Receiver and his deputy were to be replaced by a fiscal representative and a deputy to be appointed by the President of Haiti, on nomination of the American President. Haitians were to take over full control of the Internal Revenue Service, but the Fiscal Representative was to continue in control of the Customs. The agreement was made possible largely through the efficient administration of Haiti by the Vincent government, Secretary of State Hull announced on August 8.

Haitian objections to the financial clauses of the agreement were voiced by Dantes Bellegarde, Haitian Minister to the United States, in his farewell address before a meeting of the governing board of the Pan American Union in Washington Nov. 2, 1933. Alluding to the United States, he said that "the financial aggressor is he who administers, by his functionaries, the finances of another independent state." M. Bellegarde, who had on previous occasions openly attacked American policies in Haiti, was recalled and replaced at Washington by Albert Blanchet, previously Foreign Minister.

On November 16 President Vincent wrote to President Roosevelt asking the immediate termination of the American financial administration. He declared Haiti's intention to carry out the agreement of August 7, but stated that the financial clauses infringed on Haitian sovereignty. He expressed the hope that the United States "will be able to renounce a useless financial control in Haiti by a spontaneous act which would

be the most eloquent affirmation of a common will toward friendship . . ." President Roosevelt replied early in December that unescapable treaty obligations prevented the withdrawal of the American financial administration, unless a refunding arrangement satisfactory to American holders of \$12,600,000 in Haitian bonds could be worked out. The President said the United States would welcome an arrangement which would permit the early withdrawal of the financing administration. At the Pan American Conference (q.v.) in December, 1933, the Haitian delegation attempted unsuccessfully to secure the adoption of a non-intervention resolution in such form that it would compel the United States to end its financial control in Haiti.

FRAUD BY AMERICAN OFFICIAL. On Apr. 13, 1933, the U. S. Department of State made public a confession in which David P. Johnson, American Collector of Customs at Port-au-Prince, admitted accepting bribes from local merchants and importers. Following his confession, the State Department on April 11 waived Johnson's immunity as a treaty official and surrendered him to the jurisdiction of the Haitian courts.

HALE, LOUISE CLOSSER. An American actress and author, died in Hollywood, Calif., July 26, 1933. Born in Chicago, Ill., Oct. 13, 1872, she received her training for the stage at the American Academy of Dramatic Arts, making her debut in Detroit in 1894 in *In Old Kentucky*. Five years later, appearing in several minor rôles, she was married to Walter Hale, the painter and etcher. She scored a success during 1903-04 in Shaw's *Candida* and then went to London where during 1907-09 she played the part of Miss Hazy in *Mrs. Wiggs of the Cabbage Patch*. Her next important rôle was that of the Fairy Berylune in the New York production of Maeterlinck's *Blue Bird* in 1910. After appearing in *The Rainbow* (1912-13), *The Marriage of Columbine* (1914), *The Clever Ones* (1915), *His Bridal Night* (1917), and *For the Defense* (1919), she created in 1920 the part of Mrs. Atkins in *Beyond the Horizon*, Eugene O'Neill's first successful Broadway production. Later that year she appeared as "Grandma" Bett in the dramatization of Zona Gale's *Miss Lulu Bett*, the first of a series of successful characterizations of elderly women. Among the others were Asa in Ibsen's *Peer Gynt* (1923), Mrs. Smith in *Expressing Willie* (1924), Anna in *The Ivory Door* (1927), and Cora Sabot in *Paris* (1928).

In 1929 Mrs. Hale went to Hollywood where she was cast in *The White Sister*, *Letty Lynton*, *Shanghai Express*, *Another Language*, *Dinner at Eight*, and other outstanding motion pictures. Besides numerous short stories and magazine articles she published the novels *A Motor Car Divorce* (1906); *The Actress* (1909); *The Married Miss Worth* (1911); and *Her Soul and Her Body* (1912). Among her travel books were *We Discover New England* (1915); *We Discover the Old Dominion* (1916); and *An American's London* (1920). She wrote also *Home Talent* (1926) and *The Canal Boat Fracas* (1926).

HAMBURG, STATE AND FREE CITY OF. A state of the German Reich on the River Elbe and between the Prussian provinces of Hanover and Schleswig-Holstein. Total area, 160 square miles; total population (June 16, 1933), 1,181,548. The estimated population on Oct. 10, 1929 of each of the two divisions of the state was: City of Hamburg, 1,143,079; Landgebiet, 83,032. In 1932

there were 315 elementary schools with 113,129 pupils; 33 higher schools with 14,451 pupils; and 3777 matriculated students at the University of Hamburg.

Hamburg is the chief seaport of Germany. In 1931, 19,871 ships aggregating 20,774,510 tons entered the port and 21,758 ships aggregating 20,642,139 tons cleared. The ordinary budget for 1932 was balanced at 362,924,000 reichsmarks, and the public debt on Mar. 31, 1932 was 410,860,000 reichsmarks. Starting on April 8, 1933 the parliamentary system of government was abolished by Chancellor Hitler who appointed a regent to govern the state. See GERMANY under *History*.

HAMILTON COLLEGE. A non-sectarian institution for the higher education of men in Clinton, N. Y., founded in 1812. A total of 469 students was registered for the 1933 autumn session. There were 43 members of the faculty for the year 1933-34. The productive funds of the college were approximately \$4,190,000 and the income for the year 1932-33 was \$368,000. The library contained 153,426 volumes, and 32,600 pamphlets. President, Frederick C. Ferry, Ph.D., Sc.D., LL.D.

HAMPTON INSTITUTE. An institution founded in 1868 at Hampton, Va., for the education of Negroes. The enrollment for the autumn term of 1933 was 989, while that for the summer school was 702. The faculty numbered 157. The endowment for the fiscal year ending June 30, 1933, was \$9,889,615, from which the income was \$596,856. Gifts to the endowment and investment funds amounted to \$33,531. There were 83,914 volumes in the library. Kelsey Hall, a new women's dormitory, was completed during the year. President, Arthur Howe.

HANDBALL. The amazing increase in interest in the game of handball throughout the United States, and the defeat of the 1932 national champion, were the high spots in the 1933 season. In every section of the country, and in a marked degree in the schools, the game grew and brought new experts to the firing line for the various championships. At the end of the year petitions were being raised in almost every city for more and more handball courts and the clubs and recreation centres with courts were beset with anxious crowds of players.

Angelo Trulio of the New York Athletic Club, who held six four-wall titles at the close of 1932, lost half of his possessions in 1933. He dropped out of the national championship at Detroit in the semi-final round, falling before Sam Atcheson, of Memphis, 1932 finalist, eventual 1933 champion. Atcheson, after a dozen years of striving for the honors, took the championship, defeating Sam Hobelman, of Cleveland, in the final, 21-11, 21-6. Joe Godreau and Jack Endsavick of Cleveland captured the doubles.

Trulio retained both his singles and doubles crowns in the New York State championships, beating Edward Hahn, of the Pastime A.C. in the singles and pairing with Maynard Laaswell to take the doubles. He also took the metropolitan singles but the doubles went to Hahn and John Dunwoody of the Pastime A.C. Charley Mentz, of Cleveland won the national four-wall junior singles and the New York A.C. team of Ray Ruddy and Frank Coyle took the doubles.

In one-wall competition, limited mainly to the New York City district, Irving Jacobs won the national A.A.U. title and Jack London and Cy

Alexander of the Trinity Club the doubles. Lou Lubin was crowned Metropolitan singles champion and the doubles was won by Harry Dolinger and Dan Levinson.

HANSBROUGH, HENRY CLAY. An American publisher and legislator, died in Washington, D. C., Nov. 16, 1933. Born at Prairie du Rocher, Randolph Co., Ill., Jan. 30, 1848, he received a common school education and then went to California to seek his fortune. After learning the printing trade he published a daily newspaper at San José during 1869-70 and then became associated with the San Francisco *Chronicle*, of which he was managing editor until 1879. Following another publishing venture at Baraboo, Wis., he removed in 1882 to the Territory of Dakota, establishing at Grand Forks a daily newspaper and two years later a weekly at Devils Lake. He thereafter made his permanent residence at Devils Lake, his initial step in politics being as its mayor for two terms.

Mr. Hansbrough sponsored the movement to divide the Territory of Dakota and admit it to the Union as two States, and in 1889, on the ratification of North Dakota's constitution, he was elected the State's first representative to the 51st Congress. As a member of the United States Senate during the next three terms (1891-1909) he fostered the Reclamation Act of 1902 and in 1907 secured passage of the law permitting small distillers to manufacture alcohol without payment of a tax for denaturation. He aided also in abolishing the Louisiana State Lottery through his support in 1894 of the bill prohibiting the use of the United States mails for the transmission of lottery tickets or advertisements.

Mr. Hansbrough was a delegate to the Republican National Conventions of 1888, 1892, 1900, and 1904 and was also a member during 1888-96 of the Republican National Committee. In the 1916 and 1928 presidential campaigns, however, he supported the Democratic candidate and in 1932 was a member of the board of the National Progressive League. He wrote *The Wreck* (1913) and *War and Woman* (1915).

HARBORS. See PORTS AND HARBORS.

HARDINGE, SIR ARTHUR HENRY. A British diplomat, died at East Sheen, Surrey, England, Dec. 29, 1933. Born Oct. 12, 1859, he was graduated from Balliol College, Oxford, and then entered on his career with the Foreign Office, serving in 1885 as second secretary and précis writer to Lord Salisbury when the latter became Prime Minister and Secretary of State for Foreign Affairs. In 1888 he was attached to the British Embassy in St. Petersburg (later Leningrad) as second secretary and two years later accompanied the Czarevitch (later Nicholas II) on a tour of India. He was acting chargé d'affaires at Bucharest in 1890 and acting consul-general at Cairo in 1891 and in Zanzibar in 1894. From 1896 to 1900 he served as commissioner and consul-general in the British East Africa Protectorate.

Sir Arthur's first ministerial post was at Teheran where he served from 1900 to 1905. He was then transferred to Brussels where during the days of pre-war tension it was his duty to keep the Foreign Office informed of the probable attitude of Belgium in the event of war between France and Germany. After serving as Minister to Portugal during 1911-13, he was appointed Ambassador to Spain and throughout the War carefully guarded the interests of Great Britain in that country. For his action in 1916 in forestalling the German government by buying the

stock control of two Spanish railroads, traversing a section in which there were British-owned mines, he was warmly commended.

Following his retirement from the diplomatic service in 1920, Sir Arthur wrote *A Diplomatist in Europe* (1927) and *A Diplomatist in the East* (1928). He was created a Companion of the Bath in 1895, Knight Commander of St. Michael and St. George in 1897, Knight Commander of the Bath in 1904, and Knight of the Grand Cross of St. Michael and St. George in 1910.

HARMSWORTH TROPHY. See MOTORBOATING.

HARNESS RACING. See HORSE RACING.

HARVARD UNIVERSITY. A nonsectarian institution of higher education for men in Cambridge, Mass., founded in 1636. The number of students enrolled for the year 1933-34 was 7938, distributed as follows: College, 3450, including 650 seniors, 718 juniors, 988 sophomores, 1052 freshmen, and 42 out-of-course. Graduate schools: arts and sciences, 915; business administration, 811; education, 261. Professional schools: engineering (undergraduate and graduate), 173; divinity, 63; law, 1462; medicine, 516; dentistry, 132; public health, 24; architecture, 60; landscape architecture, 33; city planning, 11; special students 27. For the summer session of 1933, the registration was 1506. The officers of instruction and administration for 1933-34 numbered 1692, of whom 268 were professors, 99 associate professors, and 155 assistant professors.

Visiting professors and lecturers during the year included: Georges Valiron, member of the faculty of sciences at the Sorbonne, who came as exchange professor from France for the first half-year; Miles Lawrence Hanley, associate professor of English at the University of Wisconsin, who came as lecturer on English for the academic year; James Blaine Hedges, George L. Littlefield professor of American history at Brown University, who came as a lecturer on history for the first half-year; Raymond Leslie Buell, research director of the Foreign Policy Association, who came as lecturer on government for the first half-year; Norman Alexander Robertson, under-secretary, Department of External Affairs of Canada, who came as lecturer on government for the academic year; Eugen Rosenstock, professor of applied law at the University of Breslau, who came as a visiting lecturer on government for the academic year; Hugo Leichtentritt, a teacher of composition and history of music in Berlin, who came as lecturer on music for the first half-year under the Horatio Appleton Lamb Foundation; Laurence Binyon, Deputy Keeper of the British Museum, who came as Charles Eliot Norton professor of poetry for the academic year; and Wilhelm Köhler, director of the Weimar State art collection, who returned as Kuno Francke professor of German art and culture for the first half-year.

The book value of endowment funds of the university in June, 1933, exclusive of land and buildings used for educational purposes, was \$126,126,368. The total expenses for the year was \$12,986,242. Building activity included the completion of the group of buildings comprising the new Oak Ridge Astronomical Observing Station at Harvard, Mass., and also of Gregory S. Bryant Hall, a new residential unit of Kirkland House. The library contained 3,471,934 volumes and pamphlets. President, James Bryant Conant,

Ph.D., who succeeded Abbott Lawrence Lowell on his resignation in June, 1933.

HAVERFORD COLLEGE. An institution of higher education under the control of the Society of Friends in Haverford, Pa., founded in 1833. Registration for the autumn term of 1933 totaled 319 students. There were 45 members on the faculty. The productive funds of the institution amounted to \$4,020,387 (book value). The library contained 120,648 volumes. President, William Wistar Comfort, Ph.D., Litt.D., LL.D.

HAWAII, hä-wŭ'ē. A territory of the United States, consisting of a group of islands in the Pacific Ocean 2809 miles southwest of San Francisco. Capital, Honolulu.

AREA AND POPULATION. Hawaii has an area of 6407 square miles and a population estimated on June 30, 1933, at 380,211 (368,336 at the census of 1930). The population of the nine inhabited islands at the 1930 census was: Oahu, 202,887; Hawaii, 73,325; Maui, 48,756; Kauai, 35,806; Molokai, 5032; Lanai, 2356; Niihau, 136; Midway, 36; and Kahoolawe, 2. The estimated population, by racial descent, as of June 30, 1932, was: Japanese, 146,189; Filipino, 65,515; Chinese, 27,235; Hawaiian, 22,230; Caucasian-Hawaiian, 17,056; Asiatic-Hawaiian, 14,459; Portuguese, 28,595; Puerto Rican, 7000; Spanish, 1253; other Caucasian, 43,517; Korean, 6653; all others, 805; total, 380,507. Of the 1930 census population, 81.4 per cent were native born (65.9 per cent in 1920). The estimated population of the chief cities on June 30, 1932, was: Honolulu, 144,018; Hilo, 15,450.

EDUCATION. Public-school enrollment for the 1932-33 term was: Elementary, 52,825; intermediate, 10,906; high schools, 6366; total, 80,097, or an increase of 1863 over the preceding year. On June 30, 1933, there were 184 public schools, with 2636 teachers and 80,161 pupils; and 79 private schools with 580 teachers and 12,589 pupils. Japanese comprised 54.40 per cent of all children enrolled in public schools. The total expenditure on public instruction for the fiscal year ended June 30, 1933, was \$5,341,253. The University of Hawaii at Honolulu had 2206 students of all classes in 1930-31 (1369 regular undergraduates).

PRODUCTION. The chief crops are sugar and pineapples, produced largely on plantations operated by corporations. Coffee, bananas, rice, sisal, tobacco, cotton, and meat are other products. Production of raw sugar for the year ended Sept. 30, 1932, was 1,025,354 short tons, the largest ever recorded; it was harvested from 139,744 acres. In 1932-33, the sugar crop was 1,008,000 short tons. The pineapple pack in 1931 was 12,726,000 cases (of 24 cans each). Shipments of canned pineapple to the United States in 1932 totaled 388,068,857 pounds, valued at \$20,591,503 (434,884,057 pounds, valued at \$23,925,003, in 1933). Coffee shipments to the United States were 7,759,695 pounds, valued at \$925,677, in 1932 (4,158,135 pounds, valued at \$536,379, in 1933). There were 21,028 persons engaged in mining and manufacturing industries in 1930, most of them in sugar refining and pineapple canning. The tourist trade is an important source of income. In 1932 10,370 tourists visited the islands (15,780 in 1931).

COMMERCE. For the calendar year 1932 imports were valued at \$63,556,022, of which \$58,504,394 were imports from the United States, and exports totaled \$83,448,296, of which \$82,688,205 were exports to the United States. This compared with the 1931 imports of \$86,956,768 (\$79,092,387 from

the United States) and exports of \$102,737,835 (\$101,548,555 to the United States). In the calendar year 1933, imports from the United States were valued at \$57,894,488 and exports to the United States at \$93,641,887. The chief 1933 exports to the mainland, in order of value, were: Sugar, \$65,495,134 (raw sugar, \$63,454,273); pineapples, \$23,979,253 (canned pineapples, \$23,925,003); coffee, \$536,379; paper and paper manufactures, \$371,414; dried and canned fish, \$303,533; molasses, \$201,002.

FINANCE. For the fiscal year ended June 30, 1933, total receipts of the Territorial government from revenue were \$11,116,180 and total payments for governmental costs were \$11,755,210. Total revenue and non revenue receipts, including loans for the Territory and its counties, aggregated \$21,107,905, while total governmental and nongovernmental payments were \$22,569,011. The net cash available for the ensuing year on June 30, 1933, was \$378,833, as compared with \$1,850,743 on June 30, 1932. The bonded debt on June 30, 1932, was \$32,405,000. The U. S. Internal Revenue Service collected \$3,067,249 in Hawaii in 1932-33 (\$3,785,879 in 1931-32).

COMMUNICATIONS. Hawaii had 276.97 miles of steam railways in 1933, exclusive of plantation railroads. In 1932-33 the railways carried 1,579,195 tons of freight and 474,253 passengers. The inter-island steamship service in 1932-33 carried 103,312 passengers and 220,836 tons of freight. An inter-island airplane service was maintained.

GOVERNMENT. The Governor and Secretary of the Territory are appointed for four years by the President of the United States. There is a legislature of two houses, the Senate of 15 members elected for four years, and the House of Representatives of 30 members, elected for two years. A delegate, elected biennially, represents the Territory in the United States Congress. Governor in 1933, Lawrence M. Judd; Secretary, Raymond C. Brown; delegate to Congress, Lincoln Loy McCandless. The House of Representatives elected in 1932 consisted of 31 Republicans and 14 Democrats.

HISTORY. Hawaiian officials during 1933 continued their efforts to eliminate the laxity in law enforcement and in the administration of justice revealed by the Massie case in 1931 and 1932. Under authority conferred upon him by the 1932 Legislature, Governor Judd secured a complete reorganization of the police department in Hawaii county, which includes the city of Honolulu. Rules and regulations governing the administration of the prison also were revised. Officers or employees of the prison were forbidden to engage in political activities and the examinations for appointment as officers and employees were made more strict.

The islanders were aroused by a bill introduced into the U. S. Congress which would enable the President to appoint a resident of the mainland as Governor. A commission consisting of Judge S. A. G. M. Robertson, William H. Heen, and Samuel W. King was sent to Washington in October, 1933, to oppose the bill.

The 17th regular session of the Legislature convened on Feb. 15, 1933. At the end of the 60-day period the session was extended for 30 days by executive order of the Governor, ending on June 1, 1933. On the last day of the session the Legislature passed an unemployment relief measure, levying a tax of one-half of 1 per cent upon salaries, wages, and dividends. An unemployment work relief commission of 10 members was provided for to

replace the temporary Governor's Commission on Unemployment Relief. During the period from Mar. 1, 1932, to June 30, 1933, the Governor's temporary relief organization had provided continuous or intermittent work relief for 4391 individuals, upon whom some 25,000 persons were dependent.

Another law passed by the Legislature provided for the appointment of commissions in the various counties to regulate the sale of beer and other malt and vinous beverages. Following the repeal of the Eighteenth Amendment a difference of opinion developed between the Department of Justice at Washington, which held that the Volstead Act was still in force in Hawaii inasmuch as Congress had not annulled it, and the local Federal officials, who held that the Territory was wet. The local authorities refused to intervene when a shipment of hard liquor was landed at Honolulu December 14 and distributed.

The greatest eruption of Mauna Loa volcano since 1903 was reported by the Kilauea Observatory on Dec. 2, 1933. Three columns of fumes rose 4000 feet above the peak, which itself rises 13,675 feet above sea level.

HAWKINS, SIR ANTHONY HOPE (Pen name, ANTHONY HOPE). A British novelist and playwright, died at Walton, Surrey, July 8, 1933. Born in London Feb. 9, 1863, he was educated at Marlborough and at Balliol College, Oxford, and was admitted to the bar of the Middle Temple in 1887. On discovering his literary bent, however, he devoted his energies after 1890 to fiction writing. His earliest publications were *A Man of Mark* (1890); *Father Stafford* (1891); *Mr. Witt's Widow* (1892); and *Sport Royal*, a collection of short stories (1893). In 1894 appeared *The Prisoner of Zenda*, the first of many novels of the "Ruritania" school whose scene, laid in an imaginary principality of southern Europe, afforded a happy combination of romanticism and modernity. It was followed by the delightful and brilliant *Dolly Dialogues* 1894 and the gayly-colored *God in the Car* (1894); *The Chronicles of Count Antonio* (1895); *The Heart of Princess Osra* (1896); *Phroso* (1897); *Simon Dale* (1898); and *Rupert of Hentzau* (1898), the latter being a sequel to *The Prisoner of Zenda*. *The King's Mirror* (1899) was considered by Sir Anthony to be his best romantic novel. Other notable novels of this period were *Quisante* (1900); *Tristram of Blent* (1901); *The Intrusions of Peggy* (1902); *The Indiscretion of the Duchess* (1904); *Double Harness* (1904); *A Servant of the Public* (1905); and *Sophy of Kronovia* (1906).

In *The Great Miss Driver* (1908) and *Mrs. Maxon Protests* (1910) Sir Anthony embarked on a type of society novel noted not only for its glamour of setting but for its deftness of dialogue. He developed this style further in *A Young Man's Year* (1915); *Captain Dieppe* (1918); *Baumaroy Home from the Wars* (1919); *Lucinda* (1920); and *Little Tiger* (1925); He also wrote several plays, of which the more successful were *The Adventure of Lady Ursula* and *Pilkerton's Peerage*. In 1927 he published his memoirs under the title of *Memories and Notes*. He was knighted in 1918.

HAY. Estimates published by the Department of Agriculture placed the hay crop of the United States in 1933 at 74,485,000 short tons, the area harvested at 66,144,000 acres and the average yield per acre at 1.13 tons. This crop, the fourth

successive short crop harvested, was 9.6 per cent below the crop in 1932 and 11.5 per cent below the average of 84,166,000 tons for the five years 1926-30. The 1933 production consisted of 65,852,000 tons of tame hay and 8,633,000 tons of wild hay. The tame production comprised 25,159,000 tons of clover and timothy hay, 24,899,000 tons alfalfa hay (see (see ALFALFA), 3,974,000 tons annual legume hays, and 4,531,000 tons grain hays. Larger acreages of clover and timothy, alfalfa, and grain hays were harvested in 1933 than in 1932 but this increase in acreage was offset by lower yields. The acreage of wild hay harvested in 1933 was only 86 per cent of the harvested acreage in 1932 and the production only 71 per cent of the 1932 crop. The yields of hay crop seeds were reported as follows: alfalfa seed 922,900 bu., red and alsike clover seed 1,399,600 bu., sweet clover seed 689,800 bu., and timothy seed 907,800 bu.

The leading tame hay producing states and their yields in 1933 were reported as follows: New York 4,576,000 tons, Iowa 4,141,000 tons, California 3,937,000 tons, Wisconsin 3,685,000 tons, and Minnesota 3,130,000 tons. These States produced over one-fourth of the tame hay crop of the country. The estimates of wild hay production in the leading States were as follows: Nebraska 1,760,000 tons, Minnesota, 1,240,000 tons, and North Dakota 1,028,000 tons. The low yields of these States as compared with 1932 were due mainly to drought. Over 75 per cent of the clover and timothy hay was produced in the section of the country from Missouri, Iowa, and Minnesota eastward. The crops of the leading States were estimated as follows: New York 3,422,000 tons, Pennsylvania 2,671,000 tons, Iowa 2,320,000 tons, and Wisconsin 2,103,000 tons. The largest production of hay from grains cut green was recorded for California, North Dakota, and South Dakota and of sweet sorghums for forage and hay for Texas, Kansas, Oklahoma, and Nebraska mentioned in decreasing order of yield. The production of sweet clover hay in 16 reporting States was estimated at 690,000 tons of which 270,000 tons were reported for North Dakota and Minnesota.

During the fiscal year ended June 30, 1933 the United States imported 9000 short tons and exported 2000 long tons of hay.

HAYTI. See HAITI.

HEART DISEASE, REMOVAL OF NORMAL THYROID IN. See MEDICINE AND SURGERY.

HEDIN EXPEDITION. See EXPLORATION.

HEIMWEHR. See AUSTRALIA under *History*.

HEJAZ. See ARABIA under *Kingdom of Saudi Arabia*.

HEPBURN, KATHARINE. See MOTION PICTURES.

HEREDITY. See ZOÖLOGY.

HERR, HERBERT THACKER. An American mechanical engineer, died in Philadelphia, Pa., Dec. 19, 1933. Born in Denver, Colo., Mar. 19, 1876, he was graduated from the Sheffield Scientific School of Yale University in 1899, and for the next two years served as a machinist and draftsman for the Denver and Rio Grande Railroad. He then became associated with the Chicago, Great Western Railroad as master mechanic at Des Moines and served in the same capacity with the Chicago division of the Atchinson, Topeka, and Santa Fe Railroad and the eastern division of the Norfolk and Western Railroad. In 1906 he returned to the Denver and Rio Grande as general superin-

tendent but retired shortly thereafter to become vice-president and general manager of the Duquesne (Ariz.) Mining and Reduction Co. In 1908 he began his long association with the Westinghouse Machine Co. as general manager and later vice-president. Upon the merger of the Westinghouse Machine Co. with the Westinghouse Electric and Manufacturing Co. in 1917, he was made vice-president of the latter, being given supervision of its South Philadelphia works where steam power apparatus of various kinds is designed and manufactured. He was also chosen vice-president of the Westinghouse Gear and Dynamometer Co.

Among Mr. Herr's inventions were a locomotive air brake equipment, a double-heading device for two or more locomotives, a load brake device, a remote control for marine steam turbines, as well as many improvements in turbines and oil and gas engines so as to increase their efficiency. The Franklin Institute awarded him the Longstreth medal in 1914 for his treatise on *Steam Turbines*, while the board of directors of City Trusts, Philadelphia, presented him the John Scott medal in 1931 for his various inventions and improvements in mechanical apparatus.

HESS, ALFRED FABIAN. An American physician, died Dec. 5, 1933, in New York City, where he was born Oct. 19, 1875. After graduating from Harvard University in 1897, he attended the College of Physicians and Surgeons of Columbia University, from which he received the M.D. degree in 1901, and later took post-graduate studies at the Universities of Prague, Vienna, and Berlin. His specialty was diseases of children. From 1915 to 1931 he was clinical professor in pediatrics at the University and Bellevue Hospital Medical College, and at the time of his death was a member of the department of pathology of the College of Physicians and Surgeons.

Dr. Hess's research experiments pertained especially to rickets, scurvy, tuberculosis, hæmophilia, and gastro-intestinal disorders. In 1927 the Franklin Institute awarded him the John Scott Medal in recognition of his discovery of the antirachitic properties of irradiated cod liver oil and milk. Due to the activation of ergosterol, certain inert substances in these foods, on suitable exposure to ultra-violet rays, are transformed into vitamin D, the principal preventive and cure of mild forms of rickets. The discovery, a coöperative enterprise, was announced simultaneously by Windaus in Germany and Rosenheim and Webster in England.

For the prevention and cure of infantile scurvy Dr. Hess was the first to prescribe tomato juice, containing vitamin C. The plan for the purification of New York City's milk supply, which he advocated in 1911 on account of the danger, especially to children, of infection from tubercle bacilli, was carried out through the pasteurization plants established by his wife's uncle, Nathan Straus. He discovered also thromboplastin, a substance which caused the blood to coagulate, and invented a special duodenal tube for intestinal investigations. In addition to many papers on pediatrics and experimental pathology he published the monographs *Scurvy, Past and Present* and *Rickets, Including Osteomalacia and Tetany*.

HESSE. See GERMANY under *Area and Population*.

HETCH HETCHY WATER TUNNEL. See TUNNELS.

HIBBEN, JOHN GRIER. An American educator, killed in an automobile accident near Wood-

bridge, N. J., May 16, 1933. He was born at Peoria, Ill., Apr. 19, 1861, and was graduated in 1882 from Princeton University. He studied also at the University of Berlin (1882-83) and at the Princeton Theological Seminary (1883-86). Ordained to the Presbyterian ministry in 1887, he was pastor of the Falling Spring Church at Chambersburg, Pa., until 1891. He then took up the teaching of logic at Princeton, where after receiving his Ph.D. degree in 1893 he was assistant professor until 1897 and professor until 1912. On Woodrow Wilson's election as president of the United States he was chosen president of the institution.

During the early part of his administration Dr. Hibben introduced in the curricula of the academic and science schools at Princeton the four-department plan of study, covering philosophy, art and archæology, language and literature, mathematics and science. A secondary feature of the plan was that, after electing about half of their courses in some one department, the upper classmen might engage in independent research. The success of the experiment was considered one of the most progressive steps in modern education. Dr. Hibben also distinguished himself, on the entry of the United States into the World War, by being one of the first college administrators to establish Reserved Officers' Training Corps, supplemented by a naval unit in connection with the graduate school and research in sound ranging. In recognition of this service he was made an officer of the French Legion of Honor, a commander of the Belgian Order of the Crown, and a grand officer of the Order of St. Sava of Serbia. He retired on June 21, 1932, the fiftieth anniversary of his graduation.

Dr. Hibben edited the *Epochs of Philosophy* (12 vols., 1909) and wrote *Inductive Logic* (1896); *The Problems of Philosophy* (1898); *Hegel's Logic* (1902); *Deductive Logic* (1905); *The Philosophy of Enlightenment* (in *Epochs of Philosophy* series, 1909); *A Defense of Prejudice and Other Essays* (1911); and *The Higher Patriotism* (1915). He was a member of the National Institute of Arts and Letters.

HICKSITE FRIENDS. See FRIENDS, RELIGIOUS SOCIETY OF.

HILLQUIT, MORRIS. An American lawyer and Socialist leader, died in New York City, Oct. 7, 1933. He was born in Riga, Latvia, Aug. 1, 1869, where until 1886 he attended the Alexander Gymnasium. He then emigrated with his parents to the United States and two years later joined the Socialist party, his ability as a speaker and debater gaining him recognition from the first. On his graduation from the law school of New York University in 1893 he was admitted to the New York bar and practiced thereafter in New York City. He took a prominent part in the settlement of several strikes of the garment trade unions in New York City and in 1919 defended before the Legislative Committee the five Socialist members who had been expelled from the New York State Legislature on account of their political allegiance.

As a delegate to various national conventions of the Socialist party, Morris Hillquit played an important part in shaping its policies. He served as national committeeman from New York during 1902-06 and as a member of the party's National Council during 1907-17, being chosen chairman in 1917 when the council was superseded by the National Executive Committee. He

was also delegate to several international Socialist congresses and after 1904 represented the American party on the executive committee of the International Socialist Bureau in Brussels. In 1917 and again in 1932 he was Socialist candidate for mayor of New York City, polling on each occasion the largest Socialist vote in the history of the city. His writings included *History of Socialism in the United States* (1903); *Socialism in Theory and Practice* (1909); *Socialism Summed Up* (1912); *Socialism—Promise or Menace?* (a series of debates with the Rev. John Augustine Ryan, 1914); and *From Marx to Lenin* (1921). He was preparing his *Memoirs* at the time of his death.

HINKLER, HERBERT JOHN LOUIS. A British aviator, died in an aeroplane crash in the Apennines, northwest of Arezzo, Italy. He had been missing for three months when his body was found in the early part of May, 1933. He was born at Bundaberg, Queensland, Australia, Dec. 8, 1892. During 1911-12 he experimented with gliders, but it was not until the World War that he went seriously into aviation. During that period he was in the Royal Naval Air Service and the Royal Flying Corps. In 1920 he became associated with A. V. Roe, Ltd., remaining with this company for seven years, during which time he won several prizes in competition, and in 1925 accompanied, as a pilot, the British team that participated in the Schneider trophy seaplane race in Baltimore. In February, 1928, on his flight from Croydon Airport, England, to Port Darwin, Australia, in an Avro Avian light aeroplane, he broke the then-existing record of 28 days by making the flight in 15½ days. It was the longest solo flight that up to that time had been made.

The greatest feat performed by Hinkler was his flight in December, 1931, from New York to London by way of Brazil and Africa. The 2000 miles of flight across the Atlantic were made through a cloud bank nearly all the way. In 22 hours of blind flying he drifted only about 100 miles off his course, reaching the west coast of Africa at Bathurst instead of Dakar, which was his aim. This was the first west-to-east flight across the southern Atlantic Ocean and the first solo ocean crossing since Lindbergh's flight to Paris in 1927. On Jan. 7, 1933, Hinkler took off on a fast flight to Australia, which ended in his death in northern Italy.

HISPANIC SOCIETY OF AMERICA, THE. An international organization founded in New York City in 1904 to establish a public library and museum designed to be a link between the English-, Spanish-, and Portuguese-speaking peoples, and to advance the study of the Spanish and Portuguese languages, literature, and history, and the study of the countries wherein Spanish and Portuguese are or have been spoken languages. Since 1904, when a collection of paintings, manuscripts, maps, and coins, and a library of about 40,000 volumes were placed in charge of the society, valuable additions have been made to this collection, and a number of temporary exhibitions have been held of the works of noted Hispanic artists. Membership of the society is limited to 100, is honorary, and includes specialists and scholars of all nationalities distinguished in the Hispanic field. The society has published more than 300 catalogues, reprints of old manuscripts, and monographs. The president is Archer M. Huntington and the

secretary, George Bird Grinnell. The museum and headquarters of the society are at 156th Street, West of Broadway, New York City.

HISPANIOLA. Name adopted by the United States Geographic Board in 1933 for the island commonly known as Haiti. See **HAITI**; **DOMINICAN REPUBLIC**.

HISTORICAL ASSOCIATION, AMERICAN. A society for the promotion of historical studies and writings, formed in 1884 by a group of American scholars and chartered by Congress in 1889. Its membership in 1933 numbered 3047.

The association's forty-eighth annual meeting was held at the University of Illinois, Urbana, Ill., Dec. 27-29, 1933. Meeting concurrently were the Mississippi Valley Historical Association, Conference of State and Local Historical Societies, Agricultural History Society, National Council for the Social Studies, and American Society of Church History. Of timely interest were the discussions on economic depressions and recoveries, dictators and dictatorships, public opinion and foreign policies of Europe, foreign interests in the Caribbean, and governmental economic enterprise in Russia. The Jusserand Medal was awarded to Prof. Gilbert Chinard of the Johns Hopkins University for several works, especially *L'Amérique et le Rêve Éotique* and *Thomas Jefferson, Apostle of Americanism*; the George Louis Beer Prize, to Prof. Robert T. Pollard of the University of Washington for *China's Foreign Relations, 1917-1931*; and the John H. Dunning Prize, to Dr. Amos A. Ettinger of Allentown, Pa., for his monograph entitled *The Mission to Spain of Pierre Soule*.

The official organ of the association is the *American Historical Review*, a quarterly. The officers for 1933 were: president, Charles A. Beard, New Milford, Conn.; first vice-president, William E. Dodd, American Embassy, Berlin, Germany; second vice-president, Michael Rostovtzeff, Yale University; secretary, Dexter Perkins, University of Rochester; treasurer, Constantine E. McGuire, Washington, D. C.; executive secretary, Conyers Read, Philadelphia, Pa.; and assistant secretary-treasurer, Patty W. Washington. Headquarters are at 40 B Street, S.W., Washington, D. C.

HISTORY. See **FRENCH LITERATURE**; **GERMAN LITERATURE**; **LITERATURE, ENGLISH AND AMERICAN**; **PHILOLOGY, MODERN**; **SCANDINAVIAN LITERATURE**, **SPANISH LITERATURE**, ETC.

HITLER, ADOLPH. See **GERMANY**; **JEWS**.

HOARDING. See **UNITED STATES** under *The Treasury*.

HOBART COLLEGE. An institution for the higher education of men in Geneva, N. Y., founded chiefly under the auspices of the Protestant Episcopal Church in 1822 and permanently chartered by the Regents of the University of the State of New York in 1825. William Smith College, a coördinate institution for the separate instruction of women, administered by the Hobart College corporation, and with instruction given by the Hobart College faculty, was established in 1908. The student enrollment in Hobart College for the autumn of 1933 was 289, while the enrollment in William Smith College was 129. The combined faculty of the two colleges numbered 40. The library contains approximately 100,000 volumes and 25,000 unbound pamphlets. The endowment amounted to 1,200,000, and the income for the year was approximately \$362,638. President, Murray Bartlett, D.D., S.T.D., LL.D.

HOCKEY. ICE HOCKEY. The New York Rangers captured the highest honors in hockey—the Stanley Cup, emblematic of the world's professional championship—in 1933. After finishing third in the regular National League race, they swept through the play-offs and conquered the defending champions, the brilliant Toronto Maple Leafs, in the final. In the first round, the 1928 Stanley Cup winners eliminated the Montreal Canadiens on total goals, 8 to 5, and in the second round topped the Detroit Red Wings, 6 to 3. Meanwhile the Maple Leafs had reached the final by downing the Boston Bruins in three out of five games, taking the last of that series after a world's record over-time of 104 minutes, 46 seconds.

Bill Cook, captain of the Rangers led the league in individual scoring with twenty-eight goals and fifty points. Harvey Jackson of Toronto was second with a total of forty-four points.

A finish similar to that of the Rangers was staged by the Boston Cubs, who won the post-season series of the Canadian-American League after finishing third in the regular campaign. Boston downed the second-place Providence Reds in two straight games and then took the final from the Philadelphia Arrows, league leaders. London, which led the International League through the season, was pushed back into a tie for second place with Syracuse in the post-season series, the title going to Buffalo by an eight point margin.

Kansas City won the American Hockey Association play-offs, St. Louis finishing second and Tulsa third.

The world's amateur championship was won by the Massachusetts Rangers, who defeated the Toronto Nationals in an over-time game at Prague, Czechoslovakia, 2 to 1. The Atlantic City Sea Gulls won the United States amateur title for the second successive season by taking all six of their games in the A.A.U. round robin tournament. The Sea Gulls furnished a great attraction for amateur hockey and their games were well attended. In an exhibition game at Atlantic City they set a world's record for hockey attendance, when 22,157 watched them play.

The historic Allan Cup, symbolic of the amateur championship of Canada, went to the Moncton Hawks of New Brunswick, who brought the trophy to the Maritime provinces for the first time in history. Harvard and the University of Minnesota turned out the best college sixes, Harvard winning in the east and the Minnesotans proving impregnable in mid-western company.

FIELD HOCKEY. For the first time in nine years a women's field hockey team from the United States invaded Europe and also competed in the international tournament at Copenhagen, in which the touring Americans did well, taking all five of their games, a record equaled only by England, which played only three games.

After the Copenhagen tourney, the players toured Germany, Holland, England, Ireland, Scotland, and Wales, capturing eleven of the twenty-three matches on the tour. This was in marked contrast with the 1924 trip when the United States players won only one match. Upon its return to this country, the all-America team swept the national tournament at Chicago.

HOFFMAN, MALVINA. See **SCULPTURE**.

HOGS. See **LIVESTOCK**.

HOLLAND. See **NETHERLANDS, THE**.

HOLLICK, CHARLES ARTHUR. An American geologist and botanist, died in New York City, Mar. 11, 1933. Born at New Brighton, Staten Is-

land, N. Y., Feb. 6, 1857, he was graduated from the Columbia School of Mines in 1879 and received his Ph.D. degree from Columbian (now George Washington) University in 1897. In 1881 he joined the United States Geological Survey, of which he was senior geologist at the time of his death. He was also curator of the department of fossil botany of the New York Botanical Garden, 1900-13; honorary curator, 1914-21; and paleobotanist after 1921. In 1914 he became director of the Public Museum of the Staten Island Institute of Arts and Sciences, which post he held until 1919. He served as commissioner and president of the Richmond County (N. Y.) park commission (1897-1904) and as a member of the New York City Board of Education (1907-10).

Dr. Hollick's writings dealt with the fossil botany and geology of the eastern United States, especially New York, New Jersey, and Maryland, and include *The Flora of the Amboy Clays*; *The Later Extinct Floras of North America* (edited from MS. notes of the late John Strong Newberry); and *The Cretaceous Flora of Southern New York and New England* (monograph No. 50, U. S. Geological Survey). He was a contributor to the NEW INTERNATIONAL ENCYCLOPEDIA.

HOLMES, WILLIAM HENRY. An American anthropologist and archaeologist, died at Royal Oak, Mich., Apr. 20, 1933. He was born in Harrison Co., Ohio, Dec. 1, 1846. After graduating from the McNeely Normal College in 1870, he was assistant to the United States Geological Survey (1872-80), during which period he participated in Dr. Ferdinand V. Hayden's explorations in the Rocky Mountain region and superintended the survey of the San Juan territory. On the reorganization of the Survey in 1880 he was appointed geologist in charge of the department of illustrations, serving until 1889. In 1882 he became curator in the department of aboriginal pottery of the United States National Museum and in 1889 archaeologist with the Bureau of American Ethnology, in charge of explorations. He served from 1894 to 1897 as professor of anthropic geology at the University of Chicago and as curator of anthropology with the Field Museum of Natural History, and from 1898 to 1902 as head curator of the department of anthropology at that museum.

Returning to Washington, Dr. Holmes held the offices of chief of the Bureau of American Ethnology (1902-09); head curator of anthropology with the United States National Museum and curator of the National Gallery of Art (1910-20); and director of the National Gallery (1920-32). He was president of the National Society of Fine Arts in 1909 and at the time of his death of the American Anthropological Association. He published *Archæological Studies among the Ancient Cities of Mexico* (1895); *Stone Implements of the Potomac Chesapeake Tidewater Province* (1897); and *Handbook of Aboriginal American Antiquities* (1918).

HOLY CROSS, COLLEGE OF THE. A Roman Catholic College for men, under the Society of Jesus, in Worcester, Mass., founded in 1843. The enrollment for the autumn of 1933 totaled 1134, with distribution as follows: Arts course, 749; Science course, 146; Philosophy course, 235; and graduate school of chemistry, 4. The faculty numbered 80. The library contained 115,000 volumes. President, the Rev. Francis J. Dolan, S.J.

HOLY LAND. See PALESTINE.

HOLY YEAR. See ROMAN CATHOLIC CHURCH.

HOME ECONOMICS. See AGRICULTURAL EXTENSION WORK.

HOME OWNERS' LOAN CORPORATION. See BANKS AND BANKING; UNITED STATES.

HOMICIDE. See CRIME.

HONDURAS, hõn-dõo'rás. A Central American republic. Capital, Tegucigalpa.

AREA AND POPULATION. With an area of 46,250 square miles, Honduras had a population of 854,154 at the 1930 census. The people are mostly Indians, with a strain of Spanish blood. The population of the chief towns in 1930 was: Tegucigalpa, 34,374; San Pedro Sula, 24,425; La Ceiba, 13,073; Comayagüela, 12,703; Choluteca, 12,248; Juticalpa, 10,990; El Progreso, 10,920; Santa Rosa de Copán, 10,807; Nacaome, 10,302; Danli, 10,232; Tela, 9,935.

EDUCATION. Education is nominally free and compulsory. Of 138,256 children of school age in 1931-32, 47,210 were in actual attendance at school. The National University at Tegucigalpa had 179 students in 1930-31.

PRODUCTION. Stock raising and agriculture are the main occupations. Honduras is one of the world's largest producers of bananas, the other leading crops being sugar, coffee, and coconuts. (For exports in 1932, see *Commerce*). The banana industry, upon which some 30 per cent of the population was dependent, was largely controlled by the United Fruit and other foreign companies. The country is reported to be highly mineralized, but actual working in 1933 was confined to one large silver mine and several small gold workings. The chief manufactures are straw hats and cigars.

COMMERCE. Converted into United States currency at the par value of the lempira (\$0.50), imports in the year ended July 31, 1932, were valued at \$8,368,000 (\$10,291,000 in 1930-31) and exports at \$17,581,000 (\$20,028,000 in 1930-31). The quantity and value of the chief exports in 1931-32 was: bananas, 27,896,000 bunches, \$13,950,000; gold and silver (excluding specie), \$2,742,000; coffee, 3,386,000 pounds, \$287,000; sugar, 8,187,000 pounds, \$105,000; tobacco, leaf, 1,347,000 pounds, \$103,000; coconuts, 6,851,000 coconuts, \$97,000. The chief import items are petroleum products, iron and steel, machinery and tools, and medicines. Imports from the United States in 1931-32 were valued at \$6,376,000 (76.2 per cent of the total) and exports to the United States were \$11,881,000 (67.6 per cent). The United Kingdom, Germany and the Netherlands were the other principal export markets.

FINANCE. The revised budget for the fiscal year ended July 31, 1934, estimated revenues at 15,222,204 lempiras and expenditures at 10,727,282 lempiras. Corresponding estimates for 1932-33 balanced at 15,400,000 lempiras. In 1931-32, actual revenues were 10,944,000 lempiras and expenditures were 10,890,000 (excluding 1,631,373 lempiras unpaid); in 1930-31, actual revenues were 11,819,000 lempiras and expenditures were 12,751,000 lempiras (excluding 1,639,360 unpaid). The public debt on July 31, 1932, totaled 26,961,503 lempiras, divided as follows: Internal, 10,739,642; external, 9,386,964; floating, 6,834,897 lempiras. The government was in partial default on the internal debt on July 31, 1932.

COMMUNICATIONS. Honduras in 1932 had 1149 miles of railway lines, most of them operated by fruit companies on the north coast. Motor high-

ways extended about 361 miles. Air lines connected the principal cities and were linked with the international American air systems. The chief ports are Amapala on the Pacific and Puerto Cortez, La Ceiba, Trujillo, Tela, and Amoa on the Caribbean.

GOVERNMENT. The Constitution, as amended in 1924, vested executive power in a President, elected by popular vote for four years. Legislative power rested in a single chamber of 43 members, elected by popular vote for four years. The chamber meets for 60 days on Jan. 1 of each year. While Congress is not in session, its functions are performed by a permanent commission of five members. President, Dr. Tiburcio Carías Andino, who succeeded Dr. Vincente Mejía Colindres on Feb. 1, 1933. Vice President, Gen. Abraham Williams.

HISTORY. The serious revolt which broke out in November, 1932, following the victory of Gen. Tiburcio Carías Andino in the Presidential election of Oct. 30, 1932, was crushed by government forces early in 1933. With the recapture from the rebels of the port of Amapala on Dec. 30, 1932, the insurrectionists menacing the capital retreated southward. Amapala was reopened to international navigation on January 4 and the following day the rebel leader, Gen. José María Reina, and a group of officers crossed into Nicaragua and delivered their arms to the Nicaraguan National Guard. The remaining rebel force under Gen. José Antonio Sánchez was defeated by government forces January 14 and General Sánchez in turn fled into Nicaragua.

Minor activities by bandits and revolutionary bands were reported from Tegucigalpa in November, 1933. Political unrest had been fostered during the year by a further decline in the standard of living. The prices of imported commodities rose rather sharply due to price increases in the United States and the high cost of European exchange. On the other hand wages in Honduras were again reduced and Honduran producers continued to receive low prices for their exports.

The century-old boundary dispute between Honduras and Guatemala was settled on Jan. 23, 1933, when the arbitral tribunal headed by Chief Justice Charles Evans Hughes rendered its decision dividing the territory under dispute on the general basis of the status quo of actual occupation.

HONG KONG. A British crown colony at the estuary of the Canton River in South China, comprising the island of Hong Kong (32 sq. miles); Old Kowloon on the mainland (3 sq. miles); and the New Territories (Kowloon Extension) leased from China (356 sq. miles including islands). Total population of Hong Kong colony according to the 1931 census and exclusive of the naval and military establishments was 840,743, of whom 821,104 were Chinese. The estimated total population on June 30, 1933 was 900,796, divided as follows: Non-Chinese, 19,984; Chinese in Victoria, 364,279; Chinese in Hong Kong villages, 43,513; Chinese in Kowloon and New Kowloon, 273,244; Chinese in junks and sampans, 100,000; Chinese in New Territories, 99,776. During 1932, the number of registered births, excluding the New Territories, was 13,697; deaths, 19,829. The capital, Victoria, had a population of 410,921 in 1931. In 1932 there were 1063 schools (English and vernacular) including primary, secondary, and vocational, and they had a total of 71,233 enrolled students.

The University of Hong Kong includes faculties of medicine, engineering, and arts.

Hong Kong is noted for its immense transit trade, the free port of Victoria being the distributing centre for that part of China and French Indo-China situated south of Foochow and north of Saigon. Exports of some local manufactures in 1932 were valued as follows: Preserved ginger, 1,400,000 Hong Kong dollars (Hong Kong silver dollar averaged \$0.2346 for 1932); knitted goods, \$7,400,000; flashlights (torches and batteries), \$2,200,000; rubber shoes, \$2,000,000. Other local industries are sugar refining, tin refining, rice polishing, furniture-making, shipbuilding, and tobacco manufacture. Sugar refining was greatly curtailed by the dealers because China increased the duty on sugar to 130 per cent of the c.i.f. value. For 1932, merchandise imports were valued at \$41,000,000; merchandise exports, \$31,000,000. Bullion and specie imports were valued at \$85,272,403 and exports of bullion and specie were \$140,013,831 for 1932.

The colony is the headquarters for the China squadron of the British navy. During 1932 a total of 104,115 vessels aggregating 43,824,900 tons entered and cleared the port, of which 52,859 vessels aggregating 41,794,005 tons were engaged in the foreign trade. Roads totaled 311 miles of which 161 miles were on Hong Kong island and 150 miles were in Kowloon and the New Territories. In 1932 actual government revenue amounted to 33,549,716 Hong Kong dollars; actual expenditure, \$32,050,283. The public debt on Jan. 1, 1933 was £1,485,733 and the sinking fund amounted to £832,751; there is also the Public Works Loan (1927) of 4,927,000 Hong Kong dollars with a sinking fund of £125,792 on Jan. 1, 1933. The colony is administered by a governor, assisted by an executive council of 9 members, and a legislative council of 17 members. Governor and Commander-in-Chief in 1933, Sir William Peel.

HOOGWERFF, REAR ADMIRAL JOHN ADRIAN, U.S.N., RET. An American naval officer, died in Honolulu, T. H., Feb. 13, 1933. He was born in Howard Co., Md., Nov. 27, 1860, and was graduated from the United States Naval Academy in 1881. On receiving his commission as ensign in 1883, he was attached to the United States Naval Observatory where he served under Asaph Hall, the observatory's distinguished professor of mathematics. He had charge of the Magnetic Observatory during 1889-92, and was then transferred to the Naval Academy as instructor in electricity during 1895-98 and again during 1901-04. He served on the *Cincinnati* during the Spanish-American War, participating in the engagement at Matanzas. During 1908-09 he was head of the Academy's department of ordnance and gunnery. He commanded the *Kansas* from 1911 to 1913 but the following year returned to shore duty as superintendent of the U. S. Naval Observatories.

On the entry of the United States into the World War in 1917 Hoogwerff was made commander of the *Pennsylvania*. In November of that year, after serving as commander of the mine force of the Atlantic Fleet, he assumed command of the first battleship division of the fleet, which acted principally as naval patrol, coöperating with the British and French fleets in curbing the German submarine menace. He resumed the post of superintendent of the U. S. Naval Observatories in 1919, and from 1921 until his retirement in 1924

was commandant of the navy yard at Puget Sound, Wash. Following his promotion to the permanent rank of rear admiral in 1918, he received the Victory Medal and the Navy Cross. He wrote *Magnetic Observations* (1891).

HOOVER, HERBERT. See UNITED STATES under *Administration*.

HOPE, ANTHONY. See HAWKINS, SIR ANTHONY HOPE.

HOPS. The hop production of six countries reporting to the International Institute of Agriculture was estimated at 95,217,000 pounds, an increase of 25.5 per cent above the production in 1932 but 20.3 per cent below the average yield for the five years 1927-1931. The total acreage in these countries reported as 100,000 acres was 10.8 per cent above that of the preceding year and 19.6 per cent below the average for the five-year period. The production of the European countries was reported as follows: England and Wales 24,192,000 pounds, Germany 14,977,000 pounds, Czechoslovakia 12,914,000 pounds, France 3,045,000 pounds, and Belgium 1,765,000 pounds. Poland for the five years 1927-1931 produced an average of 3,812,000 pounds, and Hungary 265,000 pounds. Yugoslavia produces some 2,000,000 pounds annually. The combined production of Canada and Australia during recent years has averaged above 3,000,000 pounds.

In the United States according to estimates published by the Department of Agriculture the 1933 hop production amounted to 30,440,000 pounds harvested from 26,500 acres at an average yield of 1775 pounds per acre as compared with a production of 24,058,000 an area of 22,000 acres and average yield per acre of 1094 pounds in 1932. The average farm value of hops on Dec. 1, 1933 was reported as 30.3 cents per pound making the total farm value of the crop \$11,059,000. The corresponding values the year before were 17.5 cents and \$4,199,000 respectively. The hop production in 1933 by States was reported as follows: Oregon, 19,556,000 pounds, California 10,560,000 pounds and Washington 6,324,000 pounds. The acreage in these States was 17,000; 6400; and 3100 respectively.

During the fiscal year ended June 30, 1933 the United States exported 2,431,000 pounds of hops and imported 4,572,000 pounds. In the preceding fiscal year the exports were 3,817,000 pounds and the imports 1,253,000 pounds. Prior to 1918 the consumption of hops by brewers in the United States was about 40,000,000 pounds annually and in addition the exports ranged from about 10,000,000 to 20,000,000 pounds.

HORMONES. See CHEMISTRY.

HORSE RACING. The 1933 thoroughbred turf season was one of the most unique on record for several reasons. First of all, the depression which had curtailed purses and racing activities in 1932 to a great extent, proved a boon to the game in almost every State except New York State. Legislatures, moved by the exigencies of furnishing new revenues to carry on public works and other programmes, fashioned betting laws and allowed racing. To the amazement of onlookers such previously hidebound States as New Hampshire, West Virginia, California, Washington, Indiana, Montana, Ohio, Oregon, and Texas joined in the general movement to unfetter personal liberty and legalized pari-mutuel horse racing. At one time in mid-summer no less than fourteen tracks were running throughout the United States. Only New York failed to adopt the revenue scheme,

which, as an example, netted the State of Maryland \$66,000,000 in 1933, and the New York bill died in committee. As the year came to a close the Jockey Club, hitherto almighty, had found itself impotent against dreadful losses and concerted moves were being made to push through a racing bill in New York.

Next to the liberality shown by the voters and lawgivers in the various States, the feats of Equipoise, Cornelius Vanderbilt Whitney's five-year-old handicap horse, stood out. In a year when the competition was so keen that no standout appeared in any other rank, the performance of Equipoise usurps more note. The grandson of Pennant-Swinging, who had been deprived of a rich harvest in his three-year-old year by a blind quarter crack discovered the morning of the 1931 Kentucky Derby, won seven of his nine 1933 starts and added \$55,700 to his winnings, bringing his total to \$322,970, back of Sun Beau, Phar Lap, and Gallant Fox in the all time list of thoroughbred money winners. Equipoise won seven major stakes, the Philadelphia, Metropolitan, Suburban, and Arlington Handicaps, the Wilson Stakes, the Hawthorne Gold Cup, and the Saratoga Cup. He was third to Dark Secret and Gusto in the Jockey Club Gold Cup of two miles, and second to Osculator in the Havre de Grace Cup Handicap, in which he conceded a twenty-eight pound advantage to W. R. Coe's horse. Dark Secret, winner nine times in seventeen starts, was the second best handicap horse.

In the two-year-old and three-year-old divisions at the end of the season championship ratings were much the same matter of guesswork as at the beginning of the year. Three juveniles stood out: Mrs. Payne Whitney's First Minstrel, winner of the Sanford Memorial and the Junior Champion; Mrs. Dodge Sloane's Cavalcade, Hyde Park winner at Arlington Park; and Mrs. John Hay Whitney's Singing Wood, winner of the rich Futurity. The three-year-olds were as disappointing as the juveniles. The richest and most coveted race for that age of the entire year was won by a colt that in his previous start had raced as a \$4500 plater. This was J. E. Widener's Hurryoff in the historic Belmont Stakes of a mile and a half. The Kentucky Derby (May 6, 1933), most glamorous of 3-year old stakes, went to Col. Edward R. Bradley's stable for the second successive year. His Broker's Tip, Don Meade up, beat Head Play, purchased by Mrs. Silas B. Mason the day before the race, by a nose. Meade, on Broker's Tip and Harry Fisher on Head Play battled down the stretch pulling at each other's saddle cloths. Mrs. Mason filed a protest but the stewards let the finish stand, blaming both jockeys equally. Mrs. Dodge Sloane's Inlander, a superior muddler but strictly a mudder, was the leading three-year-old money winner, by victories in the Arlington Classic and the Travers. War Glory had the best record for his age, for he won, among other stakes, the Dwyer, the Saranac Handicap, the Kenner, and the Lawrence Realization. Among the leading three-year-old fillies no real championship line could be drawn either. Edelweiss beat Barn Swallow in the Coaching Club American Oaks after her stablemate, Iseult, succumbed to the killing pace she set. Iseult and Edelweiss ran one-two in the Acorn, but Barn Swallow won the Alabama at Saratoga, in which Iseult did not start, beating Edelweiss among others.

Jackie Westrope, who rode his first winner at Oriental Park, Havana, in February, far surpassed

all jockeys, riding more than 300 winners in the year.

American sportsmen and sportswomen gained signal triumphs in the richest classics of the English and French turf. Mrs. F. Ambrose Clark's Kellsboro Jack won the arduous Grand National at Aintree; William Woodward's three-year-old filly, Brown Betty, triumphed in the Thousand Guineas; J. E. Widener's Seminole took the Cesarewitch. Lord Derby's Hyperion captured the English Derby at Epsom Downs in June. Lady Granard's Capiello won the Grand Prix de Paris.

Steeplechasing and Hunt Racing enjoyed a prosperous season. John Sanford's Best Play, on his third trial through the field, won the Grand National Steeplechase handicap. J. E. Widener's Azucar took the Charles L. Appleton Memorial Handicap Steeplechase. Thomas Hitchcock not only took the Brook with the venerable Chenango, but also the coveted Harbor Hill for three-year-olds, in which his Yandanch and Nesconsit, making their first appearance under silks, finished one-three. Captain Kettle won the famed Maryland Cup.

HARNESS RACING. Mary Reynolds, 2:03¾, owned by W. N. Reynolds of Winston-Salem, N. C., was the sensational three-year-old trotter of the season and the largest money winner of the season for all ages. She took the \$11,405 Championship Stallion Stake at Cleveland, a \$2500 stake at Toledo on the Grand Circuit, a purse of \$4874 at Salem, for winning the National Stake, and the \$40,462 Hambletonian Stake, richest trotting race. Mary Reynolds made her record in the Hambletonian at Goshen, N. Y. in August, beating Brown Berry in two of three heats. Brown Berry stumbled when leading in the third heat and reinsmen were divided in opinion whether she would have beaten Mary Reynolds if there had been no mishap. Later in the summer Brown Berry beat Mary Reynolds in the Western Horsemen's Futurity at Syracuse in 2:03¾. In five meetings, on the Grand Circuit, however, Mary Reynolds beat Brown Berry three times.

Vansandt and Calumet Crusader were the fastest four-year-olds, the former trotting a mile in 2:01 in a night race at Toledo in July, the fastest recorded by a four-year-old, and Calumet Crusader winning three heats at Goshen in 2:01¾, 2:01¾, 2:02½.

The outstanding two-year-old trotter of the season was Sturdy, a colt by Guy Axworthy, 2:08¾, which won eleven consecutive races within ten months after he had been sold for \$160 at the New York auction as an unbroken yearling. Filling all his engagements, beating the best of his age, winning with ease in 2:04¾ on a mile track and in 2:06½ on a half-mile ring, his campaign seldom, if ever, has been equaled.

Among the notable performances by pacers was a mile in 1:59½ by Dick Reynolds in winning the American Pacing Classic at Springfield, Ill. in August. Laurel Hanover won the two-year-old stake, the Fox, at Syracuse, gained \$3325. Angus Peter set a five mile pacing record at Quebec in September of 11:54.

HORSE SHOWS. Despite the abolition of the champion of champions class at the National Show at Madison Square Garden New York, and the retirement of Seaton Pippin, the horse shows of the year produced many excellent winners. It is impossible to name one great champion, but among the hunters who dominated the show game were Dilwyne Farm's King Vulture, Mrs. John Hay

Whitney's The Gray Knight, Mrs. Bernard Gimbel's His Elegance, and Mrs. John V. Bouvier's Danseuse. Locke Brown's Danum Woodbine stood out in the harness division.

Horse shows profited in the year, the National attracting total crowds of 100,000. The Century of Progress show at Chicago, which took over the Boston dates when the Boston authorities decided not to run a show, was a huge success in every way.

HORSE SHOWS. See HORSE RACING.

HORTICULTURE. Although marketing conditions were far from favorable for most horticultural crops in 1933, there were many hopeful signs. Prices per farm unit, as reported by the United States Bureau of Agricultural Economics, were considerably higher than in 1932 for many crops, including apples, peaches, pears, grapes, dried prunes, grapefruit, pecans, cabbage, sweet corn, onions, and watermelons. A factor in the better apple prices was the stronger demand for export apples of prime quality. In certain sections, notably western New York and western Pennsylvania, the approach of national repeal had a very stimulating effect on grape prices. At one time Delaware grapes sold as high as \$150 a ton in western New York. At the same time, strangely enough, the demand in eastern centres for California wine grapes fell off very sharply.

Hurricanes in September sharply reduced the grapefruit crop in Texas and the grapefruit and orange crops in Florida. As reported in the *Packer* of September 23, the loss in Texas approximated 88 per cent of the potential citrus crop and in Florida 25 per cent.

Hops, of which approximately 20,000,000 pounds were harvested in Oregon alone, sold readily at more than double their 1932 value.

Home gardening continued to be of great popular interest as was attested by the numerous books and magazine articles relating to this fascinating and productive avocation.

The formulation of marketing agreements under the authority of the Agricultural Adjustment Act promised much for the welfare of commercial horticulturists. The first of these agreements to be formally approved, namely the California Cling Peach Agreement, limited the total pack of California peaches to 10,000,000 cases and the minimum price to the grower at \$20 a ton. Other completed agreements covered apple and tree fruits in the Northwest, the California deciduous fruits, the California Tokay grapes; and the citrus fruits of California, Arizona, Texas, Florida, and Puerto Rico.

These and other prospective agreements, according to the annual report of Secretary of Agriculture Henry C. Wallace, are designed to prevent seasonal surpluses, level the flow of supply to market and to coördinate shipments so as to keep them moving to markets as needed.

PRODUCTION IN 1933. Figures released on December 19 by the United States Department of Agriculture show a downward trend in production for practically all important fruit crops. The commercial production of apples was estimated at 25,739,000 barrels in 1933 as compared with 28,592,000 in 1932; pears 21,192,000 bushels in 1933, 22,050,000 in 1932; peaches 45,326,000 bushels in 1933, 42,443,000 in 1932; grapes 1,808,584 and 2,203,758 tons; cherries 112,498 and 127,118 tons; dried prunes 196,750 and 195,000 tons; oranges 48,216,000 and 50,930,000 boxes; grapefruit 12,689,000 and 15,326,000 boxes;

lemons 6,800,000 and 6,715,000 boxes; cranberries 667,700 barrels in 1933 and 504,836 barrels in 1932 and pecans 61,210,000 and 53,560,000 pounds.

The trend toward lower yields in 1933 is noticeable also in vegetables. For example, cabbage yields were 723,200 tons in 1933 as compared with 987,100 in 1932; cantaloupes 12,762,000 and 17,021,000 crates; carrots 10,565,000 and 10,815,000 bushels; cauliflower 7,162,000 and 7,730,000 crates; celery 8,624,000 and 9,894,000 crates; sweet corn for canning 393,000 and 386,900 tons; lettuce 17,149,000 and 17,820,000 crates; onions 20,802,000 and 27,906,000 bushels; strawberries 12,718,000 and 13,369,000 crates.

Analyzing the data, the Crop Reporting Board asserts that the combined production of the 10 more important fruit crops in the United States in 1933 was 12 per cent less than the average of the preceding five years. Peaches were notably low due to belated spring freezes following unseasonably warm weather in certain producing areas. Grapes were estimated at 26 per cent less than the average crop for the five years 1926 to 1930. Grapefruit yields were cut by September Florida and Texas hurricanes.

THE WORLD SITUATION. As reported by the Dominion Bureau of Statistics, the Canadian commercial apple crop totaled 14,676,000 bushels in 1933, a 23 per cent increase above 1932. The pear yield, 466,000 bushels, was approximately equal to 1932 whereas peaches, plums, and grapes showed respective declines of 3, 23 and 17 per cent from 1932. The large increase in apples resulted from a bumper Nova Scotia crop. Fortunately for the export trade, the European late apple crop was decidedly short.

The European Persian walnut crop, estimated at 1,336,000 bags of unshelled nuts, was considerably larger than in 1932. The North China walnut crop was from 20 to 30 per cent larger than in 1932. Italy and Spain produced 25 per cent more almonds than in 1932. The Palestine citrus crop, more than 700,000 boxes larger in 1932-33 than the preceding year, became an increasingly important factor in the world markets. Argentina supplied 8,574,000 pounds of table grapes to the United States in early 1933. The export of United States apples to France in 1932-33 was about one million bushels as compared with two million the preceding period. The Mediterranean Basin raisin crop was estimated at 95,000 tons in 1933 as compared with 118,000 tons in 1932.

FOREIGN COMMERCE. The total value of horticultural products, including fruits, nuts, vegetables, and vegetable preparations exported from the United States in the first 10 months of 1933 was, according to the United States Department of Commerce, \$57,316,732. This total was exceeded by that of the corresponding period of 1932 by \$13,803,671. The total value of imports of the same category was \$42,312,286 in 1933 as compared with \$51,514,393 in 1932. These declines, obviously manifestations of the depressed business conditions, were, nevertheless, sufficiently smaller than those of the preceding two years to offer an encouraging outlook.

Among export items, apples led with a value of \$8,558,986. Dried prunes and oranges followed with values of \$5,840,061 and \$5,827,187, respectively. Better prospects for apples and pears in 1934 were forecast in marketing agreements reached in late December with France which permit larger consignments of these fruits in ex-

change for larger importations of French wines and liquors.

Bananas, allowed to enter the United States duty free, were again the outstanding import item, \$17,342,013 in value. Olives ranked next with an estimated worth of \$2,164,785, followed by coconut meats, \$1,319,199. Cashew nuts were a popular import, value \$960,104.

PLANT QUARANTINES. Among important changes in the plant quarantine programme of the United States Department of Agriculture was the revocation of the European corn borer and peach quarantines, the former on account of a lack of funds for prosecuting the control work and the second because of the discovery of the wide distribution of the disease and the belief that it might be more successfully controlled by nursery inspections. In the port inspection service, there were intercepted more than 20,000 insect and plant pests, including many dangerous enemies of fruits, vegetables, and forest trees. In carrying out the mandate of the quarantine on movement of domestic narcissus, a total of over 300,000,000 bulbs were examined for nematodes and eel worms and other pests.

The so-called Dutch elm bark disease, first reported two years ago in Ohio, was found rather widely distributed in the vicinity of New York City. Active measures were instituted by the Federal and State Departments of Agriculture to bring about an early control of this potentially serious pest.

That other nations are also quarantine conscious was manifest in an edict issued by the British Ministry of Agriculture, prohibiting the importation of live elm trees and various conifers, including *Abies*, *Larix*, *Picea*, *Pinus*, *Sequoia*, *Pseudotsuga*, *Thuja*, and *Tsuga*. All other living plants are forbidden entrance except when properly certified as free of pests.

RESEARCH ACTIVITIES. Perhaps no better indication of the present day status of horticultural research is needed than a study of the Proceedings of the 1932 meeting of the American Society for Horticultural Science, held at Atlantic City in late December. A total of 154 papers relating to studies with fruits, vegetables, and flowers are included in this report. The extent to which chemical, cytological, and statistical methods are utilized in this productive field of research betokens their fundamental nature. Among papers of note are "Effects of Irrigation on the Quality of Prunes" by A. H. Hendrickson and F. J. Veihmeyer of the University of California; "Factors Affecting the Breaking Strength of Apple Tree Crotches" by L. H. MacDaniels of Cornell University; "Dichogamy—An Important Factor Affecting Production in the Persian Walnut" by M. N. Wood of the United States Department of Agriculture; "Transpiration Rates and Suction Forces of Fruiting Canes and Current Season Shoots of the Black Raspberry" by R. E. Marshall of Michigan State College; "The Influence of Drying on the After-Ripening and Germination of Fruit Tree Seeds" by I. C. Haut of the University of Maryland; "The Effect of Potassium Deficiency Upon the Structure and Composition of the Sweet Potato" by W. R. Robbins of Rutgers University and "The Influence of Aluminum on the Flower Color of Hydrangea" by R. C. Allen of Boyce Thompson Institute.

The 1933 meeting of the American Society for Horticultural Science was held at Boston, Mass.,

on December 26-30 in connection with American Association for the Advancement of Science.

MISCELLANEOUS. H. P. Stuckey, director of the Georgia Experiment Station and research horticulturist of note, was on July 1, 1933 appointed also dean of the College of Agriculture at Athens, Ga.

The New York Agricultural Experiment Station was awarded the gold medal of the Massachusetts Horticultural Society for a display of station seedling fruits.

Bellmar, Southland, Redheart, Dorsett, Fairfax, and Narcissa strawberries originated by the United States Department of Agriculture received high commendation from growers.

NECROLOGY. The death of the following horticultural leaders was recorded during the year:

Dr. W. T. Macoun, chief horticulturist for the Dominion of Canada, died August 13. He was a past president of the American Society for Horticultural Science and was well known as a breeder of hardy fruits.

J. D. Eisele, commercial horticulturist and president of Henry A. Dreer, Inc., died Sept. 3, 1933.

J. W. Crow, formerly professor of horticulture at the Ontario Agricultural College and a past president of the American Society for Horticultural Science, died March 8. He was well known as an originator of gladiolus, particularly the varieties Hercules, Sultan, and Mrs. T. E. Longford.

W. G. Bixby, past president of the Northern Nut Growers Association and a prolific writer on nut culture, passed away during the year.

BIBLIOGRAPHY. Many interesting and valuable books on gardens and garden plants were published in 1933, for example:

Bailey, L. H., *How Plants Get Their Names*, New York, 1933; Grieve, Maud, *Culinary Herbs and Condiments*, London, 1933; Hall, Sir A. D. and Crane, M. B., *The Apple*, London, 1933; Harding, Alice, *Lilacs in My Garden*, New York, 1933; Higgins, Vera, *The Study of Cacti*, London, 1933; Orloff, H. S., *Informal Gardens*, New York, 1933; Putz, Alfred, *The Garden Notebook*, Garden City, N. Y., 1933; Phillips, G. A., *Delphiniums*, London, 1933; Stevens, G. A., *Climbing Roses*, New York, 1933; Louise B. Wilder, *The Rock Garden*, New York, 1933; Aiken, George D., *Pioneering with Wild Flowers*, New York, 1933; Wright, Richardson, *Another Gardeners Bed Book*, New York, 1933.

HOUSING. See ARCHITECTURE.

HOWARD UNIVERSITY. A nonsectarian coeducational institution in Washington, D. C., open to students without regard to race but principally for the education of Negroes. The registration for the first semester of 1933 was 1449. The faculty numbered 229. The total endowment amounted to \$857,240. The total appropriation of the United States government for 1933-34 was \$1,018,811. The university also received during 1932-33, \$42,627 from private sources in addition to \$5000 for endowment. The library contained 66,551 volumes. President, Mordecai Wyatt Johnson. T.S.M., D.D.

HOWELL, ROBERT BEECHER. A United States Senator, died in Washington, D. C., Mar. 11, 1933. He was born at Adrian, Mich., Jan. 21, 1864, and was graduated from the United States Naval Academy in 1885. On resigning his commission two years later, he entered the employ of the American Water Works Co. in Omaha,

Neb., as a civil engineer and also attended the Detroit (Mich.) School of Law for a brief period. In 1895 he received the appointment of State engineer of Nebraska, and in 1896 that of city engineer of Omaha. He served as a lieutenant in the Navy during the Spanish-American War and on his discharge returned to Omaha to conduct an insurance, real estate, and investment business.

While a member of the Nebraska State Senate (1903-05), Mr. Howell secured legislation that resulted in the public ownership of Omaha's water system and in the creation of the water board of which he was a member from 1904 to 1910. In 1913, after serving as water commissioner, he became director and general manager of the Metropolitan Utilities District (including Omaha and adjacent municipalities) and was active in establishing municipal ice and gas plants. During 1912-24 he was a member of the Republican National Committee and in 1921 was chairman of the Radio Service Commission of the United States Post Office and Agricultural Departments.

As a member of the United States Senate, to which he was elected for the terms 1923-29 and 1929-35, Mr. Howell was a staunch advocate of prohibition and a bitter opponent of any reduction in the war debts owed by foreign governments. At the time of his death he was chairman of the special campaign funds committee appointed to investigate the Broussard-Overton contest in connection with the Louisiana Senatorial Democratic primary of 1932.

HULBERT, ARCHER BUTLER. An American educator and historian, died in Colorado Springs, Colo., Dec. 24, 1933. Born in Bennington, Vt., Jan. 26, 1873, he was graduated from Marietta College in 1895, and two years later went to Seoul where he edited the Korean *Independent* and for the ensuing six years was engaged in literary work. On his return to the United States in 1904 he accepted the chair of American history at Marietta College where he remained until his appointment as lecturer on American history at Clark University in 1918. In 1919 he was called to Colorado College as associate professor of American history, being made full professor the following year and in 1925 director also of the Stewart Commission on Western History. He had previously served from 1912 to 1916 as an archivist for the Harvard Commission on Western History. The best known of his works was *Forty Niners*, a chronicle of the California gold rush, which was awarded the *Atlantic Monthly* prize of \$5000 in 1931.

In addition to being a member of the board of editors of the *Mississippi Valley Historical Review*, Dr. Hulbert was greatly interested in the economics of good roads, lecturing on that subject for the Office of Public Roads of the U. S. Department of Agriculture during 1905-14 and serving as vice-president of the Inter-State Good Roads Association. He was also chairman of the historic highways division of the National Highway Association.

HUMANISM. A religious movement emphasizing faith in the supreme value and self-improvability of human personality, instead of belief in the supernatural. In the United States it has arisen largely from and in the left wing of Unitarianism, although it is now spreading in other liberal religious groups, including the Universalists and Congregationalists. A careful con-

servative estimate would indicate at least 10,000 avowed Humanists in the United States. There are yet but four definitely Humanist local societies—in Hollywood and Berkeley, Calif., Kansas City, Mo., and New York City—but some 40 or more Unitarian churches are led by ministers who have openly announced their belief in Humanism. The Unitarian policy of no creedal restrictions permits these men to remain in full Unitarian fellowship.

The tendency in Humanist societies and in churches led by Humanist ministers is toward the minimizing or abolition of prayer, worship, and Bible reading and the maintaining of an agnostic attitude on the questions of immortality and the existence of God. Groups avowing beliefs identical with Humanism or essentially the same have been reported in Canada, Australia, England, Germany, Turkey, and India. Publications include *The Humanist*, monthly, Hollywood; *The New Humanist*, bi-monthly, Chicago; and *Morrow: The Human Outlook*, monthly, New York City. The latter is edited by Charles Francis Potter, founder and leader of the First Humanist Society of New York, Inc.

HUNGARY. A kingdom of central Europe. Capital, Budapest. Regent in 1933, Nicholas Horthy de Nagybánya (elected Mar. 1, 1920).

AREA AND POPULATION. With an area of 35,875 square miles, Hungary had an estimated population in 1932 of 8,780,909 (8,688,349 at census of Dec. 31, 1930). Of the 1932 total, 2,887,660 resided in towns of 10,000 or over. The 1930 population was 92.1 per cent Hungarian (Magyar), 5.5 per cent German, and 1.2 per cent Slovak. Living births during 1932 numbered 205,529; deaths, 157,106; marriages, 71,202. The birth rate per 1000 inhabitants was 23.0 and the death rate 17.8. The population of the chief cities in 1932 was: Budapest, 1,019,907; Szeged, 136,544; Debrecen, 119,918; Kecskemét, 80,086; Pésterzsébet, 72,919; Újpest, 69,570; Kispeszt, 67,826.

EDUCATION AND RELIGION. About 9.6 per cent of the population over six years of age were illiterate in 1930. In 1931-32 there were 6802 elementary schools, with 1,004,369 pupils; 5689 continuation schools, with 172,853 pupils; 380 primary schools, with 84,769 pupils; 60 training colleges for infant and elementary schools; 174 middle schools, with 65,567 pupils; 665 special and occupational schools, with 64,581 pupils; four universities and one technical high school, with 12,408 students; 31 colleges, with 3594 students. The universities are at Budapest, Szeged, Pécs, and Debrecen. In 1930, Roman Catholics comprised 64.9 per cent of the population; Helvetian Evangelicals, 20.9 per cent; Augsburg Evangelicals, 6.1 per cent; Jews, 5.1 per cent; Greek Catholics, 2.3 per cent.

PRODUCTION. Agriculture is the main support of the people. In 1931 there were 13,821,000 acres of arable land, 797,000 acres of vineyards and gardens, 4,124,000 acres of meadow and pasture, and 2,706,000 acres of forests. The chief crops in 1932 (thousands of units, bushels except as specified), with 1931 figures in parentheses, were: Wheat, 64,462 (72,550); rye, 30,301 (21,672); barley, 33,030 (21,867); oats, 21,756 (13,368); potatoes, 57,226 (53,185); corn, 95,740 (59,749); sugar beets (metric tons), 849 (906); beet sugar (metric tons, seasons ended following year), 105 (125); fodder beets (metric tons), 2688 (2062); grape must (gallons), 90,821 (103,019); tobacco (pounds), 80,958 (80,403).

Production of the chief crops in 1933 (in metric quintals except as indicated) was: Wheat, 24,534,000; rye, 9,264,407; barley, 7,561,716; oats, 3,162,579; corn, 17,668,061; potatoes, 19,448,192; sugar beets, 9,416,751; beet sugar, 1,033,790; wine, 2,976,698 hectolitres. Livestock in 1933 included 1,696,615 cattle, 819,871 horses, 1,056,218 sheep, and 1,899,479 swine.

The value of manufactured production in 1932 was 2,053,000,000 pengos (\$359,162,000), compared with 2,492,000,000 pengos (\$435,828,000) in 1931. Mineral and metallurgical output (1932) was (in 1000 metric tons): Coal, 895 (776 in 1931); lignite, 5932 (6110); iron ore, 53 (84); pig iron, 66 (160); steel ingots and castings, 180 (316); cement, 280 in 1931; alcohol (1000 gallons), 6234 (7133). Output of the chief manufacturing lines in 1931 (1000 dollars, converted at par) was: Food products and tobacco, \$126,029; iron, metal, and machinery, \$64,856; textiles, \$55,218; chemicals, \$32,268; stone and glass, \$15,351.

COMMERCE. Hungarian imports for consumption in 1932 were equivalent to \$58,637,000 (\$94,334,000 in 1931), while exports of Hungarian products totaled \$57,791,000 (\$99,761,000 in 1931). Chemicals and allied products (\$5,078,000), hewn or sawn wood (\$3,954,000), raw cotton (\$3,449,000), and paper and cardboard (\$2,641,000) were the principal 1932 imports. The chief exports were: Electric machinery (\$4,237,000), wheat (\$3,654,000), cattle (\$3,269,000), swine (\$3,233,000), wheat flour (\$2,300,000). Austria in 1932 took 31.1 per cent of Hungary's exports by value, Germany 14.8 per cent, Italy 8.2 per cent, and Czechoslovakia 6.8 per cent. Imports came mainly from Germany (22.4 per cent), Austria (15.9), Rumania (12.3), and Czechoslovakia (10.4).

FINANCE. For the fiscal year ended June 30, 1933, provisional returns showed a deficit of 87,800,000 pengos in the budget. To this must be added 50,200,000 pengos—the equivalent of the defaulted service of the foreign debt—and also a 60,400,000-pengo deficit in state undertakings covered by internal borrowing. The 1931-32 deficit was 185,000,000 pengos. The 1933-34 budget estimates (in millions of pengos), with 1932-33 estimates in parentheses, were: Expenditure, 1173.2 (1207); revenue, 1097.0 (1207); debt service, 101.2 (101.6); defense, 87.7 (96.2).

The public debt on Mar. 1, 1933, totaled 1,995,300,000 pengos (\$348,978,000), compared with 1,767,500,000 pengos (\$309,136,000) on Mar. 31, 1932. The pengo exchanged at par (\$0.1749) in 1930 and at an average of \$0.1745 in both 1931 and 1932.

COMMUNICATIONS. The total railway mileage on July 1, 1932, was 5384 (state lines, 4816 miles). In the year ended June 30, 1932, state and private lines carried 111,000,000 passengers (121,000,000 in 1930-31) and 32,300,000 metric tons of freight (38,100,000 in 1930-31). In 1932 there were 38,551 miles of highways of all descriptions, including 12,712 miles of hard-surfaced roads. The five air lines carried 6439 passengers and 669,096 pounds of freight in 1932.

GOVERNMENT. Technically, Hungary is a constitutional monarchy with the throne vacant, power being exercised by the Regent pending the selection of a monarch. The Legislature has two houses, the Lower House of 245 members elected for five years and the Upper House of 244 elected or appointed representatives of various social,

economic, and political groups. The composition of the Lower Chamber following the election of June 28, 1931, was: United (Bethlen) party, 148; Independent Small Farmers, 27; Christian Social Economic, 27; Social Democrats, 14; other groups, 29. Premier in 1933, Gen. Julius Gömbös (United party), who assumed office Oct. 1, 1932.

HISTORY

ECONOMIC CONDITIONS. The disastrous decline in economic activity and in agricultural prices which marked the world depression in Hungary was checked to some extent during 1933. But suffering remained acute, especially among the peasants. There were few signs of economic revival as the year closed. The grain harvest surpassed all expectations, but both foreign and domestic grain prices fell to still lower levels, increasing the disparity between the prices farmers received for their produce and those they paid for manufactured articles. In August, 1933, the index for prices (Base: 1925-27 equals 100) stood at 47 for agricultural produce and at 79 for industrial products. The low purchasing power of the masses was reflected in the decline of the index of industrial production, which stood at 68.5 on June 30, 1933, compared with 77.7 on June 30, 1932.

There were a few encouraging economic developments. While imports again declined in 1933, amounting to little more than one-fourth the value of 1929 imports, export values registered an increase over the 1932 figure. The financial condition of the government improved, due to higher taxes imposed on Jan. 1, 1933, and government economies. The League of Nations committee supervising Hungarian finances had reported on Jan. 25, 1933, that its budgetary position had grown worse. The prospect of further defaults on foreign bonds was announced by government officials (the government, municipalities, banks, and corporations of Hungary were already in default on \$68,652,700 of dollar bonds). On Sept. 26, 1933, the League's committee reported that the financial condition of Hungary had improved since January. The deficit for the year ended June 30, 1933, had been reduced to 137,000,000 pengos, compared with 160,000,000 pengos in 1931-32, and the 1933-34 deficit was estimated at 76,000,000 pengos. Meanwhile the government sought to ease the condition of the peasants by extending to Nov. 1, 1933, the moratorium on agricultural debts.

DOMESTIC POLITICS. Hungarian politics during 1933 were marked by the increasing isolation of Premier Gömbös, a growing movement to place Prince Otto upon the throne, and the development of rival Fascist organizations, modeled on the German Nazis. Always an enemy of the Legitimists, who sought a Hapsburg restoration, the Premier strengthened their hostility by countenancing violent attacks upon their leaders. He was even accused of instigating anti-Legitimist terrorism. His tacit approval of the resurgence of anti-Semitism in Hungary further antagonized the Liberals, Jews, and Democrats. Still more significant was the report that the Premier's independent policies and self-confident speeches had offended the Regent, Admiral Horthy, who feared that he was being relegated to the background.

Meanwhile Count Bethlen, whose ten-year régime as the semi-dictatorial Premier of Hungary was ended in 1931 by a financial crisis resulting from the world depression, made notable headway in undermining the prestige and position of his

rival, Premier Gömbös. Count Bethlen advanced Hungary's claim to territorial revision of the peace treaties by an active campaign in England. He sought to convince the British that the creation of a larger and more powerful Hungary was the best way to block the southward expansion of Nazi Germany.

FOREIGN RELATIONS. Hungarian foreign policies, like those of all European countries, were vitally affected by the advent of Hitler's dictatorship in Germany. Hungary strongly opposed the absorption of Austria by Germany, fearing that this would pave the way for the incorporation in a greater Germany of the German-speaking minority in Hungary. Yet the restoration of territory taken from Hungary by the peace treaties remained the dominant aim of all Hungarian parties. Premier Gömbös despite his close sympathy with Italy and Premier Mussolini, clung to the hope that Hungary could advance its revisionist cause by coöperation with Hitler. He conferred with Hitler in Berlin on June 17, with Chancellor Dollfuss in Vienna July 9, and with Mussolini in Rome on June 25. He announced that all outstanding problems between Austria and Hungary were settled by his conference with Dollfuss. Both agreed, he said, that revision of the post-war treaties was the price which the Little Entente and the Allies must pay to secure Austro-Hungarian coöperation in the economic rehabilitation of the Danubian area. A few days after his conference with Gömbös, Mussolini reiterated his support of Hungarian territorial claims in a telegram to the Mayor of Budapest. By the Four-Power Pact, however, Mussolini was committed to territorial revision by peaceful means, in collaboration with France, Britain, and Germany. And France was not ready to give her consent to any policies which her allies in Eastern Europe opposed.

In September Foreign Minister de Kanya of Hungary visited Paris and conferred with Premier Daladier and Foreign Minister Paul-Boncour on Danubian economic problems. The French let it be known that they were willing to assist financially and otherwise in the economic rehabilitation of Hungary and other Danubian countries, provided the economic plan adopted was not linked up with the movement for revision of the peace treaties. In October, Premier Gömbös and Foreign Minister de Kanya continued their diplomatic negotiations by a conference with President Mustafa Kemal of Turkey at Ankara. Further conferences between Premier Gömbös and Chancellor Dollfuss toward the end of the year indicated a trend toward closer collaboration among Hungary, Austria, and Italy.

OTHER EVENTS. Other events of the year included the Fourth World Boy Scout Jamboree, held at Gödöllő, Hungary, during August, with some 10,000 foreign and 12,000 Hungarian Boy Scouts in attendance. Count Albert Apponyi (q.v.), Hungary's "grand old man" and long one of the most colorful figures in European diplomacy, died at Geneva February 7. For Hungary's part in the Hirtenberg arms affair, early in 1933, see AUSTRIA and ITALY under *History*.

HUNTER COLLEGE OF THE CITY OF NEW YORK. An institution founded in 1870 for the training of women teachers and supported by public funds administered by the Board of Higher Education. The enrollment for the autumn of 1933 included 6000 day session students and 4258 evening and extension session students. The 1933 summer session had an attendance of 2638.

There were 553 faculty members. The library contained 67,835 volumes. President, Eugene A. Coligan, Ph.D., LL.D.

HURLEY, EDWARD NASH. An American manufacturer and public official, died in Chicago, Ill., Nov. 14, 1933. After receiving a public school education he entered the employ of the Chicago, Burlington, and Quincy Railroad at the age of 14, serving as a repair shop assistant and later as a locomotive engineer. In 1888 he removed to Philadelphia, where he was successively a traveling salesman and manager for the United States Metallic Packing Co. Becoming associated with Henry J. Kimman in the development of the portable piston air drill and the portable pneumatic hammer, he served from 1896 to 1902 as president and treasurer of the Standard Pneumatic Tool Co. of Chicago.

In 1906 Mr. Hurley organized the Hurley Machine Co., manufacturers of washing machines, irons, vacuum cleaners, and other electric labor saving devices for the home, serving as its president until 1915 and thereafter as chairman of its board of directors. He was also president of the First National Bank of Wheaton, Ill., from 1909 to 1919, director of numerous Middle-Western public utilities, banks, railroads, and manufacturing concerns, and in 1932 co-receiver with Samuel Insull of the Middle West Utilities Co. At the time of his death he was president of the American Manufacturers Export Association and director of the National Foreign Trade Council.

Mr. Hurley's public service began in 1913 when he was appointed United States trade commissioner to the Latin American republics. He served also during 1916-17 as chairman of the Federal Trade Commission, and on the entry of the United States into the World War was appointed a member of the War Council of the American Red Cross, helping to organize its first campaign for the raising of \$100,000,000. In July, 1917, he was appointed chairman of the United States Shipping Board and president of the Emergency Fleet Corporation. In this post he directed the expansion of the shipbuilding industry of the United States for the purpose of creating a naval auxiliary and merchant marine. The amount of tonnage of merchant vessels launched was increased from 997,900 in 1917 to 4,075,300 in 1919; the number of shipyards from 61 to 341; and the number of men employed from 50,000 to 385,000. Of the 2543 vessels of 14,706,217 dead weight tonnage acquired by the Emergency Fleet Corporation, 2314 were built, 103 were purchased, 105 were seized enemy vessels, and the remainder were transferred from other government departments.

On his resignation of the Shipping Board post in July, 1919, Mr. Hurley received the Distinguished Service Medal. The French government honored him by making him a commander of the Legion of Honor, and the Italian by making him a grand officer of the Order of the Crown of Italy. After 1924 he was a member of the World War Funding Commission. President Hoover appointed him a member of the Advisory Shipping Commission and President Roosevelt of the Industrial Advisory Council of the NRA. He was also one of the principal sponsors of Chicago's Century of Progress Exposition in 1933. Among the other honors accorded him was the Lætare Medal, bestowed by the University of Notre Dame on distinguished Roman Catholic laymen. He wrote: *The Awakening of Business* (1916); *The New*

Merchant Marine (1920); and *The Bridge to France* (1927).

HURRICANES. See JAMAICA; PUERTO RICO under *History*; METEOROLOGY.

HYDROCARBON OILS. See CHEMISTRY, INDUSTRIAL OR APPLIED.

HYDROGEN. See CHEMISTRY.

IBÁÑEZ, MAXIMILIANO. A Chilean statesman, died in Santiago, Dec. 27, 1933. Born at Linares, in 1868, he attended the University of Chile and on his graduation in 1889 was admitted to the bar. While attending the School of Political Sciences in Paris, he served in 1891 as secretary to the European delegation of the revolutionary junta, publishing in the *Revue des Deux Mondes* and other French journals, articles explaining the aims of that government. On his return to Chile in 1892 he was appointed professor of commercial law at the University of Chile, and a year later became editor of *La Libertad Electoral*. In 1894 he was elected Deputy for the Department of Linares, representing that district through reelection until 1906. In 1909 and again in 1916 he was elected representative for Santiago.

Dr. Ibañez held the portfolio of Finance in 1904, later becoming Minister of Justice and Public Instruction. He twice served as premier, under President Barros Luco in 1910 and under President Sanfuentes in 1916. In 1917 he was appointed Minister to France.

ICE HOCKEY. See HOCKEY.

ICELAND. An island state in the North Atlantic Ocean to the northwest of Great Britain and with its northern coast touching the Arctic Circle. Total area, 39,709 square miles; total population was estimated to be 109,719 on Jan. 1, 1932 as compared with 108,870 at the census of 1930. Reykjavik, the capital, had 28,847 inhabitants in 1931; Akureyri, 4001; Hafnarfjörður, 3568; and Vestmannaeyjar, 3345. In 1931, living births numbered 2794; deaths, 1277; marriages, 681.

Fisheries are the chief support of the population as only about one-seventh of the total land area is suitable for cultivation. In 1930 the sea fisheries amounted to 253,100 metric tons valued at 42,700,000 kroner (kroner equals \$0.268 at par) of which the cod fisheries were valued at 39,530,000 kroner. Agricultural production for 1930 in metric tons was potatoes, 3600; turnips, 1250; hay, 162,750. Livestock (1930): Horses, 49,000; cattle, 30,100; sheep, 68,200; goats, 3000. Imports in 1930 amounted to 71,956,000 kroner; exports 60,096 kroner. The budget for 1933 estimated revenue at 10,530,095 kroner and expenditure at 10,726,631 kroner. The public debt on Jan. 1, 1932 was 39,393,482 kroner; state assets were 65,018,834 kroner. On June 28, 1933 the commercial agreement signed with Great Britain on May 19, 1933 came into force. It is similar to the commercial agreements concluded with the Scandinavian countries by Great Britain (see GREAT BRITAIN under *History*).

Executive power is vested in the King of Denmark who acts through a responsible ministry; and legislative power in the King and Althing (Icelandic Parliament) which consists of 42 members of whom 6 are elected for 8 years by proportional representation for the whole country, and 36 for 4 years by universal suffrage. The Althing is divided into an upper house of 14 members and a lower house of 28 members. Men and women over the age of 25 years have the right to vote. King in 1933, Christian X. Presi-

dent of the Council and Minister of Finance, A. Asgeirsson.

In a referendum on Iceland's Prohibition law held Nov. 13, 1933, the vote was approximately 15,000 to 11,000 in favor of repeal. Repeal legislation was to be considered by the Althing in 1934.

IDAHO. POPULATION. The population of the State on April 1, 1930, was 445,032 (Fifteenth Census); in 1920 it was 431,866; in 1933, 447,000 (Federal estimate). Boise, the capital, had (1930) 21,544 inhabitants.

AGRICULTURE. The following table shows the acreage, production, and value of the principal crops for 1933 and 1932:

Crop	Year	Acreage	Prod. Bu.	Value
Hay (tame) .	1933	1,086,000	2,329,000*	\$14,678,000
	1932	1,102,000	2,673,000*	11,227,000
Wheat	1933	1,075,000	19,385,000	10,263,000
	1932	1,192,000	30,656,000	8,121,000
Potatoes ...	1933	92,000	19,504,000	7,997,000
	1932	99,000	19,800,000	3,366,000
Dry beans ..	1933	121,000	1,670,000*	3,340,000
	1932	93,000	1,060,000*	1,166,000
Apples	1933	.....	5,244,000	2,622,000
	1932	.....	4,200,000	1,470,000
Barley	1933	143,000	4,147,000	1,451,000
	1932	163,000	5,868,000	1,408,000
Sugar beets .	1933	76,000	862,000*	.....
	1932	53,000	709,000*	3,618,000
Oats	1933	142,000	4,544,000	1,272,000
	1932	148,000	5,476,000	1,095,000

* Tons. † 100-lb bags.

MINERAL PRODUCTION. The mines' production of gold, silver, copper, lead, and zinc fell to a total value for 1932 less than one-fourth that for 1929. It attained (1932) \$7,501,151, as against \$11,418,013 for 1931. Production declined in every case save that of gold. The value of gold mined rose to \$936,434 (1932), from \$379,563 (1931), chiefly by reason of initial or increased operation of two or three mines. Mines brought into production by the St. Joseph Lead Company furnished about 42 per cent of the year's output of gold.

Production of silver fell in quantity to 6,700,000 fine ounces (1932) from 7,220,923 (1931); that of copper, to 1,097,000 pounds, from 1,144,915; lead, to 142,000,000 pounds, from 198,729,228; zinc, to 20,400,000 pounds, from 39,137,212. In terms of value, the chief decline was that of the production of lead, to \$3,976,000 (1932), from \$7,352,981 (1931).

For 1933, the estimated value of the mines' output of gold, silver, copper, lead, and zinc, was \$11,211,718. Of this total, 61,208 ounces of gold (reckoned at \$20.67 an ounce) furnished \$1,265,282; 7202 ounces of silver, \$2,484,690; lead, 149,761,000 pounds, \$5,541,157; and 42,485,000 pounds of zinc, \$1,820,855.

CHARITIES AND CORRECTIONS. Through its Department of Public Welfare the State conducted approximately the functions of a State board of health. This department also held jurisdiction over the State's mental hospitals, its Soldiers' Home, work to combat tuberculosis, and the administration of the old-age pension. The State's institutions for the mentally afflicted were: Northern Idaho Sanatorium, Orofino; State School and Colony, Nampa. The State Penitentiary, at Boise, was directed by a board composed of the Governor, Attorney General, and Secretary of State.

LEGISLATION. Meeting in regular session on January 2, the Legislature passed a law authorizing the Governor to call a special election, at which should be chosen delegates to a State

convention that was to act for the State with regard to the proposed repeal of the Federal Eighteenth Amendment. The Governor was authorized on March 1, at the height of the Nationwide financial crisis, to suspend foreclosures and bank runs by declaring legal holidays.

POLITICAL AND OTHER EVENTS. Governor Ross issued a proclamation on March 24 suspending proceedings for the foreclosure of mortgages for 60 days. At an election on September 19 were chosen, by a vote in the approximate proportion of 4 to 3, delegates favorable to the repeal of the Federal Eighteenth Amendment. They met in State convention on October 17 and voted the State's ratification of repeal as proposed by Congress in the superseding amendment.

OFFICERS. The chief officers of the State, serving in 1933, were: Governor, C. Ben Ross; Lieutenant-Governor, George E. Hill, Secretary of State, Franklin Girard; Auditor, Harry C. Parsons; State Treasurer, Myrtle P. Enking; Attorney General, Bert H. Miller; Superintendent of Public Instruction, John W. Condie; Inspector of Mines, W. H. Simons.

Judiciary. Supreme Court: Chief Justice, Alfred Budge; Associate Justices, Raymond L. Givens, William M. Morgan, Edwin M. Holden, N. D. Wernette.

IDAHO, UNIVERSITY OF. A coeducational State institution of higher learning in Moscow, Idaho, founded in 1889, with a southern branch in Pocatello, established by Act of the State Legislature which converted the Idaho Technical Institute into a division of the State University; the change became effective in the autumn of 1927. The total enrollment at Moscow in the autumn of 1933 was 1995. Total enrollment at Pocatello was 808. The enrollment for the 1933 summer session was 537. The faculty numbered approximately 180. The physical plant at the university was valued at approximately \$2,150,000 and that at the southern branch at approximately \$765,000, making a total of about \$2,915,000. The productive funds of the university amounted to \$2,078,950, and the income for 1932-33 was approximately \$1,114,139. The library now approaches 100,000 volumes. President, Mervin Gordon Neale, Ph.D.

ILLINOIS. POPULATION. The population of the State on Apr. 1, 1930, was 7,030,654 (Fifteenth Census); in 1920 it was 6,485,280; in 1933, 7,826,000 (Federal estimate). Chicago, the chief city, had (1930) 3,376,438 inhabitants; Peoria, 104,909; Springfield, the capital, 71,864.

AGRICULTURE. The following table shows the acreage, production, and value of the principal crops for 1933 and 1932:

Crop	Year	Acreage	Prod. Bu.	Value
Corn	1933	8,324,000	224,748,000	\$78,662,000
	1932	9,353,000	404,179,000	60,327,000
Hay (tame) .	1933	2,340,000	2,824,000*	21,462,000
	1932	2,313,000	3,088,000*	16,058,000
Oats	1933	4,039,000	78,760,000	21,265,000
	1932	4,439,000	166,462,000	16,646,000
Wheat	1933	1,721,000	27,418,000	20,289,000
	1932	1,652,000	24,978,000	8,759,000
Potatoes ..	1933	46,000	1,584,000	1,505,000
	1932	54,000	4,860,000	2,430,000
Barley	1933	319,000	4,785,000	2,201,000
	1932	371,000	10,574,000	2,749,000

* Tons.

MINERAL PRODUCTION. The mines' production of coal was further sharply reduced, to 32,360,000 net tons (1932), from 44,303,295 tons for

1931. The decline from 1931, proportionately, was 27 per cent; that from 1929, 46.7 per cent. There was produced in 1932, from 2,151,004 net tons of coal, 1,428,334 net tons of coke; in value, \$6,870,191. It was entirely the output of by-product ovens. The output of petroleum attained for 1932, 4,661,000 barrels, as against 5,039,000 for 1931; it was the lowest year's output subsequent to that of 1906. Low prices for the product, though somewhat improved in the course of the year, discouraged exploration for new wells.

FINANCE. State expenditures in the year ended June 30, 1932, as reported by the U. S. Department of Commerce, were: for maintaining and operating governmental departments \$62,139,744 (of which \$4,296,745 was for local education); for interest on debt, \$8,262,918; for permanent improvements, \$37,375,323; total, \$107,804,844 (of which \$36,586,756 was for highways, \$5,315,317 being for maintenance and \$31,271,439 for construction). Revenues were \$88,998,551. Of these, property and special taxes furnished 32.5 per cent; departmental earnings and compensation to the State for officers' services, 4.1; sale of licenses, 50.5 (in which was included a gasoline sale tax that produced \$18,760,020). Funded debt outstanding on June 30, 1932, totaled \$190,960,920, of which \$149,544,000 was for highways. Net of sinking-fund assets, the debt was \$189,628,756. (On an assessed valuation of \$7,875,676,804 the State levied in the year ad-valorem taxes of \$30,-715.139.

The State tax board, by action on Dec. 27, 1933, eliminated the direct State tax on realty, which would otherwise have been payable in 1934 (or later in Cook Co.) on a levy covering 1933.

EDUCATION. Statistics for the public-school system as a whole were obtainable only for the academic year 1931-32. For that year the number of persons of school age (from 6 years to 21 years) in the State was reckoned as 2,056,473. There were enrolled in the public schools 1,415,553 pupils. Of these, 1,077,755 were in common schools or elementary grades. Those in high schools numbered 337,798. The current expenditures of the year for public-school education totaled \$122,322,601. Salaries of teachers, for the year, averaged \$1648. Both the latter figures were moderately lower than the corresponding ones for the year before.

CHARITIES AND CORRECTIONS. The central administrative authority for the care and custody of persons rested in 1933 in the Department of Public Welfare, as created by the civil administrative code of 1917. It had as its head a director (A. L. Bowen), who also acted as superintendent of charities in the administration of the State's charitable institutions. A superintendent of prisons supervised the penal institutions. Among other subordinates was a supervisor of paroles, an alienist, and a criminologist. A division of child welfare dealt with dependent children. The department maintained a psychopathic institute, schools of psychopathic nursing, an institute for juvenile research, supervision over a system of mothers' pensions, and means for the education of crippled children, and inspected many private and (local) public institutions.

The State institutions under the direction of the department, with their populations of Nov. 1, 1933, were: mental hospitals at Elgin, Chicago, Kankakee, Manteno, Peoria, Jacksonville, East Moline, Alton, Anna, and Chester, 25,262 inmates; penitentiaries at Joliet and Menard, a

boys' reformatory at Pontiac, State Farm (for misdemeanants) at Vandalia, and women's reformatory at Dwight, with an aggregate of 11,424; institutions for the feeble-minded, at Dixon and Lincoln, 6570; Illinois School for the Deaf, at Jacksonville, 617; Illinois School for the Blind, at Jacksonville, 232; Industrial Home for the Blind, at Chicago, 92; Illinois Soldiers' and Sailors' Home, at Quincy, 769; Soldiers' Widows' Home, Wilmington, 107; Illinois Eye and Ear Infirmary, at Chicago, 197; Soldiers' and Sailors' Children's School, at Normal, 712; Research and Educational Hospitals, Chicago, 352; School for Boys (delinquent), St. Charles, 518; State Training School for Girls (delinquent), Geneva, 344. There were under parole, on June 30, 1933, 4913 persons.

LEGISLATION. The Legislature met on January 4 in regular session. It repealed the State act for the enforcement of prohibition and created a State convention, to consist of 50 delegates at large, elected by popular vote on June 5, to act for the State with regard to the Federally proposed repeal of the Eighteenth Amendment. The Legislature itself ratified the proposed Federal constitutional amendment to prohibit child labor. Among acts passed with relation to the banking crisis of March was one to enable depositors in closed State banks outside of the Chicago area to bring about the reopening of such banks by waiving withdrawal of 75 per cent of their deposits. There was imposed on retail sales, with specified exceptions, a tax of 3 per cent of the price. This tax being declared unconstitutional by the courts, the Legislature later enacted a substitute measure levying a general sale tax of 2 per cent. On oleomargarine containing coconut oil was imposed a tax of 10 cents a pound, similar to taxes imposed in the home agricultural interest in a number of other States; this tax, however was vetoed. "Yellow dog" labor contracts, by which the worker bound himself not to join a union, were made invalid by law. A board was created to fix standards of wages for women and children.

A special session, convened on November 22 to enact State control over trade in alcoholic drink, was still at work at the end of the year.

POLITICAL AND OTHER EVENTS. Henry Horner was inaugurated as Governor on January 9. In the midst of the country-wide banking panic the Governor closed banks by declaring a series of legal holidays on March 4, after banks in some sections of the State had limited depositors' withdrawals on their own initiative. Scarcity of money had been acute in some communities some time before the crisis, and an association of retail merchants at Evanston had issued in February a form of self-liquidating stamp-money. The tax on merchants' sales first enacted by the Legislature was contested in the courts and was declared to be unconstitutional by the State Supreme Court on May 10. The Legislature's second measure, imposing a 2-per cent tax on sales was sustained by the State Supreme Court in August, but other litigation on the subject was pending, and the authorities gained only in December sufficient confidence in the next tax to prompt them to do away with the State's ad-valorem levy on property (see *Finance* above).

On June 5 were elected by popular vote, in the approximate proportion of 3½ to 1, delegates favorable to the repeal of the Eighteenth Amendment, who met in State convention on July 10

and voted the State's ratification of repeal by the superseding amendment proposed by Congress.

The milk business centring in Chicago was placed under regulation by an agreement reached on May 19 between the majority of the producers and dealers, in conference with Federal Agricultural Adjustment Administrator Peek, at which prices to producers and to consumers were set. Opposition to foreclosure sales in the farming areas was carried on early in the year, by farmers, and resulted in frequent inability to realize through sales, in the face of hostile gatherings. Circuit Judge Fisher, in a Chicago foreclosure case, rendered an order on April 1 allowing the owners of a large building to remain in possession as though they were receivers, subject to the orders of the Court. Troubles occurred in the coal mining districts in January, among unemployed miners, and again in October, in connection with the efforts of the National Recovery Administration to put the industry under regulation.

Mayor Cermak of Chicago died at Miami, Florida, on March 6 of a wound inflicted by the assassin Zangara in an attempt to kill President-elect Roosevelt (see CERMAK and FLORIDA, *Events*). The Chicago city council elected Edward J. Kelly mayor to serve the balance of Cermak's term, expiring in April, 1935. Chicago having failed to carry out the requirements of the Federal Supreme Court as to building plants for the disposal of sewage, the Court refused in October to reconsider its ruling rendering the State liable for the cost of this work.

The Century-of-Progress Exposition, a world's fair to mark the centennial of Chicago, opened in that city on May 27 and continued into November. (See CENTURY OF PROGRESS EXPOSITION.)

Some progress was made toward improving Chicago's finances. Pay checks were delivered on May 18 for a total of \$12,468,447, representing the pay of some 18,000 employees of the Board of Education for the final quarter of 1932; banks in the city had agreed to lend the city the money on the security of its warrants, after a series of demonstrations carried on by teachers and pupils. Provision was made for a year's disbursements for the schools by an act of the Legislature authorizing the city to issue \$40,000,000 of bonds for that purpose without sanction of a referendum. The school year was shortened by two weeks at either end, in order to save expense of some \$4,000,000, and welfare work connected with the schools was dropped in order to save another \$1,000,000. The governmental bodies of Cook County owed in April, besides some \$400,000,000 in bonds, about \$335,000,000 of floating debt, including \$54,000,000 of back pay to employees, of which one-half was to teachers. Uncollected taxes for the years 1928-30 totaled \$219,000,000; taxes for 1931, billed in 1933, \$220,000,000.

OFFICERS. The chief officers of the State, serving in 1933, were: Governor, Henry Horner; Lieutenant-Governor, Thomas F. Donovan; Secretary of State, Edward J. Hughes; Auditor, Edward J. Barrett; Treasurer, John C. Martin; Superintendent of Public Instruction; Francis G. Blair; Attorney General, Otto Kerner.

Judiciary. Supreme Court: Chief Justice, Warren H. Orr; Associate Justices, Norman L. Jones, Paul Farthing, Frederic R. de Young, Lott R. Herrick, Clyde E. Stone, Elwyn R. Shaw.

ILLINOIS, UNIVERSITY OF. A coeducational

State institution of higher learning in Urbana-Champaign, Ill., founded in 1867. The enrollment in the autumn of 1933 was 9996, of whom 7440 were men and 2556 were women. The summer-session enrollment was 2382, of whom 1448 were men and 934 were women. The number of persons on the teaching staff above the rank of assistant was 703. In the grade of assistant or lower there were 332, and the administrative officers and assistants (including Library assistants) totaled 145. The income for the year 1932-33 was \$5,822,273, of which \$3,920,871 was from the State. The productive funds from Federal endowment totaled \$649,013 and from private gifts, \$369,313. The library contained 947,043 volumes, and 243,000 pamphlets. Acting President, Arthur Hill Daniels, Ph.D.

"I'M ALONE" CASE. See ARBITRATION, INTERNATIONAL.

IMMIGRATION. As a result of the sharp reduction in the number of alien immigrants entering the United States in recent years, the activities of the Department of Labor under Secretary Perkins have undergone almost a complete metamorphosis. When Miss Perkins entered upon her duties, the Immigration Service of the Department alone absorbed 3659 of the 5113 employees and nearly \$10,000,000 of the Department's entire appropriation of \$13,500,000. As a result of the radical changes made by the new Secretary, out of the former 13 division heads reporting directly to the Commissioner General of Immigration and 9 to the Commissioner of Naturalization, there were created 6 main branches with responsible officials at their heads. Further, the immigration and naturalization districts were reduced from 58 to 22. Secretary Perkins indicated that it was her intention to terminate the extra-legal administrative methods that were formerly so commonly associated with the work of the immigration and naturalization services. Every effort was going to be made to terminate raids on assemblages of peaceful citizens, unfeeling and unnecessary separation of families, arrests and searches without warrant, unduly long jail detention, demands for excessive bail, and persecution of labor leaders. It was recognized, as a result of Miss Perkins' activities that within less than half a year much had been done to make less harsh and more consistent with the American notions of justice and fair play the treatment of aliens. Miss Perkins quietly dropped the order promulgated by Secretary of Labor Doak two days before his departure from office which required the finger-printing of all aliens arriving in the country for permanent residence. Despite the fact that Congress had consistently refused to authorize measures requiring the registration of immigrants, Secretary Doak handed down a departmental order which was considered the most radical change in the immigration regulations in recent years. This regulation required immigrants to be finger-printed in the public lounges of incoming liners on their first arrival and also made aliens who had lived in the country as permanent residents undergo the same procedure on their return from visits abroad.

During the fiscal year ended June 30, 1933, there were admitted but 23,068 aliens for permanent residence, constituting the lowest number of admissions for over 100 years. The annual average number of admissions of the four fiscal years ending June 30, 1929, was 306,649; for the four years of world-wide depression, that is 1929-33,

the annual average was but 99,371. The following were the official reasons cited by the Commissioner General of Immigration for the decreases: 1. Circumspection exercised by American consuls selecting immigrants. 2. Realization by aliens abroad of lack of work and employment here. 3. Financial inability of husbands and fathers to bring their families to the United States, or for other relatives to assure aid or support. 4. Reconciliation of aliens in these times to remain in their own countries.

Non-immigrants admitted during the past fiscal year numbered 127,660, about 8 per cent less than in the preceding year. These are aliens admitted as visitors or in transit through the country and aliens returning to an acquired residence in the United States. These admissions also show heavy decreases from normal times. They are the smallest since distinctions have been maintained, that is, since 1924. Alien recorded departures in the year, both emigrant and non-emigrant, were 243,802, the first class numbering 80,081 and the second 163,721. Assuming that all of the non-emigrants going abroad for a visit will return and that all the immigrants admitted will remain, there is a net loss of 57,013 in the alien population in the year, the difference between the immigrants and emigrants. The disparity between the statistical classes of immigrants and non-immigrants and the emigrants and non-emigrants is 93,074, an excess of departures. Departures still exceed admissions. The movement of Mexican nationals to their own country has slackened during the latter part of the year, although not definitely reflected in the outgoing figures of this service, as the greater number of departures to that country are unrecorded, there being so many places of easy egress. Destitute Mexican families have been repatriated by States, towns, and welfare organizations. For instance, several counties in southern California removed about 6700 persons to Mexico, continuing a movement started two years ago.

Many now are attempting to return, and such attempts will increase as times improve in this country. The fear of arrest for illegal entry does not seem to be much of a deterring factor. A considerable but much smaller movement of Canadians, altogether voluntary, from the large centres of population is noted. To prevent and detect illegal entries, the first line of defense is the immigration border patrol, a force organized in 1924 as a complement to the Immigration Service proper. Apprehensions fell off but slightly from the preceding year, there being 21,066 as against 22,884 in 1932. The number of aliens intercepted on both borders in the act of entering illegally, or shortly thereafter, was 20,358, together with 117 of their smugglers, the comparable figures for the preceding year being 21,579 and 149. Illegal entries have not greatly decreased on the Mexican border, but there has been a considerable reduction on the northern frontier, likely attributable to a better appreciation of prevailing conditions in the United States.

Of the 23,068 immigrant aliens admitted during the year, 8220 were aliens charged to the quotas of their respective countries; 7475 were aliens with visas from non-quota countries (Western Hemisphere), most of these, however, being natives of Canada; and 7373 were non-quota immigrants from any country, such as the husbands, wives, and unmarried children of American citizens (who numbered 6658), ministers and professors, and their families, etc. Total number of Mexican immigrants admitted during the fiscal year was 1876, the smallest number yet, decreasing from 2058 in the preceding fiscal year. Non-immigrants recorded amounted to 2249. Table I gives the annual quota allotted to various countries and subdivisions in accordance with the national-origins plan, and admissions thereunder in the past and preceding fiscal years.

The number of aliens finally denied admissions in the fiscal year (the debarred or excluded

TABLE I.—ANNUAL QUOTAS UNDER THE NATIONAL-ORIGINS PLAN, AND THE NUMBER OF QUOTA IMMIGRANTS ADMITTED, YEARS ENDED JUNE 30, 1930, 1931, 1932, AND 1933

Country or region of birth	Annual quota	Quota immigrants admitted during—			
		1930	1931	1932	1933
All countries	153,831	141,497	54,118	12,983	8,220
Europe, total	150,508	137,016	51,153	12,022	7,634
Austria	1,418	1,417	524	187	121
Belgium	1,304	1,118	524	117	59
Bulgaria	100	95	52	11	11
Czechoslovakia	2,874	2,898	1,448	804	171
Denmark	1,181	1,144	516	209	123
Estonia	116	112	71	15	17
Finland	569	559	300	69	72
France	3,086	2,812	1,226	288	257
Germany	25,957	27,119	10,100	2,086	1,324
Great Britain and Northern Ireland	65,721	50,275	12,934	2,099	1,171
Greece	307	362	308	141	108
Hungary	869	864	624	329	187
Irish Free State	17,853	19,692	6,780	452	232
Italy	5,802	5,610	4,245	2,012	1,109
Latvia	238	202	138	43	29
Lithuania	386	398	305	181	96
Netherlands	3,153	2,788	1,142	185	128
Norway	2,377	2,546	1,156	260	141
Poland	6,524	6,456	2,841	917	961
Portugal	440	438	433	201	69
Rumania	295	670	497	318	236
Russia	2,701	2,251	1,587	528	309
Spain	252	332	263	191	164
Sweden	8,814	8,204	1,247	290	105
Switzerland	1,707	1,605	797	132	122
Yugoslavia	845	782	523	252	105
Other Europe*	1,126	1,292	622	205	157
Asia*	1,523	2,150	1,844	580	392
Africa, Australia, and Pacific Islands*	1,800	614	477	281	127
American colonies of European countries .....	....	1,717	1,144	150	67

* Including colonies, dependencies, or protectorates of European countries.

classes) was 5527, persons of the English, French, and Mexican races accounting for about one-half, and the English and French being mostly natives of Canada. A total of 6285 were excluded by the boards of special inquiry at ports of entry, and appeals to the Department were taken in 2165 cases, of which 758 were sustained and 1407 denied. At the close of the year, 190 appeals were pending in the Department and 22 in Federal courts in habeas corpus proceedings after the Department's adverse decision had been rendered. The final exclusion of 3946 aliens applying for admission along the Canadian border is roughly two-thirds of the total number, and these were mostly aliens who applied without the proper documents under the Immigration Act of 1924. On the Mexican border, 681 of the 4806 applicants for temporary or permanent admission were excluded, about 14 per cent, a very high proportion. This may be contrasted with exclusions at the port of New York of only 547 aliens, out of 102,766 immigrants and non-immigrants examined, or about five of every thousand. The reasons for the wide disparity in proportional rejections between seaports and land border stations are the facts that arrivals from overseas must be provided with documents before being permitted to sail, and that most European aliens have had the combined and thorough examination of consuls and immigration officers officiating as technical advisers, and have undergone intensive medical examination by public-health surgeons detailed to the consulates for that purpose. Of the 5527 final rejections, less than 100 were for causes other than the lack of consular documents required by the present law, this reason accounting for 5435 of the total. Only eight aliens were refused admission as criminals; because, when applying for visa, it is usually necessary to have a clear police record, evidenced by an official statement to that effect. Only one alien was denied admission as a person who had been deported.

Nineteen thousand eight hundred and sixty-five aliens were deported or left the country under their own arrangements consequent upon an order of deportation, 439 more than in the preceding fiscal year, and is the greatest number expelled from the country in its history. Of this number 17,952 were sent out at the expense of the Bureau's appropriation, and 1163 at the expense of steamship companies that had brought the aliens to the United States or Canada within the statutory periods. Fifty-seven deportees were permitted to ship as seamen on a one-way voyage to foreign ports; and 693 were granted permission to depart at their own expense and under their own arrangements. Under a procedure long in effect 10,347 aliens subject to deportation were permitted to leave the country after being interviewed, either without warrant proceedings at all or prior to their conclusion. Most of this number departed over the borders. The Service was responsible for the removal or departure of 30,212 deportable aliens. Also for the voluntary removal or repatriation of 1645 aliens under section 23 of the act of 1917, who became destitute and applied for return to their native country, a decrease of 992 from the preceding year. The decrease was occasioned by the lesser number of destitute aliens repatriated at their own request, 2637 having been so removed in the fiscal year 1932. Of the 19,865 deportations, 5904 aliens were sent to Europe, 2642 to China (mostly the refugees from Mexico along the Arizona border), 2216 to

Canada, 7760 to Mexico, 593 to other portions of this hemisphere, 658 to Asiatic countries other than China, and 102 to Africa, Australia, and the Pacific Islands.

The following table classifies reasons for deportation:

Illiteracy	1,893
Without proper visa	9,099
Overstaying permit	3,148
Diseased	1,056
Criminals	1,770
Anarchists and kindred classes	74
Drug violators	167
Immoral persons	785
Entered after deportation or exclusion	1,010
Miscellaneous	1,368

IMPEACHMENT. See LAW under *Judiciary*.

IMPORTS. See articles on various countries; and especially articles AGRICULTURE; CORN; IRON AND STEEL, ETC.

INCOME TAX. See TAXATION.

INDIA. A dependency of the British Empire, divided into British India, or the territory subject to British law and directly administered by British officials, and the Indian States, ruled by native princes but subject to the control of the British Parliament. Capital, New Delhi.

AREA AND POPULATION. The area and population of the British Provinces and the Native States and Agencies at the census of 1931 are shown in the accompanying table. The total population of 352,837,778 in 1931 compared with 318,-

**BRITISH PROVINCES AND INDIAN STATES:
AREA AND POPULATION**

<i>British Provinces</i>	<i>Area in sq. miles</i>	<i>Population, 1931</i>
Ajmer-Merwara	2,711	560,292
Andamans and Nicobars	3,143	29,463
Assam	67,334	9,247,857
Baluchistan	134,638	868,617
Bengal	82,955	51,087,338
Bihar and Orissa	111,702	42,329,583
Bombay (Presidency)	151,673	26,398,997
Aden	80	51,478
Burma	233,492	14,667,146
Central Provinces and Berar	131,095	17,990,937
Coorg	1,593	168,327
Delhi	573	636,246
Madras	143,870	47,193,602
Northwest Frontier Province	36,356	4,684,364
Punjab	105,020	24,018,639
United Provinces	112,191	49,614,833
Total Provinces	1,318,346	289,491,241

<i>Indian States and Agencies</i>		
Baroda State	8,164	2,443,007
Central India Agency	51,597	6,682,790
Cochin State	1,480	1,205,016
Gwalior State	26,367	3,523,070
Hyderabad State	82,698	14,436,148
Jammu and Kashmir States	84,516	3,646,243
Mysore State	29,326	6,557,802
Punjab States	31,241	4,472,218
Rajputana Agency	129,059	11,225,712
Sikkim	2,818	109,808
Travancore	7,625	5,095,973
Western India Agency	35,442	3,999,250
Total States	490,333	68,346,537
Total Provinces	1,318,346	289,491,241
Total India	1,808,679	352,837,778

NOTE.—Figures for the Provinces include those of the States attached to them except in the case of Madras, where they exclude Cochin and Travancore.

942,480 in 1921, or an increase for the decade of 33,895,298 (10.6 per cent). In 1931, there were 181,828,923 males and 171,008,855 females, or 940 females per 1000 males. The mean density of population per square mile for all India was 195, the maximum density being 814 in Cochin

State and the minimum 5 in the Baluchistan States. Eleven per cent of the population was urban.

The number of Europeans in India in 1931 was 168,134 (males 117,336; females 50,798) and of Anglo-Indians, 138,395 (males 71,247; females 67,148). The populations of the chief cities in 1931 were: Calcutta (with suburbs and Howrah), 1,485,582; Bombay, 1,161,383; Madras, 647,230; Hyderabad, 466,894; Delhi, 447,442; Lahore, 429,747; Rangoon, 400,415; Ahmedabad, 313,789; Bangalore, 306,470; Lucknow, 274,659; Amritsar, 204,840; Karachi, 263,565; Poona, 250,187. In 1930 births numbered 8,690,714; deaths, 6,483,449. The birth rate per 1000 inhabitants was 35.99; death rate, 26.85. Emigrants in 1931 numbered 32,424. At the 1931 census 46.7 per cent of the males and 49.3 per cent of the females were married, while 5.4 per cent and 15.4 per cent respectively were widowed. The brief average span of Indian life was indicated by the statistics showing that 39.0 per cent of the population was under 15 years, 50.5 per cent between 15 and 50, and 9.6 per cent 50 and over.

RELIGION. Out of each 1000 inhabitants in 1931 there were 682 Hindus, 222 Moslems, 36 Buddhists, 24 adherents of tribal religions, 18 Christians, and 18 members of other faiths. During the decade 1921-31 the actual number adhering to tribal religions declined 15.3 per cent. All of the other major religious groups increased in numbers, as follows: Hindus, 10.4 per cent; Moslems, 13 per cent; Buddhists, 10.5 per cent; Christians, 32.5 per cent; other religions, 38 per cent. There were approximately 2300 different castes, the largest, in the order named, being the Sheikh, Brahman, Chamar, Rajput, Ahir, Burmese, Jat, and Maratha. The so-called "untouchables" or members of the scavenger caste comprised 30 per cent of the Hindu population.

EDUCATION. The literate population of India in 1931, including children, was 28,131,315 (23,962,279 males and 4,169,036 females); the illiterate population, 321,628,003 (156,243,305 males and 165,384,698 females). Out of each 1000 inhabitants, aged five and over, 156 males and 29 females could read and write in some language, as compared with 122 males and 18 females out of every 1000 inhabitants in 1921, and 81 males and 3 females out of every 1000 in 1881. About 2,500,000 persons had a knowledge of English. In 1930-31, there were 262,068 educational institutions in British India, with 12,689,086 pupils. There were eight federal, six unitary, and two denominational universities, besides two universities in the Indian States of Mysore and Hyderabad.

PRODUCTION. Of the total working population in 1931, 66.4 per cent were engaged in agriculture, 5.13 per cent in trade, 9.95 per cent in industry, and 1.52 per cent in transportation. There were 25,005,280 persons engaged in mines, industry, and transport in 1931 (23,236,099 in 1921). The area sown to crops in British India in 1930-31 was 229,087,103 acres. India is one of the world's largest producers of sugar cane, ranks second to the United States in the output of cotton, and has a monopoly of the world's jute supply. Provisional production of the chief crops in the 1932-33 crop year, with 1931-32 figures in parentheses, was (in 1000 quintals of 220.46 pounds): Jute, 10,605 (10,099); wheat, 91,708 (94,543); rough rice (excluding several Indian States), 479,662 (516,167); cane sugar, 42,180

(39,423); linseed, 4176 (3831); cotton, 8194 (7303). Barley production in 1931-32 was 24,304,000 quintals; tea, 1,787,000 quintals (1931); sesamun, 4,836,000 quintals (1931-32); ground nuts, 27,403,000 quintals (1931-32).

Production of coal in British India in 1932 was 18,971,000 metric tons (21,026,000 in 1931). Salt production in all India (1931) was 1,869,000 metric tons; petroleum (1931), 1,197,000 metric tons; iron ore, 1,651,000 metric tons; manganese ore, 546,500 metric tons; pig iron and ferro-alloys, 1,090,000 metric tons; steel, 635,000 metric tons (580,000 in 1932); copper content of ores mined, 11,600 metric tons; lead, 90,400 metric tons; zinc, 46,000 metric tons; chrome ore, 20,200 metric tons; gold, 10,280 kilogrammes (10,000 in 1932); silver, 184,226 kilogrammes (186,700 in 1932). The value of mineral output in 1931 was £17,739,994 (\$80,451,000).

Industrially, India is one of the seven leading countries of the world. The principal manufactured products are cotton textiles, jute, iron and steel, and sugar. On Mar. 31, 1933, the number of raw cotton-spinning spindles installed in India was 9,506,000 (9,312,000 on July 31, 1932). In 1931 there were 17 wool mills, with 72,691 spindles and 1389 looms; 98 jute mills, with 53,900 looms; and 46 sugar mills, with a rated output of 99,100 tons per annum.

COMMERCE. The decline in India's foreign trade during the period 1930-32 is shown in the accompanying table.

INDIA: IMPORTS AND EXPORTS
[In thousands of rupees *]

Year	Imports for consumption	Exports of Indian produce	Excess of exports
1930	1,879,383	2,525,876	646,493
1931	1,361,594	1,651,894	290,300
1932	1,328,189	1,352,831	24,642

* The rupee, par value \$0.3650, exchanged at an average of \$0.3607 in 1930, \$0.3369 in 1931, and \$0.2635 in 1932.

Exports of bullion and specie in 1932 amounted to 800,313,000 rupees (413,239,000 in 1931) and imports were 31,594,000 rupees (126,197,000 in 1931). The chief loss in merchandise exports in 1932 was in the raw materials group, which declined 32 per cent in value, due chiefly to price declines. As compared with 1931, the 1932 exports to all foreign markets declined in value—to Japan, 34 per cent; to the United States, 31 per cent; the United Kingdom, 15 per cent; and the British Empire, 4 per cent. The United Kingdom (including the Irish Free State) in 1932 took 27.9 per cent of India's exports (375,400,000 rupees), against 26.8 per cent (440,300,000 rupees) in 1931. Japan took 8.7 per cent (116,800,000 rupees), against 10.8 per cent (177,200,000 rupees) in 1931. The United States, 7.5 per cent (101,500,000 rupees), against 9 per cent (147,400,000 rupees) in 1931. Germany took 6.2 per cent in 1932 (6.6 in 1931); France, 5.6 per cent (4.8).

Imports from all principal sources, except the United Kingdom and Japan, declined in 1932. The United Kingdom supplied 36.4 per cent of the value of all imports (486,300,000 rupees), against 34.2 per cent (463,600,000 rupees) in 1931; Japan, 14.4 per cent (192,800,000 rupees) against 10.2 per cent (138,600,000 rupees) in 1931; the United States, 8.5 per cent (114,200,000 rupees) against 10.6 per cent (143,900,000 rupees); and Germany, 7.8 per cent (104,700,

000 rupees) against 8.3 per cent (113,000,000 rupees) in 1931.

The chief export items in 1932 were (in rupees): Gold coin and bullion, 758,800,000; rice, 174,800,000; tea, 168,900,000; raw cotton, 160,300,000; jute bags, 116,700,000; jute gunny cloth, 102,700,000. Leading import items in 1932 were (in rupees): Cotton manufactures, 221,600,000; machinery, 104,700,000; raw cotton, 79,200,000; mineral oils, 77,700,000.

FINANCE. Closed accounts of the Indian budget for the fiscal year ended Mar. 31, 1932, showed a deficit, after providing nearly 70,000,000 rupees for debt reduction, of 110,750,000 rupees. Revised estimates for the fiscal year 1932-33 showed an actual surplus of 21,700,000 rupees, after providing nearly 70,000,000 rupees for debt reduction. For the two years from Apr. 1, 1931, to Mar. 31, 1933, there was a total budgetary deficit of 95,800,000 rupees, after 137,300,000 rupees had been used for reduction of debt. The net debt reduction for the period was thus 41,500,000 rupees. The budget for the fiscal year 1933-34 estimated revenue at 1,245,200,000 rupees and expenditure at 1,241,000,000 rupees. On Mar. 31, 1933, the total interest-bearing debt of the Imperial government amounted to 12,108,600,000 rupees (12,136,300,000 on Mar. 31, 1932). Against the Mar. 31, 1933, total were placed 9,688,700,000 rupees of interest-bearing assets and 350,700,000 rupees of cash, bullion, and securities held on Treasury account. The balance of interest-bearing obligations not covered by assets was 2,069,200,000 rupees.

COMMUNICATIONS. On Mar. 31, 1932, there were 42,753 miles of railway lines in operation (including 31,709 miles of Imperial State lines and 6396 miles of Indian State lines); 586 miles of new line had been opened in the previous year. During the fiscal year ended Mar. 31, 1933, the Imperial State lines carried the fewest passengers in a decade and incurred a deficit of 100,000,000 rupees. Gross receipts were 845,000,000 rupees and operating expenses (including appropriation for depreciation) were 615,000,000 rupees, the net receipts being insufficient to meet interest charges. Highways in British India and the Punjab extended 225,280 miles. Air lines connected India with London and intermediate points, with Australia, with Netherland India, and with French Indo-China. Vessels entered with cargoes in the interportal trade in 1931-32 aggregated 20,659,402 tons; cleared, 20,576,105 tons. The new port of Vizagapatam on the east coast of the Indian peninsula, about midway between Madras and Calcutta, was opened to traffic in October, 1933.

GOVERNMENT. Direction and control of the civil and military government were vested in the Governor-General in Council, or government of India. The Governor-General, or Viceroy, is appointed by the British government, usually for five years. The Legislature in 1933 consisted of the Viceroy and two chambers—the Council of State of 60 members (33 elected and 27 nominated) and the Legislative Assembly of 145 members (41 nominated and 104 elected). Viceroy in 1933, the Earl of Willingdon (assumed office, April, 1931). Members of the Executive Council, appointed by the Crown, were: Home Affairs, Harry Graham Haig; Finance, Sir George Schuster; Education, Health and Lands, Sir Fraz-i-Husain Law, Sir Gajendra Lal Mitter; Railways and Commerce, Sir Joseph Bhore; Indus-

tries and Labor, Sir Frank Noyce. The Foreign and Political Department was directly under the Governor-General.

HISTORY

The work of framing a new and more liberal constitutional government for India, inaugurated with the appointment of the Indian Statutory (Simon) Commission on Nov. 26, 1927, made further progress in 1933. The broad outlines of a new federal government for India had been drafted in three successive Round-Table Conferences in London (see 1930, 1931, and 1932 YEAR BOOKS). Details of the new constitutional scheme were elaborated in a British Government White Paper (*Proposals for Indian Constitutional Reform*, Cmd. 4268), submitted to Parliament Mar. 17, 1933. The House of Commons on March 29 voted to set up a joint parliamentary committee to consider these proposals, in consultation with Indian representatives appointed by the Viceroy. This committee, known as the Joint Select Committee, conducted hearings throughout the remainder of the year, with several recesses. Toward the end of November both Houses of Parliament voted to reappoint the committee to permit further examination of the White Paper. It was expected that the constitutional proposals, as revised by the committee, would be submitted to Parliament for its approval some time in 1934 and that the new Constitution would go into effect in 1935.

THE WHITE PAPER. The proposals of the White Paper offered a considerable degree of self-government to the provinces of British India. The electorate for the Provincial Legislatures included some 38,000,000 men and women, or 27 per cent of the population, and the provinces were entrusted with most of the burden of domestic administration. However the Federal Executive was made subordinate to the British Governor-General and the proposed setup for the Federal Legislature insured its domination by a conservative bloc opposed to the aims of the Indian nationalists. The lower house of the Federal Legislature, the House of Assembly, was to consist of 125 members appointed by the Princes of the native States and 250 elected directly by 6,000,000 voters, or 4 per cent of the population. The upper house (Council of State) was to have 100 members appointed by the Princes, 10 appointed by the Governor-General, and 150 indirectly elected by the Provincial Legislatures. There was to be an Indian Prime Minister, with a cabinet responsible to the Federal Legislature.

The Viceroy retained exclusive power over the Indian Army and India's foreign relations. He was authorized to override the Indian Cabinet (1) in case of a national emergency; (2) to safeguard the rights of minorities; (3) to maintain the financial stability and credit of the federation; (4) to protect the position of the Indian Princes; and (5) to prevent commercial discrimination against British or other goods. On a wide range of subjects, the Viceroy's approval was required before bills could be introduced. Finally, it was stipulated that the constitutional reorganization should not become effective until the Princes ruling half the aggregate population of the native States agreed to enter the federation and a central bank, free of political influence, had been established.

The proposals aroused opposition on all sides and but little support. In India, the nationalists

and liberals attacked them as a pitifully inadequate step toward self-government, while the Princes denounced them as a capitulation to democracy. The Legislative Assembly at Delhi on March 31 passed a resolution declaring that peace and order in India could not be secured unless the proposals were substantially amended. In Great Britain, the proposals were violently denounced by the Laborites, who declared them a sham, and by the reactionary wing of the Conservatives, who were indignant at the alleged abdication of British authority.

The British government stood by its guns, despite the growing strength of the Conservative elements opposed to further concessions to India. At Conservative party conferences in June and in October, 1933, the government's India policy was approved. On the latter occasion the Chancellor of the Exchequer, Neville Chamberlain, said the government would make the issue a question of confidence. The government won the contest (737 to 344). But the opposition, under Winston Churchill, had gained strength since the Cabinet's India policy was reaffirmed at the July conference.

INDIAN DISSENSIONS. While the British pledge of ultimate Dominion status for India was meeting increased opposition at home, dissensions in the ranks of the Indian nationalists raised another obstacle to the early fulfillment of that promise. Mahatma Gandhi's civil disobedience campaign collapsed early in the year under the weight of the Imperial government's extra-constitutional emergency decrees and repressive measures. The prestige of the Hindu leader was further impaired by his subsequent eccentric moves. Revolt against his leadership became widespread. Some of the dominant figures in the All-India National Congress, led by V. J. Patel and Subhas Chandra Bose, demanded that passive resistance to the British Raj be abandoned in favor of militant direct action. On the other hand, majority sentiment among the Congress leaders at a conference held in Poona July 12-14 appeared to favor a return to constitutional methods. The latter faction gained in influence during the year, due to the fear that continued noncooperation with the British government would strengthen the hands of the British reactionaries and prevent any advance toward self-government.

The Viceroy continued his policy of refusing to negotiate with the Congress leaders until it renounced civil disobedience. Gandhi remained in the now-famous Yeravda Prison at Poona, where he had been incarcerated on Jan. 3, 1932, because of his announced determination to resume leadership of the civil disobedience movement if he were released. On Feb. 4, 1933, his wife was arrested and sentenced to six months' imprisonment for illegal political activities. The government of India forbade the scheduled meeting of the All-India National Congress at Calcutta on April 2 and arrested hundreds of delegates when they assembled in defiance of its orders.

Shortly afterward Mahatma Gandhi weakened the civil disobedience campaign further by placing his major emphasis upon the campaign for the abolition of Untouchability. He called attention to the deplorable position of the Untouchables by a 21-day fast (May 8 to May 29). At the commencement of his fast, the government released him from prison, not wishing to incur responsibility for his expected death. Gandhi then

made overtures toward the government by securing the discontinuance of civil disobedience and of the boycott against British goods for one month. The government, however, rejected his request for the release of political prisoners.

At the Poona meeting Gandhi exerted his personal influence to prevent the Congress leaders from capitulating to the government. He was authorized to order the resumption of civil disobedience in any form he desired in case an "honorable settlement" with the Viceroy was not reached before August 1. Lord Willingdon on July 17 reaffirmed his determination not to negotiate with Gandhi until civil disobedience was unequivocally disavowed. Gandhi then proclaimed a new programme of symbolical, individual civil disobedience in place of mass action. He was rearrested August 1 when he was about to start on a new pilgrimage, released with an order restricting his movements, and sentenced to one year in prison when he defied the order. Deprived of the special privileges he had formerly enjoyed, the Mahatma threatened to fast to death unless given facilities to conduct his campaign against Untouchability from prison. The government consented, but Gandhi nevertheless commenced his fast and on August 23 secured his unconditional release. On September 14, he announced a year's truce with the British government. He promised not to engage in civil disobedience or other defiance of the authorities until Aug. 3, 1934, and that in the meantime he would devote all his energies to his campaign against Untouchability.

Gandhi's vacillations had aroused extensive criticism of his leadership within the Congress ranks, which seemed on the point of dissolution. There was conflict between the orthodox Hindus and Gandhi's followers over his effort to redeem the depressed classes. Another schism occurred between the radicals, lead by Jawaharlal Nehru, and the moderates in Congress over Nehru's proposal for immediate confiscation of the properties of the wealthy classes. The Congress was thus disunited and undecided upon its future course as the year ended. Meanwhile the terrorist movement continued, particularly in Bengal, and a number of daring raids on railway stations and British clubs were staged.

TEXTILE MARKET WAR. India during 1933 was the main battle ground of a bitter competition between the cotton textile manufactures of Great Britain and Japan. The Indian market absorbed annually about 5,000,000,000 yards of cotton cloth. Of this total, the expanding cotton mill industry in India supplied about 3,000,000,000 yards and India's 2,500,000 hand looms contributed another 1,000,000,000 yards. Notwithstanding the huge domestic production, the country imported 1,126,652,000 yards of cotton piece goods (excluding fents or remnants) in 1932, compared with 720,022,000 in 1931 and 1,874,000,000 in 1929. Owing to Japan's depreciated currency and low labor costs and the tariff preference accorded goods from the United Kingdom, these two countries together supplied 98 per cent of the total 1932 imports of cotton cloth. For the first time Japan displaced Great Britain as the chief source of supply, furnishing 569,893,000 yards against 541,854,000 from Britain. In 1931, imports from Japan were 336,387,000 yards and from Great Britain 350,775,000 yards.

During the first half of 1933, the Japanese not only gained a commanding lead over British

textiles but forced a number of large Indian mills to close down. An increase in the Indian tariff on textiles, with a greater preferential for British goods, failed to check the inflow from Japan, but resulted in a Japanese boycott of Indian raw cotton exports. On August 31 a measure to permit still higher tariffs or to prohibit the importation of foreign textiles was introduced into the Indian Legislative Assembly. It was held in reserve pending the outcome of negotiations between British, Indian, and Japanese government representatives which opened in Simla, India, on September 22. Coincident with the official negotiations, conferences were held between Indian and Japanese trade delegations, between Indian and British trade delegations, and between British and Japanese trade delegations. The conferences were still under way at the end of the year. It was reported that an agreement had been tentatively reached under which Japanese textile exports to India and Indian raw cotton exports to Japan would both be placed upon a quota basis. Meanwhile the British and Indians had reached an agreement for greater preferential tariffs on British cotton goods in return for increased British purchases of Indian raw cotton. See JAPAN and GREAT BRITAIN under *History*.

Consult T. A. Bisson, "Constitutional Developments in India," *Foreign Policy Reports*, Sept. 13, 1933; D. N. Bannerjee, "India's Case for Independence," *Current History*, May, 1933.

INDIANA. POPULATION. The population of the State on Apr. 1, 1930, was 3,238,503 (Fifteenth Census); in 1920 it was 2,930,390; in 1933, 3,291,000 (Federal estimate). Indianapolis, the capital, had (1930) 364,161 inhabitants.

AGRICULTURE. The following table shows the acreage, production, and value of the principal crops for 1933 and 1932:

Crop	Year	Acreage	Prod. Bu.	Value
Corn	1933	4,268,000	125,906,000	\$41,549,000
	1932	4,639,000	173,962,000	26,094,000
Hay (tame)	1933	1,703,000	1,813,000*	13,598,000
	1932	1,764,000	2,208,000*	11,040,000
Wheat	1933	1,551,000	22,484,000	16,415,000
	1932	1,468,000	23,502,000	8,696,000
Oats	1933	1,651,000	28,067,000	7,859,000
	1932	1,965,000	58,950,000	7,074,000
Potatoes . .	1933	57,000	3,192,000	2,713,000
	1932	61,000	5,490,000	2,361,000
Tobacco . .	1933	17,000	12,920,000*	988,000
	1932	13,700	10,057,000*	993,000

* Tons. ♢ Pounds.

MINERAL PRODUCTION. The production of coal was again reduced in 1932, though not so sharply, in proportion, as that of the adjoining State of Illinois. The quantity of coal mined fell to 12,400,000 net tons (1932), from 14,295,165 (1931). The total coke, produced entirely in by-product plants, was 1,435,385 net tons (1932), in value \$7,894,902. Drilling for oil wells was more active in 1932, 54 wells being completed, as against 35 for 1931. However, the production of petroleum declined to 804,000 barrels (1932), from 840,000 (1931). The Lima pool in the northeastern part of the State was reported near exhaustion; most of the output of 1932 came from southwestern Indiana. The cut-limestone industry, in which Indiana normally produced four-fifths or more of the domestic total of building stone, produced some 26 per cent less as to quantity and 38 per cent less as to value in 1932 than in 1931.

EDUCATION. Decline in the service of the public schools, due to the shrinkage of public ven-

ues in many States, was checked in Indiana by the State's action in assuring salaries of \$800 and \$1000 by the year to trained teachers for conducting classes for at least eight months of the year. It was reported in the *Journal* of the National Education Association that by Jan. 10, 1934, the State's funds would have disbursed at the rate of \$313 for every school corporation.

For the academic year 1932-33 the number of persons of school age in the State was reckoned as 876,982. There were enrolled in the public schools 751,893 pupils. Of these, 573,520 were in common schools or elementary grades; in high schools, 178,373. These figures indicated an increase of enrollment by approximately 10 per cent over the totals of the year before, in both groups. The year's expenditures for public-school education, on the contrary, fell by some \$10,000,000 from those of the year before, to \$55,148,554. The salaries of teachers averaged, for the year, \$1186.36.

CHARITIES AND CORRECTIONS. By an act of 1933 the Legislature did away with the Board of State Charities and created eight governmental units among which at his discretion the Governor was directed to assign or transfer the duties of the former board. Under this arrangement the duties of the board were taken over by a Department of Public Welfare, functioning directly under the Governor. These duties included: investigating and examining all public charities and correctional institutions in the State; advisory planning for divers public institutions; supervision of foster-homes and of institutions for dependent, neglected, or delinquent children; licensing maternity hospitals, boarding homes for infants, and infant-placing agencies; endorsing proposed adoptions; aiding in a yearly enumeration of problem children and children mentally retarded.

The State maintained 20 charitable and correctional institutions. These were: for mental affections, the Central State Hospital (Indianapolis), Logansport State Hospital (Logansport), Richmond State Hospital (Richmond), Evansville State Hospital (Evansville), Madison State Hospital (North Madison), Fort Wayne State School (at Fort Wayne, for the feeble-minded), and Muscatatuck Colony (feeble-minded, Butlerville); the Village for Epileptics, Newcastle; Soldiers' Home, Lafayette; Soldiers' and Sailors' Children's Home, Knightstown; State Sanatorium (tuberculosis), Rockville; Indiana University Hospitals, Indianapolis; State School for the Deaf, Indianapolis; State School for the Blind, Indianapolis; State Prison, Michigan City; Reformatory, Pendleton; State Farm for Misdemeanants, Greencastle; Women's Prison, Indianapolis; Indiana Girls' School, Indianapolis; Indiana Boys' School, Plainfield.

LEGISLATION. The regular session of the Legislature (January 5 to March 6) effected substantial reduction of State expenditures from the general fund. It was estimated that measures enacted reduced the total of such expenditures for the ensuing fiscal year to \$11,000,000, approximately, from \$14,000,000 for 1932. These totals did not cover expenditures of the State highway commission out of special State revenues and Federal grants. The fiscal year was changed, so as to terminate with June 30 in 1934 and after, instead of September 30. Legislation gave effect to the proposals of a budget committee appointed by the Governor. This committee had called for reductions in State salaries of \$1200 and over on

a sliding scale of from 4 to 26 per cent; also for elimination of some State activities and a sweeping consolidation of State administrative bodies, which combined 168 such bodies into 8 departments. The 8 consolidated departments were those of State, of the executive, law, audit and control, treasury, education, public works, and commerce and industries. The existing public service commission of five members was abolished and was replaced with another, having three members and maintaining a special public prosecutor to handle rate cases.

To act for the State with regard to the proposed repeal of the Federal Eighteenth Amendment of the Constitution, there was created a State convention of 329 delegates, one to be elected by popular vote on June 6 in each county, plus one for every additional 10,000 of each county's population. The prohibition laws of the State were repealed, and a measure was enacted to permit and regulate the sale of beer having not over 3.2 per cent in content of alcohol.

A system of old-age pensions was created. It provided assistance of not over \$180 a year for indigent resident citizens of the State who had attained the age of 70. It was to go into effect on Jan. 1, 1934. Banks were authorized by law, late in February, to limit depositors' withdrawals as emergency might dictate. Regulation of the trade in alcoholic drink was left to local authority.

POLITICAL AND OTHER EVENTS. During the banking panic that culminated early in March no general suspension of banks was decreed by the State, as the Legislature had enabled banks individually to limit withdrawals. On June 6 were elected by popular vote, by counties, 329 delegates, of whom 243 were favorable to the repeal of the Eighteenth Amendment to the Federal Constitution and 83 were for retaining the amendment. The popular vote was light and gave a majority for repeal in the approximate proportion of 5 to 3. The elected delegates met in State convention on June 27 and voted the State's adoption of the superseding amendment proposed by Congress to repeal the Eighteenth.

Paul V. McNutt, Democrat, inaugurated Governor in January, wielded great influence over the Legislature and was credited with having dictated the passage of the acts forming his programme for reordering the governmental and financial organization of the State. Old dormant taxes were revived and again levied on brokers and on railroad equipment not owned by companies using it.

An inter-state bridge at Vincennes, spanning the Wabash River, was dedicated on September 3, and on the same day was sealed the corner stone of the George Rogers Clark memorial, at the Indiana approach to the bridge.

OFFICERS. The chief officers of the State, serving in 1933, were: Governor, Paul V. McNutt; Lieutenant-Governor, M. Clifford Townsend; Secretary of State, Frank Mayr; Auditor, Floyd E. Williamson; Treasurer, William Storen; Attorney General, Philip Lutz, Jr.; Superintendent of Public Instruction, George C. Cole.

Judiciary. Supreme Court: Judges James P. Hughes, Michael Fansler, David A. Myers, Curtis W. Roll, and Walter E. Treanor.

INDIANA UNIVERSITY. A coeducational State institution of higher learning in Bloomington, Ind., founded in 1820. For the first semester of the academic year 1933-34 the registration aggregated 4265 students (2753 men and 1512

women). The faculty had 320 members. The endowment funds amounted to \$1,784,939, and the total income for the year, from State and private sources, was \$2,194,850. The library contained 258,875 volumes. President, William Lowe Bryan, Ph.D., LL.D.

INDIANS. The total estimated and enumerated number of Indians was 320,454 according to the annual report of the U. S. Commissioner of Indian Affairs, John Collier, for the fiscal year ending June 30, 1933, from which this review is taken. This number consists of 231,754 actually enumerated and 88,700 Indians taken from earlier or special censuses and estimates based on records. The aggregate estimated and enumerated number of Indians reported by Federal agencies on Apr. 1, 1933, represents an increase over the corresponding figure for the previous year of 3220 or 1 per cent. Of the number actually enumerated 118,076 were males and 113,672 were females.

EMERGENCY CONSERVATION WORK. Under the Act of Mar. 31, 1933, President Roosevelt created a Civilian Conservation Corps composed of some 1400 camps, each of 200 men enrolled for 6 months' service. Of the funds made available by that act, \$5,875,200 were placed at the disposal of the Indian Office, subject to the Director of Emergency Conservation Work, by Executive order of May 12, as amended on May 26 and June 7. Due to delays in perfecting accountancy arrangements, however, no part of that sum actually became available until June 20.

Because the "Indian country" is proverbially a land of great distances, many of the reservations have no important forests, and there could be but few urgently needed work projects, in those sparsely settled regions, large enough to employ 200 men for anything like a 6-months' stretch. Many Indians would sacrifice needlessly in contracting for a half year's continuous residence in remote camps, where they would be unable to get away for a few days at a time to attend to the seasonal needs of their crops or livestock. The President, therefore, authorized that Indians be mobilized into small work groups and that, in most instances, they live at home or—as experienced campers—maintain their own camps near "the job." In those cases the allowances to workers for "commutation of quarters and subsistence" would probably cost the government less—in both cash and man-days—than the constructing and maintaining of large camps.

The Indian programme was given still further individuality by Director Fechner, who authorized the Indian Office to appoint its own erosion experts, engineers, and foresters, and to do its own disbursing. And he liberalized the age limits of enrolled Indians. Enrollment in the Indian branch was opened to "persons over 18 years of age who are able to perform ordinary labor without injury to themselves," and who are free from communicable disease.

Work projects of wide variety were approved before June 30. Under prevention of forest fires, approved projects include: fire lanes, lookout towers, telephone lines, trails and bridges, roadside clearing, and the removal of fire hazards elsewhere. Other forestry projects include nursery work, seed collection, planting, insect pest control, land improvement, and in some instances landscaping. Under erosion control (largely through prevention of excessive grazing), work projects include erosion dams, range revegeta-

tion, boundary surveys, fences, driveways, corrals, springs and reservoirs, rodent control, eradication of poisonous plants, and elimination of useless range stock. Minor flood-control work has been authorized, notably in New Mexico. Improvement of public camp grounds will be a rather important item in most States.

APPROPRIATIONS. The appropriations for this year aggregated \$22,140,098 from the Federal Treasury. This is a decrease of nearly \$5,000,000 under the amount allowed for the previous year. From last year, 1932, to the coming year, 1934, beginning July, the Federal expenditures for the Indian service have been cut from \$27,030,047 to \$16,586,059. The reduction is \$10,443,988, or 39 per cent. The Indian tribal trust funds available for Indian Bureau costs have been reduced from \$3,385,934 to a sum approximating \$2,450,000—about a \$930,000 diminution. And the tribal trust funds available for payment in cash to the Indians have been reduced from \$3,289,160 to about \$2,000,000. A grand total appropriation of \$33,704,000 for 1932 is cut to approximately \$21,246,000 for 1934, and the total reduction is approximately \$12,458,000.

EDUCATION. Substitution of Federal day schools and public-school facilities for government Indian boarding schools, a policy now well established in the Indian Service, gained considerable momentum during the last year from budgetary changes made necessary by the government's economy programme.

Experience proved unusually satisfactory in the instances where change from boarding school to day school was accomplished. In enacting the 1933 appropriation bill Congress directed that \$500,000 be shifted from boarding schools to day schools. This shift was carried out with the effect of providing for twice as many Indian children a schooling of a better quality than had been employed by the number transferred from boarding schools. School officials who hesitated to take the step, because of the poor condition of many of the Indian homes, were surprised to find out how much some of these homes have improved during the short period that has elapsed since the closing of boarding schools, and with what quick responsibility the Indian parents have resumed the care of their children. It is expected that during the school term 1933-34, from 4000 to 5000 of the 22,000 children formerly attending Federal boarding schools will be in attendance at local day schools or public schools. Nearly 60,000 Indian children will be attending public schools and Federal day schools.

LAND. After a struggle of several years' duration, Congress, by the act of Mar. 1, 1933, returned to the Navajo Reservation a tract of land commonly known as the "Paiute Strip" and added a smaller tract known as the "Montezuma Creek Area." These lands lie in southeastern Utah and comprise approximately 554,000 acres. Legislation was introduced during the past session of Congress to extend the Navajo boundary lines in New Mexico and Arizona. The lines proposed merely to "cover into" the reservation lands which the Navajo Indians have been using for generations; especially is this true in New Mexico, where the proposed boundaries would embrace about 4000 individual Indian allotments on the public domain together with certain areas purchased for the Indians with their own tribal funds and lands exchanged for the Indians with the Santa Fe Railroad Co.

INDIAN RELIEF. General economic conditions among the bulk of the Indian population continued unfavorable during 1933. In common with the general trend throughout the country, the extent of Indian relief has increased many-fold during the past few years.

Generally unfavorable economic conditions, particularly in the farming and livestock industries from which the greater part of the normal Indian income is directly or indirectly derived, and the difficulty—even impossibility—of securing outside employment have naturally reacted to the serious disadvantage of the Indian. In the vicinity of many of the reservations, work for Indians, able-bodied and willing, was simply not to be had. The market for Indian handicraft and other products had dwindled. The traders are overstocked with such goods; the volume of credit which these merchants could extend the Indians has been greatly curtailed.

Some sections witnessed a recurrence during 1933 of serious drought conditions and grasshopper infestations, though the Indians' crops, particularly their subsistence gardens, showed considerable improvement over the previous year. More than 40 carloads of clothing was secured for issue to needy Indians from surplus stocks of the War Department. Among the items included were 35,000 pairs of breeches, 123,000 suits of woolen underwear, 6000 coats, 40,000 overcoats, 33,000 shirts, 24,000 pairs of shoes, 176,000 pairs of socks, 25,000 caps, 10,000 pairs of leggings, and 1000 mufflers.

The Indians continued to share in the distribution of flour and of cotton goods and garments through the Red Cross. Approximately 5,000,000 pounds of flour were secured from this source, together with many thousands of yards of prints, gingham, muslin, outing flannel, shirting, and other kinds of cloth, and a large quantity of underwear, hose, outer garments, sweaters, comforters, and blankets. In the distribution of these garments special attention was given the need of the women and children, the clothing received from the War Department surplus being almost entirely for the men.

INDIUM. See **CHEMISTRY, INDUSTRIAL OR APPLIED**, under *Metals and Alloys*.

INDO-CHINA, or FARTHER INDIA. The southeastern peninsula of Asia comprising the following divisions: BURMA, politically attached to British India; SIAM, a self-governing monarchy; FRENCH INDO-CHINA; STRAITS SETTLEMENTS, a British colony; FEDERATED MALAY STATES and UNFEDERATED MALAY STATES, under British protection. See the separate articles on the above.

INDUSTRIAL CHEMISTRY. See **CHEMISTRY, INDUSTRIAL OR APPLIED**.

INFLATION. See **BANKS AND BANKING; UNITED STATES under Administration; BUSINESS REVIEW**.

INFRA-RED. See **PHOTOGRAPHY**.

INGENHOHL, ADMIRAL FRIEDRICH VON. A German naval officer, died in Berlin, Dec. 19, 1933. He was born at Neuwied, June 30, 1857. Beginning his naval career in 1874, he was soon afterwards assigned to service in the Far East where he remained for a number of years. He was placed in command of a gunboat during the Chino-Japanese War of 1895 and it was under his direction that the Germans fired on certain Chinese forts for shelling one of their boats. He served also on several African punitive expeditions. He was at the Admiralty in Berlin from 1897 to 1901

in the capacity of supervisor of fighting equipment. In 1904 he received the appointment of commander of the royal yacht *Hohenzollern*, becoming intimate with the Kaiser during the latter's trip to confer with the Czar in 1905 and again during the same year on his trip to Tangier. Two years after his promotion in 1906 as naval aide-de-camp to the Kaiser he was made admiral of the High Seas Fleet, and at the outbreak of the World War was commander-in-chief.

Admiral von Ingenohl commanded a squadron in the battle of Helgoland, Aug. 28, 1914. After this and other reverses he ordered a series of raids on the British coast, the most important of which was that of December 16 when the Yorkshire towns of Hartlepool, Whitby, and Scarborough were bombarded and nearly 100 non-combatants were killed and 500 wounded. These raids, however, did not meet with the approval of all of the German naval officials. He was removed from his command in February, 1915. The Allies demanded his extradition as one of the "war culprits" after the Armistice, but Germany refused to comply with such a request.

INLAND WATERWAYS CORPORATION. See CANALS.

INNER MONGOLIA. See MONGOLIA.

INNES, ROBERT THORBURN AXTON. A British astronomer, died at Surbiton, England, Mar. 13, 1933. Born in Edinburgh, Nov. 10, 1861, he emigrated in early manhood to Sydney, Australia, where as an amateur he became interested in astronomy. In 1896 he was appointed secretary of the Royal Observatory at Cape Town, South Africa, and in 1903 became director of meteorology for the Transvaal. As Union Astronomer at the Johannesburg Observatory during 1911-27, he won recognition for his discoveries and records of more than 1200 binary or double stars, inaugurating thereby a new epoch in their study. In 1931 at the London meeting of the British Association for the Advancement of Science, Dr. Innes described the method of stereoscopic projection which he had devised for showing figures and scenes in relief. At the time of his death he was chairman of the Innes Film Projection Co., Ltd. The University of Leyden conferred upon him the honorary degree of Doctor of Science. Among his monographs were *Discovery of the Nearest Star, Proxima Centauri and Proof of Oscillations in the Length of the Day*. He prepared also a catalogue of the double stars which he had discovered in the Southern hemisphere.

INSECTICIDES. See ENTOMOLOGY, ECONOMIC.

INSECTS. See ZOÖLOGY.

INSULL, MARTIN AND SAMUEL. See INTERNATIONAL LAW.

INSURANCE. Production of new life insurance and premium income in fire and casualty insurance continued to decrease as compared with corresponding months in 1932, but the decreases grew less and apparently were at the point of ceasing as the year closed. Underwriting of fire and life insurance did not present very serious new problems as companies had adapted themselves to depression, but in casualty insurance and suretyship extreme caution was necessary in underwriting classes most affected by the general financial conditions. Progress was made in bringing harmony among different interests in the business, notably between the fire and casualty companies and the inland marine companies whose invasion of the fire and casualty field had caused trouble. Several casualty com-

panies which had disturbed that branch of the business failed.

General banking and financial conditions created very serious problems for insurance. Collection of premiums, already slow, became very difficult when the bank moratorium in March tied up the funds of both assured and agents and, as many banks failed to reopen, this condition continued. As premiums in course of collection, more than 90 days due, are not admitted by State insurance departments as assets of fire and casualty-surety companies, insurance commissioners of more than 20 States notified companies of these classes to report to them the names of all agents in their respective States who owed balances more than 90 days due on October 1.

When the bank moratorium was declared life insurance companies faced a crisis, which was averted only by the prompt action of the States in declaring a moratorium on granting of policy loans and payment of cash surrender values exceeding \$100. These restrictions were lightened as the banking situation grew easier and were removed before the end of the year. Fire insurance companies, with their cash in closed banks and little money coming in, availed themselves of their right to withhold payment of losses until the expiration of 60 days (in a few States 30 or 45 days) from receipt of proof of loss, as provided in the standard policies of the various States. Previously they had usually paid immediately upon receipt of proof. Casualty and surety companies were called upon to pay not only current losses but millions of dollars in old losses, payable in installments as provided by workmen's compensation laws or when liability should be determined by the courts. As these losses had occurred they had set up reserves to meet them when they should become due, but the reserves were invested and to sell securities on a depressed market would have meant a loss which some companies were in no condition to stand. Inability to get cash income enough to meet outgo was one factor in the failure of several companies.

Approximately 40 companies of all classes ceased business as the result of failure, voluntary retirement or merger. Among the failures were those of several life and casualty companies of considerable size. A number of companies reduced capital to create surplus, and the surplus of a few casualty companies was strengthened by contributions from the fire insurance companies which own them. Through the aid of the Reconstruction Finance Corporation a few companies were able to meet in part certain pressing obligations and defer the balance to a future time when changed conditions may relieve the companies of liability without loss to the creditors.

The Rehabilitation Law of New York State, enacted in 1932, was called into use for the first time when a court, on application of the Superintendent of Insurance, ordered him to take over a large New York City fire insurance company for rehabilitation. Because of excessive losses by depreciation of securities this company was unable to meet its obligations. Under the old law it would have been ordered liquidated, but, as it appeared that it might be saved, the new law was invoked. The rehabilitation order restrained creditors from bringing suit for claims and kept the corporation alive although it did no new business. As the stock market improved its secu-

rities increased in value and it became technically solvent and before the end of the year it appeared that the court would soon order it restored to its directors to resume business. Later a large surety company was taken over for rehabilitation. Part of its assets and business were immediately transferred to a new corporation which proceeded to write business of profitable classes, using the agency organization of the old company. All the stock of the new corporation is held by the Superintendent of Insurance in trust for the benefit of creditors of the old company. By this plan a very valuable agency plant is salvaged to earn money for creditors, while in case of liquidation or receivership the value of the producing organization is usually lost.

LIFE INSURANCE. No surprise was occasioned by a considerable falling off in production of new life insurance as compared with 1932. The industrial branch made a better showing than the ordinary while the amount of group insurance written was only a little more than half that of the previous year. Remarkable growth of annuity business, reported by a number of companies, appears to indicate that many persons have concluded that the most satisfactory method of providing for their declining years is through the purchase of annuities from institutions which have proved themselves sound investors.

In December the Association of Life Insurance Presidents gave out the following approximate figures for the year, based upon data contributed by 204 companies which have in force about 98 per cent of the business of all United States legal reserve companies: Life insurance in force, Dec. 31, 1933, approximately \$95,000,000,000, or 5 per cent less than a year ago; number of policyholders, 63,000,000; new insurance paid for during the year, \$13,000,000,000, or 10.4 per cent less than in 1932. During 1933 the companies disbursed to policyholders and beneficiaries (exclusive of loans) \$3,100,000,000, of which \$2,175,000,000 went to living policyholders as matured endowments, annuities, surrender values and disability benefits, and \$925,000,000 to beneficiaries as death claims. At the end of the year legal reserve companies had assets estimated at \$21,135,000,000, an increase of \$340,000,000 for the year. The mortality experience was not quite as favorable as in 1932 but better than for any previous year except 1931 and 1932. More than half the increase in 1933 resulted from heavier mortality from organic heart disease. Suicides, however, decreased from 39.9 per 100,000 to 34.8.

When the moratorium was declared to save the banks the life insurance companies were threatened with disaster. With millions of outstanding policies containing guaranteed cash and loan value provisions and with most of the companies' own cash locked up in the closed banks, they faced a demand from policyholders for cash which they could not supply. Yet to default on their contracts might have exposed them to suits for receiverships and it certainly would have affected the public's faith in the soundness of life insurance. While this danger was averted by the prompt declaration by the States of moratoria on payment of cash values and granting of loans, the perilous position in which life insurance had been placed made thoughtful men consider the possibilities of the future. A committee of one of the leading actuarial societies made an elaborate report, in which it pointed out the danger in guaranteeing such

large cash and loan values and the ill effects this practice has upon both companies and their persistent policyholders. However, the laws of numerous States require these liberal guarantees and only by the slow process of amending statutes can a change be made.

Most of the leading life insurance companies which had not reduced their dividends to holders of participating policies at the beginning of 1933 announced reductions for 1934. Neither earnings of interest in excess of reserve requirements nor savings from mortality appear likely to be as large for some time to come as they were for a number of past years, and these are the chief sources of dividends to policyholders. Interest rates are lower. Life insurance companies are obliged to carry abnormal bank balances to be prepared for demands for policy loans and cash values. An unusual portion of their assets is unproductive due to interest being in arrears and the necessity of taking over large amounts of real estate by foreclosure. The mortality among holders of ordinary policies is not as favorable as formerly, due in part to deaths among heavily insured men from suicide or heart disease. Among industrial policyholders, however, the death rate continues low.

When legislatures met at the beginning of the year their attention was largely directed to efforts to relieve the plight of debtors. Numerous mortgage moratorium laws were the result. Some prohibited foreclosures under certain conditions for specified periods. Others gave the courts wider discretion in dealing with foreclosure cases. This legislation looked rather threatening to life insurance companies. However, they had no desire to foreclose mortgages if they could reasonably avoid doing so, and later the Federal government set up machinery to assist by loans home owners and farmers threatened with loss of their property.

FIRE INSURANCE. Companies writing fire insurance and allied lines were confronted with unusual problems, largely financial. Failure of an important casualty-surety company in January created fears as to the solvency of other insurance institutions known to be financially weak. In March thousands of policies in the Globe & Rutgers Fire Insurance Co. of New York were cancelled and the company was unable to pay the return premiums. Its surplus of nearly \$50,000,000 at the end of 1929 had been virtually wiped out by depreciation of securities, largely common stocks. It became necessary for the New York Insurance Department to take the company over for rehabilitation and it kept charge of it for the rest of the year, the company alternating between solvency and insolvency as stock prices rose or fell.

Collection of premiums, long difficult, became temporarily impossible when the bank moratorium was declared. The unusually large cash balances many companies had been carrying also were tied up, and most of the companies decided to withhold payment of losses for the period provided in their policies, usually 60 days. This plan, ameliorated from time to time, was followed during the remainder of the year. Companies also decided not to recognize as losses under their policies damage resulting from "scorches," chiefly caused by cigarettes, where no actual fire occurs. Whatever the cause, fire losses suddenly dropped in March and continued very low for the remainder of the year. Although

premium income continued to decline somewhat, with a resultant higher expense ratio, the loss ratio was low and companies generally made an underwriting profit.

One of the most constructive efforts of the year was the demarcation of the fields of marine insurance companies on the one hand and of fire and casualty companies on the other. Inland marine insurance companies had written much business previously written by fire or burglary companies. Most of the companies of these classes had reached an agreement, but it was not binding upon those not parties to it. The Superintendent of Insurance of New York promulgated a definition of marine insurance, clearly setting out the classes of risks companies of each class may write and commissioners of many other States promulgated it for their jurisdictions. Then the companies of the three interested classes set up a joint committee to interpret the ruling and decide doubtful cases. Its decisions, when approved by the insurance commissioners, will be as binding as the definition itself.

When the National Industrial Recovery Administration decided that insurance companies must file codes (although insurance has never been under federal supervision) fire, marine and casualty-surety companies, agents, and brokers filed codes containing the minimum requirements. The National Association of Insurance Agents, however, reserved the right to file a supplemental code of fair practices for the production branch of the business. In October it prepared a draft which created some consternation among companies, as its filing, if followed by approval, would have compelled them to abandon many established practices and to revamp organizations built up at great expense for the production of business. The companies, other than life, and the agents opened negotiations in an effort to correct by voluntary action by the companies practices to which the agents object and, if possible, avoid the filing of a code. Conferences produced no results and just before the end of the year the agents' code was filed.

Other classes of insurance written by fire companies presented no very unusual conditions. The volume of automobile fire and theft insurance decreased with the diminishing insurable value of old cars, not replaced as usual by new ones. Notwithstanding some destructive storms along the Gulf coast it is doubtful if losses under wind-storm policies varied much from normal. Depressed farming conditions reduced purchase of hail insurance on growing crops.

Only about a dozen fire insurance companies, chiefly small ones, ceased operation through failure, voluntary liquidation, reinsurance or merger.

CASUALTY-SURETY. Companies engaged in the casualty and surety business had a peculiarly trying year. Not only was the loss experienced in most of the major classes bad but the financial difficulties were severe. Premium income was reduced and collections were hard, but losses had to be paid as they became due. About a dozen of the weaker companies failed. A few were merged. Over \$3,000,000 was paid into the capital of casualty companies by fire companies which owned them, and a few increased capital and secured necessary cash by selling first preferred stock to the R.F.C. and junior issues to stockholders and outsiders.

The chief failures were those of the Union In-

demnity Company of New Orleans, the International Re-Insurance Corporation of Los Angeles and Lloyds Insurance Co. of America, New York. The Union Indemnity was one of a group of companies owned by a holding company which was unable to supply any more money. The other two had each absorbed a number of companies which, with few exceptions, had operated in an unorthodox way and were actually or nearly insolvent when merged. Their failure, which caused no surprise, considerably cleared the field of institutions which were writing at less than the usual rates, paying excess commissions or accepting business with too little discrimination and made it easier for the remaining companies to operate on sound lines. The National Surety Company in April, though technically solvent, had not cash to meet current demands and was taken over by the New York Insurance Department for rehabilitation. This action was attacked in court and the constitutionality of the law under which it was taken was questioned. Both in the Supreme Court and in the Appellate Division the law was upheld, as was also the financing of the National Surety Corporation out of the assets of the National Surety Company to continue part of the business of the old company and earn money for its creditors. The old company is still in rehabilitation.

Several surety companies which had guaranteed mortgages continued to be hard pressed. In a number of instances it was possible to induce holders of mortgage certificates to take part cash, furnished by the R.F.C., and to take new certificates for the balance at a lower interest rate. This reduces the surety companies' disbursements for interest and a normal rise in real estate values within a few years may relieve them of any loss. Closing of many banks created demands upon surety companies under depository bonds and was one cause of the crisis in the affairs of a few of them.

Workmen's compensation insurance continued to cause casualty companies heavy losses. New methods of rating were studied in the hope of enabling the companies to reduce these losses, but they have not yet become effective. Many companies were obliged to restrict their writings of this class. In December two prominent companies announced that they had ceased writing it altogether. There appears to be no way in which this class can be made profitable unless the States which control the rates will permit insurance companies to charge rates which experience shows to be necessary. States generally, through their own officials or boards, decide what workmen's compensation insurance carriers must pay. The difference between premiums collected under State controlled rates and losses paid by direction of representatives of the States is insufficient to meet operating expenses and taxes. States which do not want their employers burdened too heavily in paying for workmen's compensation insurance have been able to protect them by refusing to permit adequate rates to be charged. Insurance companies have made good the deficit out of profits in other States or on other classes of business, hoping that conditions would improve. As the companies generally have suffered an underwriting loss on this class of \$141,000,000 during the decade closing with 1932, they have about reached the limit of endurance.

Automobile liability insurance, the class of casualty business involving the largest premium

income, has ceased to be dependable as a source of profit. While the number of accidents is reduced because fewer cars are on the roads, a great number of cars are dangerous because old and worn out, and in some territories damage case lawyers are very active and juries award heavy damages for personal injuries. The great reduction in premium income from automobile liability insurance has left it very doubtful whether any profit will accrue after losses, expenses and taxes are paid. Automobile property damage insurance has continued quite generally to be profitable but it is a mere item compared with automobile liability insurance.

In the other branches of casualty insurance conditions have not been extraordinary. In some territories it has been necessary to advance rates for plate glass insurance and for bank robbery insurance.

INTERNAL COMBUSTION ENGINES. By far the outstanding Diesel installation of the year was the 35,000-horsepower municipal plant for the city of Vernon, Calif., an industrial centre adjacent to Los Angeles. This installation, comprising five 7000-horsepower, two-cycle, double-acting Diesels, went into service on June 19, 1933 and has the distinction of being the largest Diesel plant in the United States. It is outranked in size only by the Diesel station at Shanghai, China.

Aside from its size, the Vernon plant is notable in that it contains all the latest refinements, such as waste-heat boilers to recover much of the heat of the exhaust for evaporative purposes; and all the air, before being sucked into the cylinders for combustion, is first washed and filtered.

Another municipal plant, that at Rockwell Center, Long Island, N. Y., installed a 2800-horsepower Diesel as an addition to its existing units, thus bringing its total capacity up to 7200 horsepower in Diesel power.

In general, however, 1933 saw more activity in the field of small Diesels, both as to output and development. The number of orders placed for such units was about twice that of 1932, but only half that of 1929. The United States Navy contracted for about 50,000 horsepower capacity in units for submarines, launches and auxiliary drive. The present naval programme calls for about 150,000 horsepower of this type of power.

Development during the year was directed toward the small light-weight Diesel for application to trucks, tractors, small manufacturing plants and rail-car service. The stream-line train of the Union Pacific is propelled by a Diesel unit and a ten-car train is said to be under consideration.

The Public Works Administration at Washington has received many applications from small and medium-sized towns for loans to construct municipal power plants. It is anticipated that among those that have already been granted, and among those which the government may deem advisable to grant, the Diesel engine will play an important rôle.

INTERNAL REVENUE. See TOBACCO.

INTERNATIONAL AIR MEET. See AERONAUTICS.

INTERNATIONAL ARBITRATION. See ARBITRATION, INTERNATIONAL.

INTERNATIONAL BANKING. The idea of an international control over banking; and, if possible, of an international adjustment of mone-

tary questions and systems, had long occupied the attention of the financial markets of the world, prior to the year 1933, and at times some approach to progress had been made in such a direction. At the same time, there had been a practical effort, on the part of bankers in the chief trading nations, during the years before 1929, to bring about a closer international use of funds, and to induce the borrowers in the various parts of the world to avail themselves indifferently of the respective markets, in the thought that such unification and competition would tend to bring about standard conditions of credit extension, and would thus make it practicable to shift funds readily between markets. The establishment of the Bank for International Settlements in 1930 had been an earnest of this intent, and represented the general belief that joint control of money and investment systems by the central banks of the major countries was a possibility of the early future.

The year 1933 brought a rude shock to such expectations, even in the form entertained at the outset of the year. Great Britain's departure from the gold standard in the summer of 1931 and Germany's moratorium in the middle of the same year, had already made it evident that the idea of international treatment of banking would encounter some serious difficulties. Still, it was believed possible that joint action among the nations might restore community of interest and harmonize financial conditions. There were still some optimists who believed that the conference of Lausanne in 1932 had laid the foundation for a general international accord; and that, if the United States would, in collaboration with the other nations at the London Economic Conference of June, 1932, exert its influence toward harmonization of financial systems the result would possibly produce a further forward step greater than any as yet taken. This expectation, moreover, was to a certain extent, supported by the constant statements issued from the White House in Washington during the spring months of 1933, after conferences with the visiting delegates who had been invited as a preliminary to the London conference. These were to the effect that harmonious action in stabilizing currencies was to be considered a necessary step in the restoration of prosperity and the "saving of the world" from economic disaster. The outcome of the London conference was, accordingly, a severe disappointment, especially in view of the American declaration, on July 4, that acceptance of any stabilization scheme by the United States would be out of the question, owing to the unsettlement of conditions at home, and the desire that they should be more nearly fixed, before any new commitments should be undertaken.

This attitude undoubtedly dealt a severe blow to international monetary action or any early prospect of it; and, in so doing, afforded a decisive defeat to any plans of immediate international banking progress. The situation became the more evident in the course of the visit of the governor of the Bank of England to the United States during September, 1933. The governor had one or more consultations with the President of the United States; and, while no official statement of results was issued, it became definitely known that the discussions had had no practical result, either as to stabilization of currency or joint action for the control of central bank policy,

or financial operations, in the different markets of the world.

To this disappointing record in the matter of general currency action, internationally considered, should also be added the international debt situation, as developed during the year. It was a phase of the situation which had a great indirect influence upon banking, owing to the fact that, in the absence of some satisfactory settlement of the international debts, there could be no expectation of resumption of international financing on a confident basis. This was not only because of the numerous questions of a financial nature necessarily left open pending the adjustment of the debts, but also because of the fact that failure to effect settlement gave a set-back to confidence internationally speaking, and hence rendered international operations of any banking sort less certain and more open to suspicion, than for many years preceding. The fact that, even with Great Britain, in spite of two long periods of negotiation, one in March, the other in October, 1933, it was finally necessary to leave the whole subject in abeyance (with only a token payment on the part of Britain by way of technical recognition of her debt to the United States) spoke eloquently of the real conditions surrounding the debt negotiations.

The result of this decadence in international banking and credit arrangements has been reflected in a variety of ways. One—perhaps the most striking—has been the development of a large body of migratory capital—roughly and popularly estimated at some ten billions of dollars—and certainly amounting to a large figure, which is being carried by investors in the banks of the world financial centres and which takes flight from any given market whenever it sees what are believed to be symptoms of instability or danger. Lord Robert Cecil, in speaking at the Canadian financial conference of July, 1933 referred to this as “unwanted money,”—so far as the London market was concerned—because of its instability; and most other markets of the world have about the same attitude of mind with respect to it. The migratory character of these foreign holdings—a large part of them carried abroad by central and other banks in various countries because of lack of confidence in their own home conditions—has been demonstrated so far as the United States is concerned, by the great variations in the foreign balances carried with American banks by institutions located elsewhere. Secretary Mellon had estimated the total of such balances in 1927 at about \$2,000,000,000, but during the past season they fell to not over \$250,000,000 to \$500,000,000 according to the best estimates.

Such uncertainty of safety for deposits was also made manifest by the steady decadence of international borrowing and lending and of financing generally. So far as long-term bonds were concerned, the year 1933 witnessed what amounted to a practical termination of any foreign lending whatever, and while the London market appeared to show some recovery in this respect, during the period, it was apparent that such recovery was largely due to the decadence of other markets, and consisted to a large extent, in the refinancing of obligations which had to be cared for in some way in order to avoid larger loss on the part of existing holders. Short-term financing of international trade assumed a more definitely secured or very short-term basis, and

American institutions often thought it needful to inform even their best customers—some of long years' standing—in various South American countries, that it would be possible to provide for financing their products only against documents, their overdraft facilities being definitely terminated for the time. Somewhat the same position, in a less acute form, was accepted by not a few of the foreign institutions and in finance, as in business and manufacturing, the year showed a definite trend toward a distinctly local type of operation, with dependence upon outside aid or accompanied by foreign participation confessedly brought to a close.

It was not strange that, in such circumstances, there should be a reduction in the amount of facilities for foreign or international banking at the service of the world in general. American banks, which had built up a total of branches which after various vicissitudes had reached a level about equal to the highest figure of past years, now began to rescind their commitments in this regard. One of the best known of American institutions closed its Paris offices, and similar action was taken by others. British banks were less disposed to give up their long established foreign branches, but they tended to cut down the quantity of accommodation there extended. Military disturbances in various countries, such as Cuba, forced like action on the part of all foreign financial establishments. The year must undoubtedly be reckoned a period of general retrogression, not only in the total amount of international banking operations both long and short term, but also in the total number of establishments open for business. Reductions of staff in the foreign exchange departments of not a few American banks likewise reflected the tendency toward reduction of facilities available to the public.

The Bank for International Settlements, established at Basle, Switzerland, during the year 1930 had, soon after its organization, determined to conduct operations only in gold or gold-convertible currencies. The moratorium of Germany was a blow to the Bank not only because of the lessening of profitable business involved (German reparations having been one of the main reasons for the establishment of the Bank), but also in consequence of the elimination of German currency as a satisfactory medium for its operations. Abandonment of the gold standard was a still more severe disappointment. When the United States gave up gold in March, 1933, the Bank for International Settlements found its sphere of international transactions closely circumscribed while the growing doubt about the reliability and safety of international finance was tending more and more to restrict its field of activity. As a result, the Bank thought best to cut down its staff, and reduce salaries, while some were inclined to predict that the institution would not be able to find the business upon which to subsist, unless a distinct change of outlook, internationally, should be brought about, and at no distant date. Belief in the possibility of an international currency had, from time to time, been voiced, even during the year 1933, and unquestionably has still some academic advocates, but generally speaking, any step of the sort is to-day admitted to be less within the range of feasibility than at any time in the past fifteen years. It must depend largely upon the possibility of bringing about a disposition on the part of

the principal countries to agree upon some means of stabilization. From that to an international currency, or the holding of central bank balances in an internationally-organized institution is seen to be a still longer step in advance;—far beyond anything now reasonably to be forecast. It is, however, worthy of note that, during the year 1933, a Federal representative on the Board of Directors of the Bank for International Settlements was arranged for, and permission granted by the government at Washington. This represented a reversal of the policy in the matter which had been pursued by President Hoover.

The problem of international banking was more and more generally admitted, at the close of the year 1933, to be actually a problem of the restoration of world trade, and the readjustment of world indebtedness. As for the former, it was itself in turn recognized as dependent upon the pursuit of a less "nationalistic" policy by the nations of the world, chiefly interested in trade. The adherence of the United States to an obvious policy of nationalism, and the creation of the British empire trade coalition are possibly the two events most discouraging from the standpoint of commercial internationalism. The readjustment of world debts and the arrangement of resources to meet interest and amortization on such debts, is in its turn, a problem dependent upon the restoration of trade. With a declining volume of trade, restoration of the debt payments, whether public or private, to a live and collectible basis will be out of the question. The debt payments, whether of interest or principal on the scale proposed in 1928-1929 are obviously far above any probable level of settlement in existing circumstances.

Pending the formal readjustment of these obligations, they remain as a source of friction and possible military conflict; and, as such, a definite impediment of almost insuperable character to the reinstallation of international banking and financing in anything like the position it possessed, much less contemplated, a few years ago. Much will depend for the early future, both as to the collection of present debt, and the financing of trade, upon the early settlement of the monetary question and the abandonment of the idea of currency and banking warfare which has had so dangerous a growth during the past year. The whole system of international banking is thus, with the close of 1933, definitely at a turning-point in its development.

INTERNATIONAL EXHIBITION, FIRST.
See SCULPTURE.

INTERNATIONALISM. UNIVERSAL CHRISTIAN COUNCIL. The year 1933 was a momentous one in the life of the Christian world, and it seems especially significant that in this time of great strain and of testing in Germany there existed a point of definite and official contact between the German churches and the churches in other lands through the Universal Christian Council. Most of the events of the year which are worthy of permanent record relate in one way or another to this German Church situation.

To begin with, a special conference called by the Council to consider the problem of unemployment, with special reference to the Christian ethic in economic life under the different forms of government, was in session at Rengsdorf at the time of the revolution in Germany. Its leaders, men of distinction from the churches of various lands, were therefore brought into immediate con-

tact with the developing problem of the Church and state, just after they had authorized a special study of that subject in the Research Department of the Council. In the months immediately following a number of emissaries went to Germany under the auspices of the Council for conference with Christian leaders. Secretary Henri L. Henriod and Research Director Hans Schönfeld went from the central office in Geneva; the Dean of Chichester was sent as the personal representative of the Archbishop of Canterbury and the Bishop of Chichester, President of the Council. Dr. William Adams Brown of New York, Chairman of the Administrative Committee, made several visits to Berlin, and these were followed by Dr. Samuel McCrea Cavert, General Secretary of the Federal Council of Churches, who was the special representative of the American Section of the Universal Christian Council.

This trip by Dr. Cavert was chronologically related to the holding of the first informal inter-organizational council of the five chief ecumenical movements in the non-Roman Church world, which met under the chairmanship of the Archbishop of York at Bishopthorpe, York, England. A second similar meeting was held at Paris in mid-summer likewise under the Archbishop's leadership and representatives of the International Missionary Council, the World Alliance for International Friendship Through the Churches, the World Conference on Faith and Order, the World Student Christian Federation, and the Universal Christian Council, discussed points of coöperation, relationships of programmes, and the general bearing upon church life of the German situation.

Reichsbishop-elect Müller, finding that he could not personally attend the meeting of the Universal Christian Council at Novi Sad, sent seven representatives. At this conference, held under the auspices of the Eastern Orthodox Church and assembled in the palace of the Bishop of Novi Sad, representatives of Anglicanism, Protestantism, and Eastern Orthodoxy, as well as the Old Catholic Church on the Continent, joined in a series of negotiations. While a good many items of business were attended to, the most important matter was the decision to remain in fellowship with the German Church while sending to the leaders of that Church, through the medium of a personal letter from the Bishop of Chichester, a frank statement of the concern felt by churchmen everywhere over the racializing and nationalizing tendencies manifest in German Church life.

At this meeting there was reported the result of a world-wide study of the desire of the churches with respect to the Fixation of Easter and the possibilities of calendar reform. This question had been referred to the Council by the League of Nations and the report of the Research Department in this field while significant in itself is even more significant because it represents the most comprehensive compilation of church views with respect to a common problem that has ever been made.

Another important action at the meeting in question was the creation of an international Christian press organization at Geneva to expand the work of the Press Commission of the Council which had been functioning for some years through Berlin.

When the Disarmament Conference reassembled for its short and ill-fated session in Geneva, the Council took the lead in reviving the activities of the International Christian Committee on Coöperation with the Disarmament Conference,

through which the many Christian bodies centering in Geneva functioned as a unit with relation to this conference.

The representatives of the American Section in connection with these various European undertakings of the summer included Dr. S. Parkes Cadman, chairman; Dr. Henry A. Atkinson, Dr. William Adams Brown, and the Rev. Henry Smith Leiper, secretary. During the fall months two meetings of the Administrative Committee were held: one in London, the other in Paris. Among other important matters the committees dealt with the question of German refugees, since the Council had been placed on the advisory body created by the High Commissioner for German Refugees, James G. McDonald.

The American Section held two meetings in New York City: one at Riverside Church in conjunction with the Federal Council's Department of International Justice and Goodwill for a discussion of the German Church situation and the other at the George Washington Hotel, where a very comprehensive résumé of the Church situation, both in Orient and Occident, was given by experts.

WORLD ALLIANCE FOR INTERNATIONAL FRIENDSHIP THROUGH THE CHURCHES. The 18th annual meeting of the World Alliance for International Friendship through the Churches, with which was combined the International Goodwill Congress, was held in Philadelphia, Nov. 10 and 11, 1933. A statement was issued containing these declarations:

The World Alliance reaffirms its confidence in the Pact of Paris, commonly known as the Briand-Kellogg Treaty, binding the signatory nations to renounce war and never to seek the settlements of disputes between them except by pacific means. This pact is the charter of a new international order and will put an end to international war, provided each of the governments signatory thereto keeps its word.

We recommend that the government of the United States, in the name of the people, propose an amendment to the Pact of Paris through which all the signatory nations will pledge themselves in the event of hostilities in the violation of the Pact, or the threat of such hostilities, promptly to consult together to determine upon such joint measures as will help to maintain peace.

We heartily endorse and approve the action of the government of the United States in refusing to recognize new governments or jurisdictions, or territorial accessions made without regard to the terms of the Pact of Paris and the Covenant of the League of Nations.

Shaping up its programme for 1934, the Congress adopted resolutions requesting the government to declare it would not send armed forces beyond the borders of the United States and to announce its purpose of abandoning all weapons of offensive warfare whenever other nations do likewise.

WORLD FEDERATION OF EDUCATION ASSOCIATIONS. A meeting of the World Federation of Education Associations was held in Dublin, Ireland, during August, 1933. Questions of international interest were discussed concerning understanding and coöperation and the various subjects which came under the departments of the Federation, such as: health, work of parent-teachers' associations, higher education, and procedures in the various school levels. The dual-language problem was also considered.

COMMITTEE ON WORLD FRIENDSHIP AMONG CHILDREN. This committee, whose slogan is "We who desire peace must write it in the hearts of children," inaugurated an educational campaign, beginning in October, 1933, and culminating on World Goodwill Day, May 18, 1934. Its chief features were the sending of picture postcards

with friendly greetings from American children to those of foreign countries, and good will messages, the best to be selected from each school or group, and the writing of compositions on world peace. The secretary of this committee was Sidney L. Gulick, 287 Fourth Avenue, New York City.

CONGRESS OF INTERNATIONAL RADICAL AND DEMOCRATIC PARTIES. At the Ninth Congress of International Radical and Democratic parties held in Sofia, Bulgaria, France sent a notable delegation headed by M. Edouard Herriot. Besides England, Holland, Sweden, Denmark, and Poland, the Eastern countries, Turkey, Greece, and Bulgaria were prominent. M. Herriot's speech at the public opening meeting was very significant from the point of world peace advocacy. The delegates of all the nine countries emphasized the necessity of working for reconciliation among the peoples. Three things were postulated as necessary for this in the papers read and conclusions arrived at—arbitration, security, and disarmament.

INTERNATIONAL STUDENT SERVICE. A conference was held July 25–28, 1933, at Kloster Ettal in Bavaria, by the International Student Service. The Nazi authorities and Nazi Student Movement gave every facility for the Conference, and it was opened by Captain Ernst Röhm, head of the Nazi Storm Troop organization, and Herr Schemm, Minister of Education in Bavaria. The delegations included 20 Indians and delegates from South Africa, Canada, and Australia. The conditions of the Conference made possible some extremely frank speaking for and against Nazism. A continuation of the Conference was held at Luziensteig, in Switzerland.

INTERNATIONAL RELATIONS CLUBS. There were in 1933; 443 International Relations Clubs, a gain of 128 over the previous year. They were organized in every State of the United States; in China and Japan, in Uruguay, South Africa, etc. There were 17 in the British Isles in charge of Norman Poole, who, through special arrangement between the Carnegie Endowment for International Peace and the *Centre European* of the Endowment, was representative for the clubs in that territory.

The second annual mid-west Institute of International Relations was held at Northwestern University, Evanston, June 19–30, 1933, under the auspices of the American Friends Service Committee (Quakers). It brought together clergymen, religious leaders, and teachers from many States.

Fifty-six graduate students from British universities were in the United States in 1933 as holders of Commonwealth Fund Fellowships. Twenty-five were new appointees, and the others were spending their second or third year there.

INTERNATIONAL JUSTICE, PERMANENT COURT OF. See **WORLD COURT.**

INTERNATIONAL LAW. *Awards.* On February 16 at Lausanne, an arbitral tribunal, constituted pursuant to articles 297 and 298 of the Versailles treaty, rejected the claim of Portugal against Germany on account of acts committed by the latter, prior to the former's entrance into the World War; on the ground that all such claims were included in the "new plan" of the Hague Agreement of Jan. 20, 1930. Seventeen reasons were assigned by the tribunal of which George W. Wickersham was President, with four associates.

On April 5, at The Hague, the Permanent Court of International Justice decided on its merits the

East Greenland case (*Norway v. Denmark*, 1932 YEAR BOOK 436) awarding to the latter the disputed territory by a vote of 12 to 2, the dissenters being Vogt, Norway's Judge *ad hoc*, and Anzilotti of Italy. The basis of the majority opinion was Denmark's 1000 year exercise of sovereignty, unchallenged by any other power up to 1921, and followed by certain overtures between the two countries. The court made no order as to costs. Disappointment was felt in Norway; but King Haakon dispatched congratulations to King Christian (his brother) expressing the hope that "time will heal all wounds and thus that good collaboration will be established again to the advantage of fellow feeling in Scandinavia." But far beyond the results to the immediate parties is the significance of the judgment as the first, rendered under the compulsory jurisdiction clause (now accepted by 42 sovereignties) of the court statute; and as affecting "national honor and vital interests"—formerly considered outside the pale of arbitral negotiation. (See articles by C. C. Hyde, *Am. J. of Int. Law*, xxvii, 733 and M. O. Hudson, *Am. Bar. Ass'n J.*, xix, 423.)

Claims. In December, the oft repeated announcement from Mexico City of a prospective "lump sum" settlement of claims between the United States and Mexico, was again made; a later dispatch indicated that Ambassador Daniels was finding the subject more complicated than it first appeared and that difficulty was experienced in reaching a basis of agreement. No further steps appear to have been taken toward reconstituting the international commission which, for about five years had been considering these claims but which broke up in 1931 (see 1932 YEAR BOOK 440).

On December 18, the principality of Monaco appeared by counsel in the United States Supreme Court and asked leave to sue the State of Mississippi to recover the proceeds of bonds issued by the latter in the 1830's and presented by their one time owners to the applicant. This is said to be the first attempt to invoke the jurisdiction conferred by Fed. Const. III, 2 over "controversies . . . between a State . . . and foreign states." The sequel will be watched with great interest; for the Attorney General of Mississippi (whose present constitution expressly prohibits the payment of these bonds) announces that "every means will be employed to fight the action." These are the same bonds whose repudiation Jefferson Davis defended, even in England, where many of them were held, but of which Judah P. Benjamin wrote in 1868,

The Mississippi bonds were signed and sealed in the name of the State. Foreigners had a right to consider the faith of the State as pledged; and if the legislature or the Governor or the Secretary of State did wrong, the people of the State ought to have made them responsible and not to have punished innocent third holders of the bonds.

Conferences, Congress, etc. The American Society of International Law opened its 27th annual meeting at the Willard Hotel in Washington on April 27. The Manchurian situation seems to have suggested the subject-matter of the programme and the presidential address, as well as the several papers presented, dealt mainly with the sanctions of international law. Charles C. Hyde's paper was on "The Boycott as a Sanction of International Law"; "Non-Recognition as a Sanction" was the theme of Prof. F. A. Middelbush of Missouri State University; "Embargo as a Sanction" was discussed by Joseph P. Cham-

berlain of Columbia University; while "Intervention as a Sanction" was the subject of a paper read by Miss Ellen Ellis, a professor at Mt. Holyoke College. These papers were followed by general discussions from the floor and the whole afforded a contribution of no slight importance to the literature of a very practical branch of international law. At the annual dinner on the evening of April 29, Senator Thomas of Utah, a former resident of Japan, quoted from a Japanese poem

"There are many trails which lead to the top of the mountain,

But once the summit is gained the same moon is seen,"

and asked,

Are there not in other nations and in other countries those who are climbing up their various trails attempting to attain the heights of true appreciation, who will meet with us at the top and enjoy with us the . . . view of our accomplishment?

Aside from the Disarmament Conference (see DISARMAMENT) the chief gathering of the year for international law was the 7th Pan-American Conference, which opened at Montevideo on December 3 and remained continuously in session for over three weeks. All of the sovereign nations of the western hemisphere (21 in number) were represented and the proceedings appear to have been quite harmonious and fruitful. The conference approved three draft treaties, and a declaration on the rights and duties of states, which condemned intervention, made recognition unconditional and irrevocable and outlawed the acquisition of territory by force. There were also five resolutions and 12 recommendations. One of the latter was for a study of the unification of civil codes and submission of the results of the 8th Pan-American Conference, for use by a commission of jurists to draft a uniform American code. Various labor measures were recommended, including the establishment of an American Institute of Labor. Memorials to Columbus and Bolivar were approved and steps were taken which resulted in a brief armistice between Bolivia and Paraguay, whose representatives participated actively in the work of the conference. Those of Bolivia advanced a proposal to connect the Amazon, Orinoco, and La Plata rivers, the details to be worked out at a geographic conference to be held at Rio Janeiro in 1934. A resolution asking the participating nations to relax those sanitary regulations which interfere with trade, was approved in committee.

Extradition (see also LAW). "The principles of international law recognize no right to extradition apart from treaty," said Justice Stone in *Factor v. Laubenheimer*, 290 U. S. 276, on Dec. 4, 1933 when he upheld Factor's (Jake the Barber) extradition on the charge of receiving money "knowing the same to have been fraudulently obtained." Factor's counsel, Newton D. Baker, had argued that the act thus charged was not a crime under the laws of Illinois, where his client then resided, and that

it is a general principle of international law that an offense for which extradition may be had must be a crime both in the demanding country and in the place where the fugitive is found.

Incidentally it may be noted that this is the rule proposed by the recent Montevideo Conference for adoption by all of the American nations. But the treaty between Britain and the United States included specifically, as an extraditable offense, "receiving any money . . . knowing the same to have been fraudulently obtained"; and

Justice Stone, writing the majority opinion, considered that this language

evidenced an intention to dispense with the restriction, applied to other treaty offenses, that they must be crimes "by the laws of both countries."

Here, in other words, we find recognized the doctrine announced a decade earlier by the United States Court for China, that crimes may be created and penalized by treaty, independent of the domestic legislation. (See *U. S. v. Kearney*, 2 Extra-territorial Cases, 671.) Justices Butler, Brandeis, and Roberts dissented. The United States government renewed its request (1932 YEAR BOOK 435) upon that of Greece, for the extradition of Samuel Insull and, after another hearing before the Greek Court of Appeal, that tribunal, on October 31, in a decision said to have been rendered by three only of the five judges, one of the dissenters being President Panegerikis, decided against the request. An opinion from Dean Wigmore was produced by Insull's counsel who claimed that it supported his contention that the court might hear the case on its merits and inquire into the guilt or innocence of Insull. That, however, is contrary to the prevailing rule which is no different from the one governing interstate extradition, where, as recently stated in *South Carolina v. Bailey*, 289 U. S. 420, "the sole point for decision related to his absence from the State" (of his domicile). Nevertheless, the Greek court not only proceeded to retry the case on its merits, but rejected the affidavit presented by the American representative, quoted Insull to the effect that the bankruptcy laws (which he was charged with violating by using the assets of his various corporations as collateral for bank loans) were unconstitutional; and took into account the alleged facts that he was "old and seriously ill," had been a friend of Thomas A. Edison, had founded 52 corporations "still active"—and other quite irrelevant matters—although it conceded that some of Insull's acts were "obviously unethical but not unusual in the management of corporations." Both the manner of conducting the proceeding and its outcome seemed so indefensible that, four days after its announcement in the United States, the Department of State peremptorily denounced the treaty, recently negotiated, under which extradition had been sought and which had been in force only since November, 1932, but which provided for its own termination one year after either of "the high contracting parties" might denounce it. The American minister, MacVeigh, was instructed so to inform the Greek government.

The Greek reply maintained that the courts had the right to pass upon the merits of such charges and stated that Greek justice, according to the constitution, was entirely independent of the political branch; nevertheless the Greek government seemed to have awakened to the seriousness of the situation, for about a month later it announced that it would not renew Insull's permit for residence within the country and that he must leave it by January 31. Subsequent attempts by the accused to have the time extended finally succeeded. Meanwhile his brother, Martin J. Insull, who had taken refuge in Canada, had been ordered extradited but on December 19, for the second time had applied for a discharge from custody on the ground of insufficient evidence. But while the normal course of international justice was encountering obstacles in these jurisdictions, the highest tribunal of Italy was promoting it; for the latter, on November 3, ordered the re-

turn to Pittsburgh for trial, of Giuseppe ("Big Mike") Spinelli, charged with the "gangster" murder of the three Volpe brothers. His counsel had sought to prevent extradition on the ground that when Spinelli had applied for his first American citizenship papers, he had failed to file a declaration of relinquishment with the Italian consul. A draft treaty on extradition was one of the achievements of the 7th Pan-American Conference at Montevideo in December.

Extraterritoriality. Less was heard during the year, than in some recent ones, of the proposal to abolish the jurisdiction which certain foreign powers, including the United States, exercise over their nationals in China. In view of its government's difficulties, occasioned by the Japanese invasion, as well as by the prolongation of internal strife, it may have become less confident of its ability to protect foreigners in case their national protection should be withdrawn. Nevertheless the foreign friends of China have not been inactive in attempting to relieve the situation arising out of extraterritoriality. Undoubtedly its greatest evil is the conflict and confusion of legal systems. With 17 or more nations each applying its own laws, any approach to legal uniformity is impossible. The situation is bad enough in civil matters; but it is infinitely worse in police and criminal jurisdiction. Clearly such conditions can be relieved only by substituting one legal system for all China and subjecting all of its inhabitants, native and foreign, thereto. Clearly, too, the natural and logical substitute system would be the Chinese. It was with this purpose in view that Senator Thomas of Utah who spent five years in the Far East and knows conditions there first hand, introduced on May 15, a bill (S. 1784) to require the United States Court for China to apply the new Chinese codes instead of as heretofore, "the laws of the United States." The bill is now before the Foreign Relations Committee of the United States Senate and an article by Charles S. Lobingier, former Judge of the Court, appeared in the summer number of *Case & Comment*, explaining the purposes and probable effects of the measure.

The extent to which extraterritorial jurisdiction is exercised by the United States independently of treaty, is well illustrated in *U. S. v. Flores*, 289 U. S. 137, where defendant was charged with murder committed on an American merchant vessel, attached by cables to the shore at the Port of Matadi in the Belgian Congo. The Federal Judicial Code, sec. 102, provides that

the trial of all offenses committed upon the high seas or elsewhere out of the jurisdiction of any particular state, or district, shall be in the district where the offender is found or into which he is first brought.

Under this provision the accused was indicted in the eastern district of Pennsylvania but the indictment was dismissed by the United States District Court there for the supposed want of jurisdiction. This judgment of dismissal was reversed by the Supreme Court which held that the constitutional extension of judicial power "to all cases of admiralty and maritime jurisdiction" (art. III, sec. 2) authorized Congress to define and penalize such an offense and that

the language of the statute making it applicable to offenses committed on an American vessel outside the jurisdiction of a state "within the admiralty and maritime jurisdiction of the United States" is broad enough to include crimes in the territorial waters of a foreign sovereignty, and that a merchant vessel . . . for purposes of the jurisdiction of the courts of the sovereignty whose flag it flies, to punish crimes committed upon it, is deemed

to be a part of the territory of that sovereignty and not to lose that character when in navigable waters within the territorial limits of another sovereignty.

The opinion is by Justice Stone who learnedly reviews the history of the constitutional clause involved and most of the Supreme Court's prior decisions relating to the subject. He does not cite *In re Ross*, 140 U. S. 453, where the murder was committed on board an American vessel in Yokohama harbor and the offender was convicted by the American consul stationed there.

Narcotics. The international treaty restricting the manufacture of, and traffic in, narcotics, formulated at Geneva in 1931 and signed on July 13 of that year, came into force on July 9, 1933, by virtue of its terms, having been ratified by 30 nations and proclaimed in the United States on the following day. It provides for an international control agency to restrict narcotic manufacture to medicinal and scientific uses and meanwhile much will depend upon the effectiveness of that agency. The rapidity and extent of the treaty's ratification indicate a general desire among the nations to make the plan workable. On December 15 the League of Nations Secretariat at Geneva announced the limitations, effective Jan. 1, 1934, in every part of the world and the quantity of every dangerous narcotic drug, numbering 15, allowed each nation for medicinal purposes during the next year. The burden of proof rests upon the government of any country exceeding the limitations to overcome the presumption that its excess resulted from illicit traffic and the breach of international obligations. Similar in purpose is the opium convention, likewise formulated at Geneva, of Feb. 19, 1925. Chile deposited its ratification on Apr. 1, 1933. Turkey adhered on January 14 and gave its formal accession on April 3. The latter, apparently genuine, should prove especially helpful because much of the opium traffic has been carried on by Turkish subjects and their exclusion therefrom will go far to make the restrictions effective. Here we find international law applied to suppress a great international evil and it noticeably proceeds along the lines of the discarded 18th amendment of the Federal Constitution.

Nationality. Another subject which, by recent events and legislation has been projected into the field of international law, is nationality, especially that of married women. The 7th Pan-American Conference which met at Montevideo in December, unanimously approved a draft treaty based on the principle that nationality is an inherent right and that "neither marriage nor divorce affects the nationality of husband, wife, or children." A new British Act of Parliament, effective at the end of the year, provides that the wife of a newly naturalized British subject, retains her former nationality unless she makes formal declaration within a year after his naturalization, that she desires to take that of her husband. A new law in Mexico declares all those born of Mexican parents anywhere, and of alien parents in that country, to be Mexicans.

Non-Aggression Pacts. One of the hopeful auguries for the effective acceptance of international law among the nations, is found in the pacts and conventions of particular groups, usually those of geographical propinquity. On July 3, at the Soviet embassy in London, an "aggression definition pact" was signed by Afghanistan, Estonia, Latvia, Persia, Poland, Rumania, Russia, and Turkey. On the following day at the same

place, a similar pact was signed by Russia and Turkey with the "Little Entente" (Czechoslovakia, Rumania, and Yugoslavia). A non-aggression treaty between France and Russia was also ratified and in August, negotiations for a treaty of non-aggression and neutrality were concluded between Soviet Russia and Italy. On October 10, six Latin-American states—Argentina, Brazil, Chile, Mexico, Paraguay, and Uruguay—signed at Rio Janeiro a treaty condemning aggressive war and pledging themselves to recognize no territorial acquisitions by force. Italian adherence to this pact was announced at Rome on December 8, and it is expected that the other Latin-American states will eventually adhere; indeed the unanimity displayed at Montevideo, where the anti-war pact was on the agenda at the instance of Argentina, points to no other outcome. On November 29, representatives of Peru and Chile signed a special protocol for the erection of a statue of Christ on the heights of Morro de Arica, symbolizing the new era of peace between them.

Following three Balkan conferences, a pact of enormous significance to world peace was negotiated between their various participants—Albania, Bulgaria, Greece, Yugoslavia, Rumania, and Turkey. For that part of the world has heretofore been a breeding place of wars—as in June, 1914. On November 27, following a visit of King Alexander to Turkey, the pact was signed at Belgrade between the latter country and Yugoslavia. On December 10, King Boris and Queen Joanna of Bulgaria arrived in Belgrade for a three-day visit which was marked by extraordinary manifestations of good will on the part of the hosts—monarch and people—and is expected to pave the way for the two Balkan nations which have been most estranged to join in the pact. King Boris later visited King Carol at Bucharest.

Other Treaties. Legislation by treaty has been quite extensive during the year, all told. On Jan. 1, 1933 the "International Convention for the Safety of Life at Sea" came into force by virtue of its art. 65 which provides that it shall do so three months after deposit of the 5th ratification. By the date named the following nations had ratified: America (United States of), British Empire, Canada, Denmark, Finland, France, Germany, Italy, Netherlands, Norway, Spain, and Sweden. By March, ratifications had been deposited by Brazil, Danzig, Hungary, Iceland, and Portugal. By April, China had ratified.

Ratifications were exchanged between the United States and Mexico of the treaty for the rectification of the Rio Grande boundary, and the improvement of the river with a special view to flood prevention, of which the former country undertakes to defray 88 per cent of the cost. Most of the work is needed in the Juarez-El Paso region.

Opposition to the St. Lawrence Waterway treaty seemed to be growing as the year closed. No attempt seemed to be planned to bring to a vote in the Senate, the World Court protocol, although the State Bar Association of Idaho, home of the protocol's chief opponent, adopted a resolution in favor of it. Some interesting decisions relative to treaties were rendered during the year. We have already noted (ante p. 371) that which recognizes the treaty as a proper source of penal law. In *Cook v. U. S.*, 288 U. S., 102, the treaty of 1924 between the United States and Great Britain was construed in the light of its history, in a lengthy opinion by Justice Brandeis and was found to reaffirm

the principle that 3 marine leagues extending from the coast line outwards and measured from low water mark, constitute the proper limits of territorial waters

But the treaty also authorized the seizure of suspected vessels at a distance no greater "from the coast of the United States . . . than can be traversed in one hour by the vessel suspected." This was construed to modify an earlier customs law provision authorizing the seizure of vessels within four leagues of the coast. It was also found that "in a strict sense the treaty was self-executing, in that no legislation was necessary to authorize executive action pursuant to its provisions." Here two important principles governing treaties are announced in the same decision.

Taxation. In *Burnet v. Brooks*, 288 U. S. 378, the court dealt with the fiscal relations between a government and aliens domiciled within their own territory, holding inapplicable to the latter the domestic "rule of immunity from taxation by more than one State"; and, reversing the Board of Tax Appeals, and the Circuit Court of Appeals, upheld the collector of internal revenue in taxing securities, deposited in New York Banks, of a non-resident British subject. The court cited *Winans v. Attorney General*, (1910) A. C. 27, where the House of Lords held taxable in England securities of an American citizen domiciled in his own country, and where Lord Atkinson said:

There does not appear, *a priori*, to be anything contrary to the principles of international law, or hurtful to the polity of nations, in a State's taxing property, physically situated within its borders, wherever the owner may have been domiciled at the time of his death.

INTERNATIONAL RADICAL AND DEMOCRATIC PARTIES, 9TH CONGRESS OF.
See INTERNATIONALISM.

INTERNATIONAL RELATIONS CLUBS.
See INTERNATIONALISM.

INTERPARLIAMENTARY UNION.
Amidst particularly unfavorable circumstances, the Interparliamentary Union once again proved its vitality. A few months after the German Revolution, at the close of a summer marked by the continual delays of the Disarmament Conference and the failure of the World Economic Conference, the Madrid meetings, Oct. 4-10, 1933, might well have taken place in an atmosphere of skepticism and limp resignation. On the contrary, the discussions have rarely been of such continued interest, interpreting as they did the unanimous desire of all the delegates to increase the prestige and the authority of the Union as the mouthpiece of the elected representatives of free nations.

There were more than 150 delegates from the following 26 Parliaments or Groups: United States of America, Belgium, Bolivia, Bulgaria, Colombia, Czechoslovakia, Denmark, Egypt, Finland, France, Great Britain, Guatemala, Hungary, Japan, Latvia, Mexico, the Netherlands, Norway, Panama, Poland, Rumania, Spain, Sweden, Switzerland, Turkey, Venezuela. The Congress of the Argentine Republic announced its accession to the Union.

The Head of the State, President Alcala Zamora, extended the delegates a personal greeting and welcome. Señor Zamora, who was a former member of the Union, had participated actively in its work. Julian Besteiro, President of the Constituent Cortes in Madrid and of the Spanish Interparliamentary Group, was elected president of the conference by unanimous vote.

Influenced by the failure of the London Con-

ference and events in Germany, most of the speakers insisted upon the necessity of the Union's defending the principles which are its very *raison d'être*—the reestablishment of normal cultural and economic relations between the nations and the free play of parliamentary institutions.

The Conference decided, on the advice of the Economic and Financial Committee, to make a fresh study of the conclusions which had been presented to it by M. Mylonas (Greece) on the subject of demographic questions. Colonial problems were placed before the Conference in the form of a long draft resolution, of which the first part referred to certain ethical and social problems, and the second part to colonial mandates. The latter underwent some alteration before being adopted. Speakers laid special stress on the importance of improving the material and moral conditions of African negroes by a better supervision of working conditions and by encouraging the creation of small native holdings.

The debate on security and disarmament expressed the clearly-defined conviction of members of the Conference. The governments must, in spite of the difficulties with which the Geneva Conference was continually confronted, set up a Convention in conformity with the spirit of the League of Nations which would permit a substantial diminution of armaments within a short space of time.

The last day of the Conference, October 10, was devoted to the evolution of the representative system. The debate had been impatiently awaited and twenty-five delegates had put their names down to speak. There followed one of the most vigorous debates which had taken place within the Union for many years. Conservatives, Liberals, and Socialists in turn affirmed their faith in the future of the parliamentary system. The draft resolution to this effect was unanimously adopted amidst loud applause.

The Conference noted with regret that slavery and the slave-traffic still existed, and asked that every form of slavery, whether direct, indirect, or masked, be abolished. The Conference urged the National Groups to recommend that the 1926 Convention relating to slavery be ratified and trusted that the decision of the 13th Ordinary Assembly of the League of Nations in favor of the creation of a Consultative Committee of Experts would be put into execution as soon as possible.

Recalling the resolution adopted by the Conference in 1924 and considering that the time had come for the immediate prohibition in the colonies of forced labor to the profit of private persons or enterprises, and that forced labor, still exceptionally countenanced in the case of public utility works, should be abolished as early as possible, the Conference invited the National Groups of the Union to take action in favor of the immediate ratification of the Convention relating to forced or compulsory labor adopted in 1930 by the International Labor Conference at its 14th Session.

The Conference was of opinion that in future no penal clauses should be introduced or renewed in the labor contracts concluded with natives. It asked the Groups to use their influence for that purpose within their respective Parliaments, and expressed the belief that the governments should instruct colonial administrators not to neglect any means of making the natives better acquainted with the provisions of colonial labor legislation.

The American Interparliamentary Group held its 30th Annual General Assembly on Jan. 16, 1933. Governor Andrew J. Montague was reelected President of the Group. Vice-President: Hon. Sam D. McReynolds, in the place of Hon. Henry W. Temple; Treasurer: Hon. Sol Bloom; Secretary: Hon. Charles A. Eaton, in the place of Hon. Burton L. French; Members of the Executive Committee of the Group: Hon. Lewis W. Douglas and Albert E. Carter, in the place of Hon. Carl R. Chindblom and the late Hon. J. Charles Linthicum.

INTERSTATE COMMERCE COMMISSION. See RAILWAYS.

INTERVENTION. For changes in the intervention policy of the United States in Latin America see PAN-AMERICAN CONFERENCE; CUBA, HAITI, NICARAGUA and SALVADOR under *History*.

IOWA. POPULATION. The population of the State on Apr. 1, 1930, was 2,470,939 (Federal Census); in 1920 it was 2,404,021; in 1933, 2,482,000 (Federal estimate). Des Moines, the capital, had (1930) 142,559 inhabitants.

AGRICULTURE. The following table shows the acreage, production, and value of the principal crops for 1933 and 1932:

Crop	Year	Acreage	Prod. Bu.	Value
Corn	1933	11,138,000	439,951,000	\$136,385,000
	1932	11,849,000	509,507,000	61,141,000
	1933	6,119,000	134,618,000	35,001,000
Oats	1933	6,181,000	219,426,000	21,943,000
	1933	3,172,000	4,141,000 *	25,260,000
	1932	2,929,000	4,645,000 *	26,941,000
Potatoes .	1933	75,000	5,100,000	4,080,000
	1932	74,000	8,140,000	2,930,000
	1933	532,000	8,512,000	3,660,000
Barley ...	1932	604,000	15,100,000	2,869,000
	1933	255,000	4,159,000	2,864,000
	1932	273,000	4,350,000	1,441,000

* Tons.

MINERAL PRODUCTION. A slight estimated increase in the production of coal was reported, to 3,430,000 net tons for 1932, from 3,388,355 for 1931. Gypsum was produced to the quantity of 178,087 short tons (1932), in value \$1,468,414.

FINANCE. State expenditures in the year ended June 30, 1932, as reported by the U. S. Department of Commerce, were: for maintaining and operating governmental departments \$23,580,324 (of which \$1,053,924 was for local education); for interest on debt, \$677,935; for permanent improvements, \$25,207,453; total, \$49,465,712 (of which \$27,042,368 was for highways, \$3,383,921 being for maintenance and \$23,658,447 for construction). Revenues were \$43,027,599. Of these, property and special taxes furnished 25.1 per cent; departmental earnings and compensation to the State for officers' services, 12.4; sale of licenses, 50.4 (in which was included a gasoline sale tax that produced \$6,064,834). Funded debt outstanding on June 30, 1932, totaled \$15,761,282. Net of sinking-fund assets, the debt was \$14,720,762. On an assessed valuation of \$1,466,741,054 the State levied in the year ad-valorem taxes of \$9,110,730.

EDUCATION. Though the difficulty in meeting the financial obligations, in some of the school districts, was severe, it was reported that no schools, in the course of the academic year 1932-33, had been obliged to close altogether for lack of money. A new law for the certification of teachers was enacted. One half of all the teachers in the public schools were stated in December to be receiving pay at the yearly rate of \$750 or less.

CHARITIES AND CORRECTIONS. The statutory

Board of Control of State Institutions was in 1933 the body holding the centralized authority to control and govern the institutions of the State for the care and custody of persons. It was composed of three members, serving six year terms expiring in rotation. It appointed officers governing State institutions and fixed the number and compensation of their subordinates. It also functioned as the institutional purchasing agent and conducted institutional industries. These produced the State's automobile-license plates and road markers; also, for institutions' requirements, clothing, bedding, soap, shoes, brooms, and utensils. Institutional farms furnished vegetables and much milk and butter for the institutions' use.

These State institutions, with their populations of Dec. 1, 1933, were: State hospitals for the insane at Cherokee, 1649; Clarinda, 1690; Independence, 1665; and Mount Pleasant, 1568; Men's Reformatory, Anamosa, 348; State Penitentiary, Fort Madison, 1554; Women's Reformatory, Rockwell City, 101; Training School for Boys, Eldora, 518; Training School for Girls, Mitchellville, 169; State Sanatorium for Tuberculosis, Oakdale, 351; Soldiers' Home, Marshalltown, 481; Soldiers' Orphans' Home, Davenport, 688; Juvenile Home, Toledo, 346; Institution for the Feeble-Minded, Glenwood, 1735; Hospital for Epileptics and School for the Feeble-Minded, Woodward, 1175. The total institutional population was 15,038.

LEGISLATION. The regular session of the forty-fifth General Assembly, convening on January 9, followed the guidance of Governor Herring in dealing with a broad programme of relief to taxpayers, governmental economies, and measures relating to the financial emergency of March. A reorganization of the State government was proposed, on the basis of recommendations resulting from a survey conducted by the Brookings Institution, but action on most of the details of this plan was left for a later special session. There was enacted, however, a financial-control measure, embodying some of the Institution's recommendations. It abolished the offices of budget director and State board of audit and put control of State expenditure in the hands of a controller directly under the authority of the Governor. It required the State's spending agencies to submit to the Governor quarterly estimates of their coming expenditures, which he might cut down whenever revenues gave signs of falling below appropriations.

A sweeping programme of relief for taxpayers, embodied in a large number of bills, was carried to the statute books in chief part. The millage tax rate was reduced by one fifth; the time at which non-payment of tax bills on property should cause delinquency was put off to July 1; a moratorium was provided for foreclosures on farms, the courts being authorized to continue suits for foreclosure until Mar. 1, 1935.

To act for the State with regard to the proposed repeal of the Federal Eighteenth Amendment there was created a State convention to be composed of 99 delegates elected at large on June 20 but nominated, one each, in the several counties. A measure was passed to legalize the sale of beer containing not over 3.2 per cent of alcohol.

A special session convened on November 6; it enabled banks to sell proposed stock to the Reconstruction Finance Corporation. Liquor laws

were still under consideration at the year's end. The proposed Federal child-labor amendment was ratified by the Legislature.

POLITICAL AND OTHER EVENTS. Reversing a record of popular sentiment against liquor that extended over some 20 years, the voters elected, on June 20, 99 delegates in favor of repealing the Federal Eighteenth Amendment. Meeting on July 10 in State convention the delegates voted the State's adoption of repeal by the superseding amendment proposed by Congress. The popular vote was reported as 376,661 for repeal and 249,534 for retaining the amendment.

An act authorizing the State to borrow \$20,000,000 through issuance of its bonds, and intended to provide \$17,000,000 to make up State deposits and sinking funds in closed banks and to redeem State warrants, was held unconstitutional in June, by decision of a State district judge, and appeal to the State Supreme Court was prepared. The Brookings Institute rendered in September a report on the situation of the State government, recommending taxes on incomes, business, tobacco, and theatres and a reduction of 10 per cent in the State's direct tax on property.

Fiscal and commercial conditions in the State were greatly impaired throughout the year by the general inability to meet farm mortgages. Efforts in many localities early in the year to effect public sales under foreclosure were defeated by threatening or violent mobs. Governor Herring issued on January 19 a proclamation urging mortgagees to refrain from foreclosing. At the end of January a number of great Eastern insurance companies adopted the policy of suspending foreclosure for the time being in Iowa and certain other States, but some mortgagees still tried to foreclose. On April 27 Judge Charles C. Bradley, at Lemars, was dragged from the bench by a crowd of several hundred farmers, taken out of town, beaten and partly choked with a rope in efforts to make him swear to sign no more orders of foreclosure. State troops were sent to Lemars. Suspected anti-foreclosure rioters in several counties were seized by soldiers, and a number were convicted.

Governor Herring later, on October 20, issued a proclamation directing the postponement of all county sales of property for delinquent taxes, until January, 1934.

The State was the centre of a farmers' strike declared on October 23 by the Farmers' Holiday Association as a protest against the refusal of President Roosevelt to adopt proposals for a great issue of greenbacks and a guarantee of a fixed price for agricultural products. Strikers broke into freight cars, and several railroad bridges were burned down and dynamited.

OFFICERS. The chief officers of the State, serving in 1933, were: Governor, Clyde L. Herring; Lieutenant-Governor, Nelson G. Kraschel; Secretary of State, Mrs. Alex Miller; Treasurer, Leo J. Wegman; Auditor, C. W. Storms; Attorney General, Edward L. O'Connor; Secretary of Agriculture, Ray Murray; Superintendent of Public Instruction, Agnes Samuelson.

Judiciary. Supreme Court Justices, Maurice F. Donegan, John W. Kitzinger, John W. Anderson, Richard F. Mitchell, Hubert Utterback, William D. Evans, Truman S. Stevens, J. W. Kindig, E. G. Albert.

IOWA, THE STATE UNIVERSITY OF. A codeucational State institution of higher learning in Iowa City, founded in 1847. The enrollment for

1932-33 was 8877. For the autumn of 1933 the enrollment was 6176, including 1064 correspondence students not also registered in residence. The summer session registration totaled 3533. There were approximately 570 members on the faculty in the autumn of 1933. The income for 1932-33 was \$5,019,082. The libraries contained 435,800 volumes. President, Walter Albert Jessup, Ph.D., LL.D.

IOWA STATE COLLEGE OF AGRICULTURE AND MECHANIC ARTS. A State institution for the higher education of men and women in Ames, Iowa, founded in 1868. The enrollment for the autumn term of 1933 was 3302. The registration for the first half of the 1933 summer session was 899, and for the second half, 408. The faculty numbered 480 members. The endowment funds amounted to \$695,000 and the income for the year was \$3,120,000. The library contained approximately 220,000 volumes. President, Raymond Mollyneaux Hughes, LL.D.

IRAQ (IRAK). A kingdom occupying the basin of the Tigris and Euphrates rivers in Mesopotamia. Capital, Baghdad. Feisal, king of Iraq, died Sept. 8, 1933, and was succeeded by his eldest son, Ghazi.

AREA AND POPULATION. With an area of 177,148 square miles, Iraq had a population estimated at 3,300,000 in 1928 (2,849,282 at the 1920 census). The inhabitants are mainly Mohammedans of the Sunnite and Shiite sects; there were in 1920 87,488 Jews and 78,792 Christians. The chief cities, with their approximate populations, are: Baghdad, 300,000; Mosul, 60,000; and Basra, the chief seaport, 50,000. In 1930-31, government and private schools enrolled 50,000 pupils, the public schools showing a 20 per cent increase over 1929-30.

PRODUCTION. Agriculture is the main occupation, dates being the chief export crop. Other leading products are wheat, barley, rice, cotton, oats, linseed, flax, fruits, wool, and sheep casings. Petroleum production in 1931 totaled 900,000 barrels (of 42 U. S. gallons), as against 1,200,000 in 1932. Manufacturing is on a small scale. Besides petroleum, the only mineral produced in commercial quantities is asphalt.

COMMERCE. In the fiscal year ended Mar. 31, 1932, imports totaled 63,978,175 rupees and exports 46,223,767 rupees (1 rupee equaled \$0.3650 U. S. gold). In the preceding year imports were 71,381,615 rupees and exports 40,712,642 rupees. There was a considerable transit trade with Persia (30,767,262 in 1931-32). Exports in order of value in 1930-31 were dates, wheat, barley, wool. Exports to the United States in 1933 were valued at \$2,229,963 (\$1,905,488 in 1932) and imports from the United States at \$1,267,634 (\$1,124,394 in 1932).

FINANCE. The budget for the fiscal year ended Mar. 31, 1933, showed receipts equivalent to £4,188,770 and total expenditures of £3,881,416; in 1931-32, receipts totaled £4,289,741 and expenditures were £3,729,974. The 1932-33 Customs revenues were £1,926,769 (£1,854,297 in 1931-32). The Iraq public debt consists solely of a share of the Ottoman Debt, accepted in 1927. The government purchased bonds to the amount of £1,228,000 (\$5,976,000 at par) and agreed to pay the balance of the debt, about £383,000 (\$1,864,000), with interest in seven equal annual installments. The unit of currency adopted Apr. 1, 1932, is the dinar (equivalent to the pound sterling).

COMMUNICATIONS. A meter-gauge railway line

runs from Basra to Baghdad, a distance of 354 miles. Other lines bring the total mileage to 753 miles, all government operated. There are some 5000 miles of improved highways, mostly earthen. A survey for a motor road between Baghdad and Medina in Saudi Arabia was undertaken jointly by the two governments in 1933. When completed, the road was expected to become an important route for pilgrims to the Moslem holy cities in Saudi Arabia. The British Imperial Airways operated air services linking Baghdad with India, Egypt, and Europe.

GOVERNMENT. The Constitution of August, 1924, provided for a limited monarchy and a responsible government. There is a Senate of 20 nominated members and a Lower House of 88 elected deputies. The Cabinet formed Mar. 20, 1933, was headed by Rashid Ali Beg el Ailani.

HISTORY

DEATH OF KING FEISAL. Feisal, first king of Iraq and during the World War leader of the anti-Turkish "Revolt in the Desert" chronicled by Col. T. E. Lawrence, died somewhat unexpectedly Sept. 8, 1933, in Berne, Switzerland, where he had gone to restore his failing health. His body was returned to Baghdad and buried in a new royal tomb there on September 15, amid the lamentations of his countrymen. His son, Crown Prince Ghazi, a 21-year-old youth educated at Harrow, in England, was sworn in as the new king before Parliament on September 10. A few days later King Ghazi was married by proxy to his cousin, Princess Aliyah, daughter of former King Ali of the Hejaz. The Queen, who had been in Turkey at the time of her marriage, arrived in Baghdad Dec. 1, 1933, and saw her husband for the first time.

THE ASSYRIAN OUTBREAK. Feisal's death came at an inopportune time for his country. Iraq had been called before the bar of the League of Nations to explain the alleged massacre of members of the Assyrian Christian minority and to justify the action of the League and of Great Britain in terminating Iraq's mandatory status in 1932 (see 1932 YEAR BOOK). The Assyrians, driven out of Turkey after the World War, had settled in Northern Iraq among the Kurds. Safe under the British mandatory régime, they became alarmed when Iraq was granted independence and petitioned the League to intervene with the Iraqi government to secure for them the autonomous rights they had enjoyed under the Turkish Sultan. The Iraqi government rejected the plea for autonomy, asserting that their pledge to guarantee minority rights was sufficient protection. They did consent to the concentration of the Assyrians in their own communities, but the efforts to reach a settlement along this line failed.

The Assyrian Patriarch, Mar Shimun, having refused to sign a declaration of loyalty to King Feisal or to cooperate with the League's scheme for settlement of the Assyrians, was deported from Baghdad to Cyprus. These events led to an uprising by some 1300 armed Assyrians late in July. Forced across the Syrian border by Iraqi troops, they were disarmed by the French authorities in Syria. The Iraqi government agreed to permit the return of the Assyrians, provided they surrendered their arms. Some 500 Assyrians, accepting these terms, received their arms from the Syrian authorities and recrossed the border into Iraq. Instead of surrendering their arms they clashed with a small Iraqi detachment, destroyed it, and fled to the mountains, some of them return-

ing into Syria. In retaliation, the Iraqi commander in the district, a Kurd named Bekir Sidkey Bey, enlisted Kurdish irregulars who seized the opportunity to destroy the villages of their hereditary enemies. Several hundred Assyrians were killed, many of them innocent villagers unconnected with the Assyrian force from Syria.

The British government and the League brought pressure upon King Feisal to end the disorders and punish the guilty. The League Council appointed a committee of three to investigate the question and the issue was still pending when Feisal died. The problem came before the League Council on October 14. The Council provisionally accepted the Iraqi suggestion that those Assyrians who did not wish to remain in Iraq should be settled in some other country under League auspices. The possibility of transporting them to Brazil was under consideration at the end of the year. In the meantime, some 5000 Assyrians had gathered in Mosul waiting for the League to act.

IRAQI POLITICS. That the ministry of Rashid Ali Bey el Ailani would be faced with a critical Opposition was demonstrated when Parliament convened early in 1933 for its first real session under the new independent régime. The Anglo-Iraqi treaty of Dec. 14, 1927, was vigorously attacked by Yasin Pasha, who demanded that the government secure amendments designed to prevent a dual administration of the country. A downward revision of the British debt, contracted for the reconstruction of Iraq, also was demanded. King Feisal was understood to have discussed these subjects with British officials during his state visit to England in June.

While attacks upon Britain's predominant rôle in Iraq were common among Iraqi politicians and in the press, there was a general realization among leading officials of the dangers that might beset Iraq if British protection were withdrawn. The cabinet resigned as a matter of form upon the death of King Feisal and was reappointed in its entirety by the new king. At the first meeting of the newly constituted cabinet on September 11, Premier Rashid Ali Bey declared that its guiding motive would be the maintenance of the alliance and friendship with Great Britain.

Despite the criticism aroused in Great Britain by the Iraqi government's handling of the Assyrian problem, the cabinet decided upon a stronger policy toward the minorities. A few weeks after King Ghazi ascended the throne the Premier asked him to dissolve Parliament and call new elections in order to secure a popular vote on the cabinet's policies. The King unexpectedly ignored the request and immediately accepted the cabinet's resignation when it was offered to him October 29. A new cabinet was formed on November 9, with Jamil Bey Midfai as Premier. Former president of the Chamber of Deputies, the new Premier had a large following in both houses of Parliament. The Nationalist party, which was influential in the preceding ministry, was not represented in Premier Jamil Bey's cabinet.

COMPLETION OF PETROLEUM PIPE-LINE. Both branches of the petroleum pipe-line from the Iraq oil-fields centre at Kirkuk to the Mediterranean were practically completed at the end of 1933 and oil was expected to flow early in 1934. The northern branch, built by the French, ran 531 miles from Kirkuk to Tripoli on the coast of Syria. The southern branch, under British control, extended from Kirkuk to the port of Haifa in Palestine, a distance of 617 miles. The French share in

the Iraq oil fields was to be exploited by a state monopoly and completion of the pipe-line was expected to materially reduce American exports of petroleum products to France.

Consult William C. Bagley, "Iraq's Rise to Nationhood," *Current History*, April, 1933. See **ARCHAEOLOGY**.

IRELAND. The second in size of the British Isles lying west of Great Britain. Total area, 32,586 square miles; total population (1931 census), 4,228,553. It is politically divided into Northern Ireland and the Irish Free State. See **IRELAND, NORTHERN**; **IRISH FREE STATE**.

IRELAND, NORTHERN. A constituent part of the United Kingdom, comprising six counties and two parliamentary boroughs in northern Ireland, Capital, Belfast.

AREA AND POPULATION. Northern Ireland has an area of 3,351,444 statute acres (exclusive of water) and a population estimated on June 30, 1932, at 1,250,000 (1,256,561 at census of 1926). In 1931 births numbered 25,673; deaths, 18,049; marriages, 7369. About one-third of the population is Roman Catholic. Education statistics showed 1868 public elementary schools with 204,399 pupils; 73 secondary schools, with 12,267 pupils; 62 technical schools, and 63 other vocational centres, with 24,073 students. Queen's University of Belfast had 1475 students in 1932-33.

PRODUCTION. Agriculture and manufacturing are the chief occupations. There were 843,231 acres under cultivation in 1932. Production of the chief crops in 1932 was (in tons): Potatoes, 1,125,824; oats, 288,582; flax, 1145; hay, 784,628; turnips, 640,670. Wheat, barley, beans, peas, and roots are other crops. Livestock (1932) included 714,757 cattle, 791,932 sheep, 219,767 swine, 44,445 goats, and 103,555 horses. Linen manufacturing and shipbuilding, both concentrated in Belfast, are the chief industries. Tobacco products, ropes, twine, soaps, spirits, hosiery, and underwear, and biscuits are other products. Quarrying, mining, and fishing are secondary industries. Commerce statistics are included in those given for Great Britain.

FINANCE. Actual receipts and expenditures of the Northern Irish Exchequer for the fiscal year ended Mar. 31, 1933, were £10,093,951 and £10,087,246, respectively. These returns excluded the cost of Imperial defense and of Northern Irish services reserved to the British Parliament. Including these sums, revenues were £12,114,000 and expenditures £12,109,000. The budget for 1933-34, as introduced into Parliament, called for revenues of £11,407,000 and expenditures of £11,754,000.

COMMUNICATIONS. Besides 769 miles of railway lines (1932), Northern Ireland had 180 miles of canals, and about 13,000 miles of highways. The chief seaports are Belfast, Londonderry, Newry, and Larne. A new dock and channel, constructed by the Belfast Harbor Commission on the County Antrim side of Belfast harbor at a cost of £400,000, were formally opened early in November. Regular air service between Belfast and Glasgow, Scotland, was opened May 30, 1933, with a twice-daily trip in each direction.

GOVERNMENT. Northern Ireland has autonomous control of its local affairs but forms an integral part of the United Kingdom, sending 13 representatives to the British House of Commons. The local Parliament consists of a Senate of 24 elected and 2 *ex-officio* members and a House of Commons of 52 elected members. Governor in 1933, the

Duke of Abercorn. The ministry in 1933 was headed by Viscount Craigavon.

HISTORY. The Unionist government formed in 1921 under Viscount Craigavon was assured of another five-year term in office as a result of the elections to the Northern Ireland Parliament held Nov. 30, 1933. The Unionists, pledged to maintain the separation of Ulster from the Irish Free State and to preserve the Imperial connection, won 37 of the 52 seats. The standing of the parties in the new parliament, with the former standing in parentheses, was: Unionists, 37 (37); Nationalists, 9 (11); Independent, 2 (3); Labor, 2 (1); Fianna Fail, 1 (0); Irish Republican Army, 1 (1). The two seats lost by the Nationalists went to President Eamon de Valera of the Irish Free State, who was elected from South Down, and to an I. R. A. Republican in South Armagh. Both of the new deputies had announced that they would not take their seats.

The election hinged mainly on the issue of union with Great Britain as against union or coöperation with the Irish Free State. Lord Craigavon in his campaign called attention to the intensification of Nationalist and Republican activities in Northern Ireland, calculated to force Ulster into the Free State, and asked the electors to frustrate "such a calamity." Previous to dissolution the government had been aroused by the shooting of a constable guarding the home of a Belfast resident against Republican terrorists. Immediately afterwards Belfast police rounded up 34 alleged Republicans and detained them under the Civil Powers Act. Fourteen were surprised while drilling in a shed. Following Mr. de Valera's nomination as candidate for Parliament, the Northern Ireland government reimposed the ban upon his presence in Ulster which had been revoked following his election as President of the Free State. The Belfast authorities were equally suspicious of Gen. Owen O'Duffy's National Guard, organized in the Free State during 1933. A proclamation declaring the organization unlawful in Northern Ireland was issued July 22.

Northern Ireland experienced some of the economic improvement which characterized the year in Great Britain, but many industries remained badly depressed. On Nov. 20, 1933, there were about 187,450 registered unemployed, or 9850 more than on Nov. 20, 1932. Toward the end of the year, however, definite improvement was reported in shipbuilding, distilling, and other industries, and farm prices registered an increase. See **GREAT BRITAIN**; **IRISH FREE STATE**.

IRIGOYEN, HIPÓLITO. An Argentine statesman, died July 3, 1933, in Buenos Aires where he was born July 13, 1850. He was educated at the College of San José (later the University of Buenos Aires) and early evinced a keen interest in politics, being elected in 1878 to the provincial legislature and in 1880 to the national Congress. After the political upheaval of 1890 he became the leader of the Radical party in its struggle to wrest power from the wealthy landowners. His efforts were crowned with success through the passage in 1911 of a law which provided for free, universal, and compulsory suffrage, including the secret ballot. In the first election held under this law in 1916 he was elected president, receiving, despite the fact that he had refused to campaign for himself, 152 out of 298 electoral votes. His elevation to the presidency, however, caused no change in his unostentatious mode of living; he refused to occupy the presi-

dential palace and gave his salary to charity. During the latter part of the World War he successfully maintained Argentina's neutrality, after receiving from Germany a promise to abstain from further torpedoing of Argentine vessels. He won also the loyalty of the working classes through the introduction of a minimum wage to save them from a devalorized currency and was popular throughout the country for his stand in upholding the national and provincial constitutions. On the expiration of his term of office in 1922 he retired, as the constitution of Argentina forbade a president to succeed himself.

Re-elected in 1928 for a second six-year term, President Irigoyen incurred considerable criticism on account of the arbitrary methods of government which he adopted. But his fall in popular esteem was due principally to the economic crisis, the business elements being angered by his refusal to secure higher tariff protection for the textile, packing, and yerba maté (tea) industries, and the labor elements being equally discontented because of widespread unemployment and want. After threats of impeachment he was deposed by an army junta, headed by Gen. José Francisco Uriburu, on Sept. 6, 1930, and went into exile on the island of Martin Garcia. He was pardoned by General Uriburu and allowed to return to Buenos Aires at the end of the *de facto* régime in January, 1932, but was exiled again in December for his alleged participation in a plot to overthrow the conservative government of Gen. Augustín P. Justo.

IRISH FREE STATE. A self-governing unit of the British Commonwealth of Nations, established under the Irish Free State Government Act of Dec. 5, 1922, which embodied the terms of the Anglo-Irish Treaty of Dec. 6, 1921. Capital, Dublin.

AREA AND POPULATION. Comprising the southern five-sixths of Ireland (q.v.), the Free State has an area of 26,601 square miles and a population estimated in 1933 at 2,992,000 (2,971,992 at the census of 1926). In 1931 births numbered 37,103; deaths, 42,957; marriages, 13,236; overseas emigrants, 1462 (811 in 1932); overseas immigrants, 3407 (4059 in 1932). The 1932 birth rate per 1000 inhabitants was 18.89; death rate, 14.44. There were 2,751,260 Roman Catholics in 1926.

EDUCATION. There is free and compulsory elementary education for children under 14 years. Study of the Irish language is compulsory in all national schools and its use as a medium of instruction is increasing. In 1931-32 there were 417,017 pupils in 5361 national elementary schools, 26,082 in 306 recognized secondary schools, and 4639 in colleges and universities. In 1932-33, Trinity College, Dublin, had 1477 students; the National University, Dublin, had 1714; and the Cork and Galway branches of the National University had 750 and 525 students, respectively. There were 63,426 students enrolled for vocational education in 1931-32.

PRODUCTION. Primarily an agricultural and stock raising country, the Free State in 1932 had 3,705,736 acres under crops, 7,956,879 acres of pasture, and 237,170 acres of woods and plantations. Until the tariff placed on Irish cattle by Great Britain in 1932, the cattle export trade was the principal source of agricultural income. Livestock in 1932 included 4,025,080 cattle, 446,064 horses and ponies, 3,460,856 sheep, and 1,108,048 swine. Poultry numbered 22,536,120. Esti-

mated production of the chief grain crops in 1932 and 1931 (in cwt. of 112 pounds) was: Wheat, 445,000 (418,000 in 1931); oats, 12,544,000 (10,416,000); barley, 2,132,000 (2,109,000); rye, 47,000 (55,000). Production of other crops in long tons was: Potatoes, 3,015,000 in 1932 (1,932,000 in 1931); turnips, 3,384,000 (3,303,000); mangels, 1,638,000 (1,540,000); and hay, 4,792,000 (5,116,000). On June 1, 1932, there were 558,920 males engaged in farm work. Wool production in 1932 was 19,559,000 pounds (15,513,000 pounds of shorn wool); creamery butter, 610,370 cwt.

The fisheries in 1931 employed 1913 boats and 3889 men regularly and 1299 boats and 8037 men irregularly. The value of the fish catch in 1931, including shell fish, £223,074 (£128,783 in 1932).

The net value of industrial output in 1929 was £24,932,139, of which £18,311,451 represented the value added in process of production of transportable goods. The gross value of output of the leading industries, including cost of material, fuel, light and power, was: Butter, cheese, condensed milk, and margarine, £8,420,148; grain milling, £7,577,782; brewing £6,928,979; bacon curing £5,392,039; tobacco, £5,215,746; bread, flour, confectionery, and biscuits, £4,559,969. The number of registered unemployed in December, 1932, was 102,619.

COMMERCE. The decline in imports and exports, partially attributed to the trade war with Great Britain inaugurated in 1932, is shown in the accompanying table from the official *Statistical Abstract* for 1933.

IRISH FREE STATE: IMPORTS AND EXPORTS
[In pounds sterling]

Year	Imports for consumption	Exports of domestic products	Excess of imports
1929	£60,249,930	£46,804,561	£13,445,369
1930	55,598,660	44,567,584	11,031,076
1931	49,666,102	36,276,118	13,389,984
1932	41,436,918	25,802,924	15,633,994
1933 * . . .	35,789,153	19,069,219	16,719,934

* Preliminary figures, not in *Statistical Abstract*.

Imports from Great Britain were £28,869,206 in 1932, compared with £35,735,217 in 1931; from Northern Ireland, £3,759,270 in 1932 (£5,037,208 in 1931); from all other countries, £9,945,746 (£9,688,455 in 1931). Exports to Great Britain declined to £22,846,814 in 1932 from £31,787,287 in 1931; to Northern Ireland, £3,104,479 in 1932 (£3,928,498 in 1931); to all other countries, £988,935 in 1932 (£1,355,111 in 1931). The 1932 imports from the United States were £1,320,211; exports to the United States, £106,100. Thus the United Kingdom (Great Britain and Northern Ireland) in 1932 supplied 76.6 per cent of all imports (80.8 per cent in 1931) and purchased 96.3 per cent of all exports (96.3 in 1931).

The chief export items in 1932 were: Cattle, £8,746,674 (£12,669,504 in 1931); porter, beer, and ale, £3,952,894 (£4,087,370); eggs, £1,673,910 (£2,227,452); butter, £1,546,162 (£1,496,291); horses, £1,295,141 (£1,960,595). The principal imports in 1932 and 1931, respectively, were: Coal, £2,732,734 (£3,072,924); corn, £2,557,842 (£2,153,652); wheat, £1,914,076 (£1,572,700); tea, £1,618,174 (£2,119,995); wheat flour, £1,559,296 (£1,662,402); boots and shoes, £1,032,276 (£1,458,820).

FINANCE. For the fiscal year ended Mar. 31, 1933, ordinary governmental revenues amounted to £29,990,935 (£25,496,000 in 1931-32) and

ordinary expenditures were £28,851,189 (£26,139,653 in 1931-32), leaving a surplus of £1,139,746 as against a deficit of £643,053 in 1931-32. Total receipts into the Treasury, including ordinary revenues, £6,464,501 raised by the creation of debt, etc., amounted to £36,916,493 in 1932-33. Total expenditures, including ordinary expenses, capital issues of £1,605,754, and repayment of borrowings, etc., amounting to £6,461,000, aggregated £36,916,493. Customs receipts totaled £9,331,000, excise £5,443,000, and the property and income tax, £5,194,000.

The budget estimates for the fiscal year 1933-34 balanced at £35,334,220. The principal revenue estimates were: Tax revenue, £21,906,000; non-tax revenue, £4,534,000; repayment of capital issues, £82,000; additional funds to be raised by borrowing or otherwise, £8,737,220. The increase in expenditures was largely due to provision for export bounty payments for the full year. These bounties were inaugurated in June, 1932.

COMMUNICATIONS. At the beginning of 1933, there were 2069 miles of first track railway line in the Irish Free State, linked with 356 miles in Northern Ireland. The two main railway systems in the Free State reported total receipts of £1,174,583 and expenditures of £1,106,411 during 1932. Highways extended 46,656 miles in 1931. There were 650 miles of inland waterways and canals. The telegraph and telephone systems are government owned. In 1932, 12,455 vessels of 8,761,207 tons entered the ports of the Irish Free State and 12,488 of 8,750,188 tons cleared.

GOVERNMENT. The Constitution of Dec. 6, 1922, declares the Irish Free State a coequal member of the British Commonwealth of Nations. Irish and English are both official languages. The Legislature (Oireachtas) consists of the King, represented by the Governor-General, the Chamber of Deputies (Dáil Eireann) of 153 members elected by popular suffrage under a system of proportional representation, and the Senate (Seanad Eireann) of 60 members elected for nine years by the members of both houses of parliament. The President of the Council is nominated by the Dáil and in turn nominates the other members of the Council, or ministry, who must be approved by the Dáil. The members of the Executive Council as reorganized Feb. 10, 1933, were: President and Minister for External Affairs, Eamon de Valera; Vice President and Minister for Local Government and Public Health, Sean T. O'Kelly; Lands and Forestry, Joseph Connolly; Industry and Commerce, Sean Lemass; Finance, Sean MacEntee; Agriculture, Dr. James Ryan; Defense, Frank Aiken; Education, Thomas Derrig; Justice, Patrick J. Rutledge; Posts and Telegraphs, Gerald Boland. The Governor General in 1933 was Domhnall Ua Buachalla (Donal Buckley).

HISTORY

DE VALERA WINS ELECTION. The parliamentary position of the Fianna Fáil government, headed by President Eamon de Valera, became somewhat precarious toward the end of December, 1932. It was dependent for a majority in the Dáil Eireann upon the seven Labor votes, with the help of which de Valera had replaced President Cosgrave following the election of February, 1932. On December 30, the Labor party threatened to desert the government when the President persisted in his plan to reduce civil service salaries. Nevertheless the civil service pay cut went into effect Jan. 1, 1933, causing William Norton, leader of

the Laborites, to announce that he would fight the government's policy "by every means at my disposal."

The prospect of President de Valera's defeat in the Dáil on this issue coincided with efforts of former President Cosgrave to unite all anti-Republican elements in his Cumann na nGaedhael party. This movement was inaugurated on Dec. 29, 1932, when Lord Mayor Alfred Byrne of Dublin presided at a meeting of business and professional men. A resolution was passed appealing to "all believers in peace by negotiation" to combine to end the economic war with Great Britain.

President de Valera met the challenge to his power from these divergent sources by dissolving the Dáil on January 3 and calling new elections for January 24. He appealed to the electorate to give him a safe majority in the Dáil and to end his dependence upon the Labor party, which he said was preventing the development of the country under his policy of protection. The campaign was marked by serious rioting in Dublin January 8. A Republican crowd of several thousands broke up a large Cosgrave political meeting, despite the efforts of 700 members of the Army Comrades' Association to preserve order. Another development was the appearance of the new Centre party, representing chiefly the larger farmers and stock raisers, and headed by Frank McDermott. The election gave de Valera's party a majority of one in the Dáil. Fianna Fáil secured 77 seats, as against 72 in the old Dáil. The standing of the other parties, with the previous standing in parentheses, was: Cumann na nGaedhael (Cosgrave), 48 (57); Centre party, 11 (4); Independents, 9 (13); Labor, 8 (7). Since Labor promised to continue its support of de Valera's general programme, particularly on the issues in dispute with Great Britain, the President now had a working majority of 17.

THE PRESIDENT'S PROGRAMME. Mr. de Valera, after reorganizing his cabinet on February 10 (see *Government* for cabinet list), proceeded vigorously to carry out his political and economic programme. The political programme called for the severance of all ties with Great Britain which were considered evidences of Irish inequality. The President asserted, however, that he still considered the Free State to be a member of the British Commonwealth and that his policy would be compatible with the Commonwealth "constitution." He further demanded the reorganization of the Senate, which had consistently opposed and delayed the enactment of his policies into legislation. He proposed that the membership be reduced from 60 to 30 and that it be made representative of various economic interests in the Free State.

Mr. de Valera's economic programme called for the reorganization of the Free State into an economically self-contained state, which would no longer be dependent upon the British market. The large farms in the east and centre of Ireland, devoted chiefly to raising cattle for export to Britain, were to be broken up and distributed among small farmers. By high protective tariffs he sought to foster Irish industry, and by internal taxation, graduated according to the size and capital of economic units, to decentralize industry and encourage ruralization.

The government's political programme met with decreasing resistance following the election, which demonstrated that he had captured a majority of the Free State electorate. On March 3

the British government was informed that the land annuities, held in a suspense account since June, 1932, would be used to finance normal requirements of the Free State exchequer. (For background of the land annuities dispute, see 1932 YEAR BOOK.) The land annuities in default amounted to £4,660,000. This compared with £2,123,000 collected by the British government on Irish imports between July 15, 1932, and Mar. 7, 1933. On May 3 the Dáil, by a vote of 76 to 56, re-passed the bill to abolish the oath of allegiance to King George. The measure thus became a law over the veto of the Senate. In a speech following adoption of this law, Mr. de Valera rejected the demand of the Irish Republican Army for immediate proclamation of the republic. He said his policy called for gradual elimination of the forms obstructing republican status. Reunion of Ulster with the Free State, he had stated earlier in the year, was "the essential basis of a lasting peace with Britain."

Before the Dáil rose for the summer recess three more bills amending the Constitution in this direction were introduced. One provided for the transfer from the Governor General to the Executive Council of the function of recommending the purpose of the appropriation of money. The second sought to eliminate sections of the Constitution which required the Governor General's assent to bills and "the reservation of bills for the signification of the King's pleasure." The third proposed to terminate the right of appeal to the Privy Council. These three measures were all passed by the Free State Parliament before the end of 1933.

The rift between the Free State and Great Britain widened perceptibly during the year as the result of these developments. Informal negotiations with a view to ending the tariff war took place during the London Economic Conference but to no avail. An effort to mediate the tariff dispute was made by three members of the South African delegation to the London Conference, who went to Dublin in August. It was reported that de Valera rejected their proposal for submission of the dispute to arbitration by a board headed by Tielmann Roos of South Africa. De Valera previously had insisted that the chairman must be some one outside of the British Empire. On November 14, J. H. Thomas, the British Secretary of State for Dominions, said in the House of Commons that the amendments to the Free State Constitution violated the Anglo-Irish treaty of 1921 and that the Free State was in danger of losing its place in the British Commonwealth. President de Valera replied by challenging the British government to let the Irish people choose between a republic and membership in the British Commonwealth.

Receiving no reply to his challenge, President de Valera on November 29 dispatched a note to J. H. Thomas, asking for "a direct and unequivocal statement" whether the British government would "treat as a cause of war or other aggressive action a decision of the Irish people to sever their connection with the Commonwealth." He declared the treaty of 1921 had been imposed upon Ireland by the threat of force. The British government, replying through Mr. Thomas, declined to accept this as a true description of the relations between the two countries. It pointed out that the treaty settlement was accepted by the elected representatives of the people of the Free State and resulted in "the progressive development of

friendly relations" between 1921 and 1932. Rejecting President de Valera's assumption "that lasting friendship cannot be attained on the basis of the present relationship," the British did not see "any ground for answering a (Mr. de Valera's) question founded on that assumption."

While the President's anti-British and most of his domestic political policies were approved by the bulk of the electorate, his economic programme aroused the fierce opposition of the larger landowners and farmers, and the business and professional elements. They were called upon to furnish the tax revenues needed to meet the cost of economic reorganization and of the economic warfare with Britain. The cattle farmers and large landowners, especially, saw that they were doomed if de Valera's policy was carried through. They watched with apprehension as the government pushed through the Dáil in July a bill for the expropriation and subdivision of large estates. Many new import duties and increases in existing rates were provided in the 1933-1934 budget resolutions, effective May 11. The Free State tariff undermined the economic position of the commercial classes, while the British tariff was forcing the cattle growers and the few exporting industries to the wall. But de Valera gained supporters among the peasants and small farmers more than sufficient to offset the antagonism of the comparatively well-to-do classes.

GROWTH OF OPPOSITION. The President had proved himself relatively immune to attack on the economic and political front. Nevertheless early in July, 1933, the disunited forces of the opposition combined, found a weak spot in his armor, and launched a formidable drive to unseat him. They found a new leader in General Eoin O'Duffy, former head of the Free State police, and rallied the growing forces of discontent about a programme calling for the equitable administration of justice and the elimination of the sinister influence of the Irish Republican Army from the government.

The Opposition dwelt effectively upon the President's apparent indifference toward the I. R. A.'s increasing terrorism and defiance of his government. Ignoring the government's ban on illegal armed bodies, the I. R. A. openly drilled, imported arms, and paraded. They were charged with the wave of political terrorism in Ireland, marked by the beating, kidnaping, and even murder of their opponents. To their influence over the President, who had fought with them during the civil war a decade before, was attributed the dismissal of General O'Duffy as head of the police early in 1933. In July, General O'Duffy accepted the leadership of the Army Comrades' Association, a semi-military organization formed the previous year for protection against republican terrorism. He at once reorganized the movement, renamed it the National Guard, adopted a semi-Fascist political, educational, and physical training programme, and began recruiting throughout the country.

The government, in obvious alarm, recalled all the licenses to carry firearms. It made no attempt, however, to disarm the I. R. A., which had no licenses. The government refused permission for a National Guard parade in Dublin on August 13 in commemoration of the death of Collins, Griffith, and O'Higgins. On August 20 the mobilization of National Guard units throughout the country in defiance of the government's orders led de Valera to outlaw the organization and to

revive the Public Safety Act, which the Cosgrave government had invoked against the I. R. A.

The result of the ban placed on the National Guard, was the fusion of all Opposition groups—the National Guard, Cumann na nGaedheal, Independents, and the Centre party—into a new political group called the United Ireland party, with General O'Duffy as president. The party programme called for reconciliation with Ulster to form a single Irish government, a settlement with Britain, and the crushing of the I. R. A. The union of the Opposition groups again forced President de Valera into dependence upon the Labor party. Labor exacted as the price of its support new provisions for old age pensions, sickness and unemployment insurance, workmen's compensation, and housing. Meanwhile a taxpayers' strike began to spread among farmers and traders. The government sought to check this movement by arresting a number of delinquent taxpayers, and arraigning them before the Military Tribunal set up under the Public Safety Act on charges of conspiracy against the State. This use of the Safety Act, while violent republican attacks upon General O'Duffy's meetings went unpunished, further undermined Mr. de Valera's prestige and popularity.

On November 30 the police made extensive raids in various cities on leaders of the United Ireland party, seeking evidences of treasonable activities. Attacked for the raids in the Dáil, the government replied that it had discovered evidence that the National Guard still continued, although outlawed in August. The following day the Blue Shirts again flouted the government's ban by holding a great parade at Kenmare, County Kerry. On December 8 the government issued a new edict suppressing the Young Ireland Association of the United Ireland party. This was the organization General O'Duffy created to evade the ban against his National Guards. Raids and arrests of persons wearing Blue Shirts followed. On December 14, General O'Duffy again evaded the government's decree by dissolving the Young Ireland Association and organizing in its place the League of Youth. Blue Shirt rallies continued and on December 17, amid great excitement, police arrested General O'Duffy while he was trying to address an outdoor meeting at Westport in County Mayo. His attorneys immediately obtained a writ of habeas corpus and on December 21 the Free State High Court at Dublin ordered his immediate release.

Balked in this move, the de Valera government now attempted to check O'Duffy's activities by charging him with inciting his adherents to murder President de Valera. General O'Duffy immediately denied the charge, which was scheduled for a hearing before a military tribunal on Jan. 2, 1934. Meanwhile the government's prestige had suffered and numerous accessions to the ranks of the United Ireland party were reported.

Consult Denis Gwynn, "The Challenge to de Valera," *Current History*, December, 1933.

IRISH LANGUAGE AND LITERATURE.

See PHILOLOGY, MODERN.

IRON AND STEEL. Getting off to a very poor start during the first three months of the year, during which the production of raw steel in America dropped almost 30 per cent below that of the same period in the preceding year, the iron and steel industry staged an amazing upturn throughout the balance of the year reaching a total of almost 23,000,000 tons of raw steel, or an

increase of 71 per cent above the total of 13,464,000 tons for 1932. This output although far below the peak production of 54,850,000 tons in 1929, compares very favorably with the annual output for the ten years prior to 1914. The end of the year, however, found the industry quite conservative because two of the three major channels of consumption—railroads, automobile industry, and construction, normally accounting for about 50 per cent of the total output—had contributed almost negligibly toward the increase. Although automobile output rose 43 per cent over that of the preceding year, construction work declined, and railroad buying was inconsequential. Apparently then, the bulk of the steel demand was for the replenishing of stocks which, with falling prices, consumers had permitted to dwindle to low levels. The prospects of increased prices stimulated the replacement of stocks and thus, presumably, made up the difference in volume.

Distribution of finished steel over the past three years is more clearly shown by the accompanying table prepared by *The Iron Age*, Philadelphia, in its annual review number from which this article is based. The figures were compiled from returns from 41 companies that represent about 89 per cent of the entire capacity of the United States. According to the companies embraced in this report, there were sharp rises in the total tonnage used in automobile production and in that for the manufacture of metal containers, the two consuming almost one-third of the total output and advancing the importance of the market for making metal containers from fifth place to second in the three year period. Structural steel for buildings in the same period dropped from leading position to third in volume of consumption, and steel for railroad purposes, formerly consuming more than a quarter of the entire output, dropped to fourth place.

DISTRIBUTION OF FINISHED STEEL
[Thousands of gross tons] (*The Iron Age*)

	1931		1932		1933	
	M. tons	%	M. tons	%	M. tons	%
Buildings . . .	3,500	18.5	1,650	16.0	1,950	11.5
Railroads . . .	2,550	13.5	1,250	12.0	1,500	9.0
Automotive . .	3,050	16.0	1,750	17.0	3,250	19.0
Oil, Gas, Mining	2,100	11.0	900	8.5	1,000	6.0
Metal Containers	1,700	9.0	1,200	11.5	2,800	13.5
Agriculture . .	850	4.5	350	3.5	700	4.0
Shipbuilding . .	100	0.5	100	1.0	200	1.0
Machinery . . .	600	3.0	300	3.0	500	3.0
Exports	750	4.0	300	3.0	500	3.0
Highways . . .	100	0.5	400	4.0	750	4.5
Miscellaneous .	3,900	20.5	2,100	20.5	4,350	25.5
Total . . .	19,000		10,300		17,000	

Several factors points to a continuance of the 1933 level of production and operated in part upon the recovery for the year. These, as listed by *The Iron Age*, are the revival of brewing and distilling, involving not only new equipment but also a growing industry in steel barrels and cases; the government agricultural relief programme which late in the year resulted in an upward demand for wire products and hardware items; the placing of contracts for 21 naval vessels with a combined displacement of more than 100,000 tons and further orders for 16 additional vessels in navy yards, and the steady increase, thanks to dollar depression, of export trade. Whereas in 1932 steel exports showed an unfavorable balance, reports for the first 10 months of 1933 showed total exports of 1,008,507 as against 484,482 tons for the

same period of 1932. A large part of the gain was in the shipment of scrap which in 1932 was 168,166 tons, rising to 595,763 tons.

The price level remained low throughout the year. According to *The Iron Age* price composite, the low of the past four years was reached on April 18, when the figure was 1.867 cents a pound. At the close of the year the composite price was 2.028 cents. The actual gain is somewhat better than is reflected by these figures for under the steel code of fair competition the waiving of extras is prohibited. The prices of scrap fluctuated widely during the year. The low composite price of \$6.75 in January rose to \$12.25 a ton in August, dropping to \$9.94 in November and closing the year at \$11.08.

Although American production of steel ingots has shown a greater net gain than has British production since the low point of the latter in August, 1932, the one has shown wild fluctuations while the other, except for seasonal declines, has been a steady growth. This is shown in the accompanying comparative table in which the production in each country for August, 1932, has the index value of 100.

STEEL INGOT PRODUCTION

1933	British monthly ^a		American monthly ^b	
	Totals (tons)	Index no.	Totals (tons)	Index no.
January	444,400	123	1,030,075	126
February	482,700	134	1,086,867	144
March	577,700	160	909,886	107
April	513,300	142	1,362,856	174
May	599,600	166	2,001,991	236
June	568,800	157	2,597,517	319
July	567,500	157	3,203,810	409
August	551,300	153	2,900,611	343
September	669,000	185	2,312,562	283
October	668,300	185	2,111,866	259
November	695,000	192	1,540,882	157
December	670,000	185	1,819,648	231

^a From *The Iron Age*.

^b From American Iron and Steel Institute.

PIG IRON. Inclusive of blast furnace ferro-alloys but excluding charcoal iron, the year's production of pig iron is estimated at 13,200,000 tons, a gain of 4½ million tons over the production of 1932, but 5 million tons less than was produced in 1931. The lowest output of the year was recorded in March with 17,484 tons daily, and the peak was in August with 59,142 tons daily, declining through September, October, and November, and gaining slightly in December. Composite prices of *The Iron Age* remained at \$13.56 a gross ton during the first three months of the year, below the cost of production, except in the Birmingham district. Thereafter, with increasing demand, prices steadily improved to \$16.90 a ton in December.

CODE OF FAIR COMPETITION. Under the National Industrial Recovery Act, the American Iron and Steel Institute acting for the steel industry submitted a tentative code of fair competition on July 15. As submitted, the code contained declarations on the principles of the open shop which, meeting objections at the hearing on July 31 at Washington, were withdrawn. In the next three weeks a number of debatable issues in the code were with difficulty adjusted and the revised code was approved by President Roosevelt on August 19. The main issues upon which agreement was ultimately met, according to a statement made by Gen. Hugh S. Johnson, were:

Hours—Average 40-hour week over three months' period with maximum per employe of 48 hours and 6 days per week. On or after Nov. 1, 1933, as soon as production reaches 60 per cent capacity, the 8-hour day for

all employes, except supervisory, technical, and emergency employes.

Wages—General increase of 15 per cent has been made since July 1.

Minimum wages fixed in code are estimated by steel companies to exceed an average of 40 cents per hour. (This results from fact that higher minimum wages than those fixed in the code are paid to large groups of common labor.)

Code to be effective for 90 days as a trial period to determine effect.

Provision for three representatives of NRA to receive full information, with access to necessary records, to meet with board of directors of Iron and Steel Institute upon administration of code and advise the President so as to provide assurance that code operation is in full compliance with the law, providing adequate protection of public interests and furnishing the basis for recommendations to the President as to continuation or modification of code after 90 days' period of trial and determination of results.

Although operation of the code showed that its major benefits went to labor, with an increased monthly payroll of \$9,000,000 and an addition of 92,000 employees, the directors of the American Iron and Steel Institute on November 21 petitioned the President to extend the steel code to May 31, 1934. From a commercial standpoint, according to T. H. Gerken in *The Iron Age*, perhaps the most important feature is "the requirement that minimum base prices for all its products be filed by each member within 10 days after the effective date of the code. It is further provided that such a list of base prices must be kept on file at all times with the secretary of the institute and that reductions in such quotations cannot become effective until 10 days after they are filed. These price lists, at all times, are open to the inspection of all members of the code, as well as of other interested parties. Under the penalty of violation of the code, no member may quote a base price lower than that which he has on file with the secretary of the institute without giving 10 days' notice during which time all of his competitors will likely have advised themselves of his intentions. In the case of an advance in base price, the competitor may use his discretion. However, it may readily be seen that if the price level reached a point at which buying was being hindered, the situation would be recognized by members of the code, who would either fail to meet the higher prices or even file reduced quotations, thus maintaining the price structure at a level which best served the interests of both consumer and producer."

IRRIGATION. See RECLAMATION.

ISLE OF MAN. See GREAT BRITAIN.

ITALIAN ARMADA. See AERONAUTICS.

ITALIAN LITERATURE. Viewed objectively, the 1933 literary season in Italy threw into relief two matters of grave importance: continuance of theatrical crisis and the demise of that excellent literary journal, *Pegaso*. It would be of some moment, therefore, to discuss these two matters before delving into our criticism proper.

Again, that theatrical crisis! Where in the wide world is not echoed and reëchoed the agony of what appears to be a moribund art? In Italy the public remains rather apathetic to things theatrical (whatever little is offered on the legitimate stage). It would be a futile task here to enumerate all the factors that have contributed to the decline of the theatre. The World Crisis explains a lot; but since it is at the moment a common denominator in the theatres of the world, one must look to another factor to diagnose the main source of ailment in the Italian theatre. If we look back about a decade we shall see that the Italian theatre was monopolized by two genres: Pirandello's

Theatre of the Paradox and Chiarelli's *Theatre of the Grotesque*. We could conveniently combine the two genres and call them the *Theatre of Mental Process*. This dramatic formula, the cerebral formula, was nothing short of a sensation in Italy and everywhere else in the world. When we say sensation, no inference is made to the loose use of the term. Who does not remember the stir created by Pirandello's *Six Characters in Search of an Author*, and Chiarelli's *The Mask and the Face*? But to come to the point, let us say that the dazzling heyday of this theatre was to be, perforce, ephemeral. Obviously the genre was to interest, as time has proven, the theatrical aristocracy; it remained essentially the theatre of the *exclusivistes*. The public in general, the non-specialized, but supporting element of the theatre, was merely caught in the enthusiasm that carried the movement. Let us concede that the non-specialized patron frequents the theatre principally for amusement. In Italy what was done for this class of patron? He sought pleasure, but he got problems. He wanted drama depicting reality, life itself, with red-blooded characters; he got, instead, philosophy, poetry, metaphysics. Small wonder then that foreign successes were favored. Why should not the cinema, with its varied entertainment, be preferred? These, in short, were the ills felt in and about the theatre, last season as well as a few others previous.

A ray of hope was injected into the picture last season when the Fascist state took up the ideas of Silvio D'Amico for a National Institute of Drama. It is to be recalled that D'Amico, keen dramatic critic and man of letters, espoused the idea of a National Theatre and worked tirelessly to bring about its reason of being. In the fall of 1932 D'Amico gave definite information (see *Italia Letteraria*, September, 1932) that the government had found subsidy, at least in bulk, for the Institute of Drama. The Institute, be it recalled, was to have various experimental centres for theatrical productions. These centres were to exchange their stock companies, and periodically, too, the companies were to make tours of the country. The major premise of the National Institute was to build on a more realistic theatre, a theatre more for the people rather than for the academic. But what has happened to the project? Thus far no official or extensive function has been in evidence. In a recent speech, in which the Duce outlined the ills of the theatre, no mention was made of the future of the Institute. Italy needs such an Institute; may we hope that the government has not shelved the plan?

Regrettable, indeed, was the news of the discontinuance in June of the *Pègaso*, a magazine which, through quality of its contributors and contributions, attained superb taste, versatility, and vitality. Why did not some modern Maecenas save the publication? As a tribute, may we record here a few facts relative to its short but useful polemic life. The *Pègaso* was launched (Florence, 1929) with material of polemic nature as an attack against the spirit or domination of criticism on literary production (spirit of Croce). It was of interest to note that the vitality and freshness that characterized the first issues of this monthly suffered no subsequent dilution. The pre-eminence of its staff and collaborators pushed the magazine immediately to the fore. It was favored as representative of Italy's intellectuals and men of letters. Much of its success was due, as we have stated in previous discussions, to the

eclectic personality of its editor and founder, Ugo Ojetti.

FICTION. Less than a decade ago literary prizes in Italy hardly existed. Now there are prizes for every field of professional writing. Perhaps too many exist for any one of them to cast the sought-for influence. Obviously, the prizes have come into being parallelly with the Fascist movement. In this case it has been the stimulation of national talent, as against inactivity and apathy; it has been the exhortation of a more intense consciousness in the cult of national literature, as against over-enthusiasm for foreign creations. Literary prizes, at best, focus but fleeting attention on contemporary publications. What works prepared under the spirit of competition have ever attained transcending permanency? Few, if any. How many books, of late, not prepared with this aim in view, but which have been singled out by literary prizes, have retained their appraised values? In Italy in the last ten years two or three only of these prize novels are still read with favor and respect. For such works as Francesco Chiesa's *Villadorna* (Mondadori Academy Prize, 1927-28), we can say with conviction that, commendably composed, it was bound to be cherished in spite of the prize awarded. (For a discussion of *Villadorna* see *THE NEW INTERNATIONAL YEAR BOOK*, p. 367, 1928.) This, however, is not a plea for the abolition or drastic curtailment of literary prizes. It is merely our belief that if they are to be taken seriously in the future, greater reserve must be practiced regarding their distribution. It is true that they provide literary speculation and comment, and no end of lively topics for literary weeklies. They also furnish interesting effervescing qualities, whatever be the residual after-taste. But reverting to our previous point: why so many prizes? In indiscriminate numbers they will, perforce, detract from those set up along serious and dignified standards. The prizes awarded by such bodies as the "Mondadori Academy," "Fracchia" ("Italia Letteraria"), "Viareggio," among others, have been, on the whole, commendable.

While speaking of prizes, we noted that the "Viareggio" made a first award to Antonio Foschino for his *Adventures of Villon*. Incidentally, the same prize was further split among Erico Pea for his *Il servitore del diavolo* (*The Devil's Servant*), Masala for *Uno fra la folla* (*One in the Crowd*), and Frateili for *Capogiro* (*Dizziness*). Here again we must disagree with the practice of spreading the award over three or four works. Either a creation has merits presumably far above others and is deserving of a signal honor, or else it is to be set aside along with the others of less sturdy composition. Withholding awards from time to time would be, indeed, a judicious practice.

Mario Puccini won the Bologna Prize for his novel, *La prigioniera* (*The Prison*; Milan). It is a story suggestive of morbidity rather than dripping with it; it has also its moments of amusement, yet never jarring the serious undertone of the composition. Amelio, the young hero of the novel, moves from a small community to a large city after having passed a competitive examination for the position of accountant in the municipal prison. Endowed with a certain amount of sensibility and rectitude he pirouettes about no little squalor and vulgarity without becoming actually contaminated. His gentility of character and his credulity draw him, innocently and unwittingly,

into awkward and pitiful situations. A chap such as this must suffer from maladjustment. Yet he has the making of the universal type. For, is he not representative of most intelligent youths, who learn very early the seriousness of living and the responsibility attached thereto? It is the type whose very intelligence is synonymous with ideals, a type that lends facile belief in the goodness that people have or should have. The young man creates in his own mind the sober morality which he subsequently attaches to people about him,—particularly women, ever suggestive of beauty and ethereal qualities. The novel ends with the youth's first disillusionment. What becomes of this delicate character after a series of delusions smite it? Had the author continued here, perhaps he would have developed a work of sturdy structure worthy of greater consideration. Then, again, this may be merely conjectural. However, as the novel stands, one can say that it constitutes a forceful episode, but not a complete finality.

Whatever has been said regarding the good or evil of literary prizes, none the less, it was through one of these competitions that a new writer was discovered in Marise Ferro. That Marise Ferro (indeed, a very young woman) has talent beyond the ordinary is attested by her first volume, *Disordine* (*Disorder*), launched by the publishers, Mondadori of Milan. Let us recall briefly that Miss Ferro submitted her manuscript for the Mondadori Academy Prize. It was awarded special mention, if not a prize,—a fact which, subsequently, influenced its publication. This novel has dimensions and structure. The first part especially gains the attention of the reader; the composition shows predispositions of artistry and experience. This might have been maintained throughout, had the *materia prima* been more evenly and judiciously distributed. Lack of a central, motivating theme seems to account for the failure. In point of fact, there are three themes focused on one type of problem: three women, a mother and two daughters, by mockery of fate (call it a pathological one, if you will), experience the same disaster,—all three, following the instincts of a delicate romantic nature bestow their love on men who come degrees short of understanding their feminine souls. All three recoil at the thought of living under conditions non-conformable to their idyllic aspirations. This is the point that the author, we believe, wanted to throw into relief. But sentiment in this regard is not clearly defined in the work. Neither is there much idyll, for, upon close analysis, we must say that the three women are more concerned with attitudes: in fact they are bitterly disappointed in the non-fulfillment of the dictates of their vanities. We question whether the author has succeeded in conveying to us the deep and tragic feelings experienced by feminine hearts in the bestowal of their affection upon arid soil. If the novel is somewhat autobiographical, which we think it is, there is this to be said, that it makes interesting reading. As a novel, however, it comes short of being comparable with other novels written by Italy's young authors,—such as, for example, Alberto Moravia's *Gli Indifferenti* (*The Indifferent*), which *Disordine* dimly echoes. Yet there are sufficient good points about this *coup d'essai* to justify Miss Ferro's continuing in the literary profession. And, by way of tribute, none greater could have been paid than that of Miss Ferro's distinguished Ligurian colleague and compatriot, Alessandro Varaldo:

"Read *Disordine* and follow its author in the future. You will not regret. . . . She has been born to narrate according to our beautiful tradition."

The next volume to be recorded, with its handsome jacket of vermilion (a Mondadori publication to be sure!), with its title *I gonfalon di Lucifero* (*The Devil's Banners*) seemed to announce a medieval tale. But not so, for a glance at the name of the author banished at once that expectation. Virgilio Brocchi, be it recalled, deals in contemporary society, with its problems of triangles and quadrangles. In this case, a double triangle is consonant with Brocchi's specialty. *I gonfalon di Lucifero* constitutes the second volume of the trilogy, of which *Il volo nuziale* (*A Nuptial Flight*), is the first volume already published, and the third, *La nuvola fulgente* (*The Splendid Cloud*), should be, by this time, off the press. Virgilio Vernazzi, in *The Devil's Banners*, is the unhappy protagonist, who after succumbing helplessly to a love affair which is not exactly within the compass of the social code, finds himself in a state of mental collapse. Losing fast his grip on life, apathetic, he is given to philosophical musing, which, in essence, is for him the intensification of the pain of living. An automaton, he makes his rounds without conviction, without goal. One can sympathize with all of the characters depicted in this trilogy: they are helplessly auto-propelled, destination unknown except toward the eternal. Hence the title to the trilogy: *A Longing for Eternity* (*L'ansia dell'eterno*). Two innocent children are the fruits of two illicit love affairs. Are we to place these love affairs beyond the morality of religion, of the social standard? Intellectually motivated, are they to receive, *ipso facto*, our special consideration? The author refrains from drawing decisive conclusions: there is neither judgment against, nor justification for Vernazzi's morality. The children remain; somehow they must expiate the sins of the father. That the novel was inspiringly developed is not to be denied. The Italian naval exploit (World War) at the Adriatic base of the Austrian fleet was narrated with excitement and suspense. The various transitional parts of the composition were so smoothly handled (Brocchi is something of a master in this regard) that dull moments are relegated to a minimum. All these merits could not be discounted, and yet the novel does not touch the sublime.

For a novel built along simple lines we had Delfino Cinelli's *Lucia* (Milan), a story of mountain folk that never leaves its place of birth unless it be for America. The gist of the story follows in this wise: Vincenzo, an *émigré*, revisits his native mountains in Italy. He returns to America, leaving behind Maria, whom he has wronged. Maria becomes subsequently the mother of a girl, Lucia. Vincenzo, who is not devoid of moral feeling, exhorts Maria to find a way of entering America outside the quota. By cross-inquiries and roundabout ways, an agent is found who works out an ingenious plan for Maria and her child to slip by the immigration authorities. Maria suffers no little ignominy at the hands of this cruel agent. She even pays the price of adultery, all for the sake of her infant girl. And, when she is within one step of liberty, this man, this libertine, as well as mental sadist, for fear, perhaps, that his prey had not suffered enough anguish, steps in and exposes Maria's plot. She is taken to Ellis Island and her infant, Lucia, de-

ported. (This point is not clear in the novel. It seems incredible that immigration authorities here would separate mother and child so ruthlessly. Could Mr. Cinelli be somewhat vaguely informed about immigration laws here? On the other hand, had the author followed a more human treatment of this point, he would have eliminated, *a priori*, the climactic moment of the story. But let us leave this speculation in the realms of fiction.) To go on with the last episode of the story, we find Maria locked up in a cell, a victim of insufferable agony. Of what good has she been to any one, to her child especially? The morbid thought of suffocating herself seizes her. She finds a way. Here, the author succeeds in injecting a heartache in the reader, for that abject body, dangling from the window-grating of the cell. Thus ends the story and the vicissitudes of that mountain maid who has innate grace and a heart of gold. One can trust Cinelli for a story, stirringly told, but is there enough in 173 pages of text to form a meaty, well-proportioned novel? It seems that a different architectonic structure should have accompanied the plot to render the whole a novel of full length and import. Technically speaking, as a novel, it must be rejected; as a novelette, if abridged, it may be a gem.

In *Pozzo Rubino* (Milan), Giuseppe Colucci drew his theme from a throbbing township in the Puglie. There pass in review before us, country, people, business people, and people of leisure. There is intrigue, rivalry, festivity, suffering. The author prefers, in the main, to describe objectively, faithfully, with no preoccupation in creating a synthetic atmosphere other than a plausible one moving in stride with the narration. Townships in Italy, which have retained their regional aspects for centuries, have made eventful strides of late toward cosmopolitanism. It would be useless to try to enumerate various influences that enhance this activity toward culture in general, but the radio, the improved railroad and autobus communications, are among important factors. We may say, incidentally, that Fascism, which is in essence, a politico-literary hegemony, with its taste for culture in ample ramifications, forms a central, motivating power from which the four corners of Italy draw. *Pozzo Rubino*, when final appraisal is cast, finds its reason of being, as well as its death, within a local geographic radius.

At this moment we should like to turn our attention to a collection of historical novels, *Romanzi Storici Italiani*, published jointly by Ravagnati of Milan, and Italian publishers of New York. In launching the series the editors and publishers have proposed to substitute good historical literature for current literature of adventure, which, on the whole, is in bad taste. Specifically the series has been launched also to oppose influences (realism, surrealism, etc.) emanating from beyond the Alps, and propagated by some young writers in the controversy between the national and the cosmopolitan sentiment, as represented in the "strapaese" and the "stracittà" movements of recent date. Likewise, the series, is meant to check, if not supplant to a considerable degree, the widely diffused "detective" and mystery stories. The volumes published were Valentino Piccoli's *Il giglio tra le fiamme* (*The Lily Among the Flames*), and Giuseppe Fanciulli's *La spada di Eleonora* (*Eleonor's Sword*). The first is a novel touching on historical and legendary episodes revolving about the powerful Donati

family of late XIIIth century Florence. More specifically, it deals with Piccarda dei Donati, the "lily" among so much violence, and her brother Messer Corso, of inflexible will. The author's chief sources of information and inspiration are drawn from Dino Compagni's *Cronaca Fiorentina*, and from Dante's *Divine Comedy*. The other novel, *La spada di Eleonora*, shifts to Sardinia of the XIVth century, when, under Pisan domination, the island was divided into four judiciary centres. It was in 1381 that Eleonora of Alborea succeeded to the judgeship of her district, after her brother, Hugo IV, was assassinated. The author gives this remarkable woman an excellent evaluation. She was, it may be recalled, a woman of moral strength, and of action, worthy of any patriot. She possessed above all a mind of consummate intelligence. Centuries upon centuries have failed to destroy the usefulness and practicability in Sardinia of her law code and handbook, *Carta de Logu*. Fanciulli has built up an historical novel of distinction. Yet its purpose of being palpably adventurous, according to the premise of the series, falls short of furnishing intense interest to the non-specialized reader. This same shortcoming must be registered against the first volume also.

SHORT STORY. Two qualities, sincerity and unpretentiousness not only single out Eurialo de Michelis' volume of short stories, *Bugie* (*Lies*; Vicenza), but advance it, perforce, to the fore of the list. The ten stories are couched in an analytical treatment, with themes in sober composition. Michelis, who gained some fame through his novel, *Adamo* (1931), and his volume of poetry, *Aver vent'anni* (1927), continues in these stories the introspective mood. This mood, to begin with, invites difficulty and danger. Fortunately, the author's keen sensibility and poetic nature keep the stories from falling into "slow-motion,"—or better, let us call it the general ennui which is wont to identify itself with the intricacies of subjective reasoning. We were afraid of this pitfall especially as the first story, *Sirio*, with outward signs of meandering, length, tediousness, gave omens of ill-fate to the whole volume. But this proved to be an insignificant hazard, for, further reading was accompanied with enjoyment, which was intensified to the point of ecstasy in *Ragazzo* (*The Boy*). This story, marked by delicate consideration and refinement, evolves a bit of drama between a son, rounding into manhood, and a father, helpless against the dangers that accompany the metamorphosis. It is that critical age when the father, by an attitude, by a misunderstood mood, may forever alienate the affections of the boy, and spoil a comradeship, so essential, when the mother is dead. The last story of the collection, *Pace* (*Peace*), attains a loftiness of sentiment that adds a touch of finality to the whole volume. In this tale, a man stricken with a fatal illness struggles to make his exit from this life without fuss or fastidiousness. The author makes him attain this end with grace, and, one might say, with poetry.

Giuseppe Fanciulli is, for Italian readers, the children's writer *par excellence*. *Le meglio ore se ne vanno* (*The Best Hours Vanish*; Milan-Rome), is a story of episodes in a boy's life: hours spent gazing at the window, a visit to the theatre, excursions, and other events of no import, but none the less dear to adolescence. "The best hours pass all too quickly"—such is the motto as well

as the title to the book. "Up children, up. The best hours are vanishing." This was a cry born of winter-time when the sunlit hours disappear all too soon beyond that bleak horizon." Of course, we witness the ephemeral ambitions of the boy,—a boy approaching the universal type, not merely the Italian boy. We see him overcome with religious emotion when, in cassock, he sees himself combating the evils of the world. Next arises the inevitable desire to become a doctor. Then, with the awakening of the esthetic sense, we see him seized with the ambition of being a great artist of the brush; and, of becoming, immediately thereafter, a great musician. All summed up, however, these sketches offer speculation in the mind of the reviewer as to how far the book can hold the attention of children? There is little composite story, and, indeed, too little action to captivate their fancy. The book, as it goes, with its abundant humor and moods, is for a highly reflective type of child, or better still, it is for the adult.

Periferia (Periphery; Milan), awarded the "Viareggio Prize," has the shortcoming of the one above, in that it is a book of sketches more suited to adult reading, though it was meant for children. We must say that the children taking part in it are all of the hyper-precocious type. There are those who plan the perfect murder; there are those with mental problems *à la* Pirandello; there are those, who saturated in Shakespeare, produce Hamlet. This book, as the previous one, is destined to be read extensively by mature people who need all their intelligence to understand the subtle humor; the book is destined for adults endowed with no little sensibility to appreciate the delicate touch of poetry that permeates the atmosphere. The book in many ways is one of the outstanding publications of the year.

An anthology entitled *Italian Short Stories*, edited with an introduction and bibliography by Decio Pettoello, was published in the *Everyman's Library Series* by E. P. Dutton & Co. (New York). The selection of stories spans the XIIIth to the XXth centuries.

THEATRE. The season has been vastly more interesting from the point of view of polemics, problems, discussions, rather than from the production *per se*, which has been scant. Continuing, therefore where we left off (see introductory paragraph to this article), let us present Premier Mussolini's views on the theatrical crisis in Italy. "Mussolini believes (Associated Press release of the Duce's speech, in May, before the Società degli Autori) that the Italian theatre is suffering from too many introspective, moody, and unrealistic dramatic offerings, and that the modern dramatist is forgetting how to write anything else. . . . The so-called crisis would end quickly if they would look beyond themselves to the great driving force of modern and ancient Italy. The theatre should agitate the great collective passions, should be inspired by a live and profound sense of humanity, should reproduce that which genuinely counts in the spirit and in the conquest of man." . . . Echoing this sentiment, the Fascist press declared the crisis in the Italian theatre world was directly due to public indigestion of pawky, moody, unreal, somnambulant theatrical meanderings which are about as appealing to the public appetite as the enigmatic and capricious doings of creatures of another world. Playwrights should hearken to Il

Duce's words, forget their inner subtleties and torments and look to the great human canvas before them for their subjects. "In our history," said one editorial writer, "in our existence, our character, there is a vast store of dramatic, vigorous, beautiful and multiform inspiration for plays and dramas." It is rather obvious that these invectives are hurled against the theatre of paradox and philosophical subtlety (Pirandello) which has dominated the theatre for a decade. And this leads us to the recording of the latest offering by the distinguished Sicilian dramatist, Luigi Pirandello.

The play he put out was *Trovarsi (To Find One's Self; Milan)*. Though Pirandello here approaches the problem from a slightly different angle, the play is still consonant with the paradox of self-identity. The author develops his thesis through the medium of an actress, who after having created many characters with definite identity, let us say, the "fixed universal character," ends up by not being able to establish her own identity. She is at the mercy of the infinite twists of destiny, as we all are (the Pirandello idea),—this variable factor in life that changes one's character not once a day, but a thousand times. From this point of view, what fixity could there be for a human being? If we accept this Pirandellian principle, and if we like the *drame à thèse* variety of theatre, then we can accept this play with enthusiasm. But in the usual conception of what drama should be for the theatre, then this play must definitely be relegated to the department of philosophy. It is poetry, it is thought, it is humor, it is all that,—and still it is not drama!

The "Edizioni Littoria," publishers of Pesaro have prepared a novel year book in the *Almanacco Internazionale del Cinema e del Teatro*, profusely illustrated, and handsomely gotten up. The plans call for translations in the principal languages of the world. It is to have a wide and extensive circulation. There are to be found essays, articles, biographies, bibliographies, on any one and anything of any importance in the theatrical and moving picture world.

POETRY. Apparently, poetry held its own during the season, if not in quantity, at least, in quality. Our poets, of late, have found it opportune to gather their scattered journal and periodical contributions into graceful volumes. These volumes, in the main, show judicious and careful preparations: wise rejections, retouchings, and sublimations of poems,—all of which factors contribute much to impart a tone of seriousness and good taste. Let it suffice to call attention to a few of these "series," among others, Giulio Preda's excellent "collections," launched several seasons back, *The "Mondadori,"* and the "Eroica." A decorous volume of poetry is to be found in Ulrico Arnaldi's *La gioia di pensare (Joy of Thinking; Milan-Rome)*, in which the author does not mince his idiom. Neither style nor technique hampers a sincerity of expression. In point of fact, the volume is marked by a certain absence of style. Thought was tantamount in the poet's mind. Still, poetry must call upon a certain delicacy of expression, if it is to rise to the emotional pitch. The author, as much as has been his purpose to disregard this essential, has not escaped a lurking danger: the danger of writing prose instead of poetry. However, this fault does not appear often; and when it does, there is always a redeeming feature,—that of

genuineness and sincerity. The following lines best illustrate these points:

Se mi volgo alle spalle
non vedo che ragioni di rimorso
per il tempo perduto,
non vedo che ragioni di rimpianto
per il bene non fatto, . . .
(*I consigli*)

Benign Francesco Chiesa, poet and man of letters who hails from Ticino, offered for the season poems of meditation and reverie in *La stellata sera* (*Starlit Night*; Milan). Francesco Chiesa's poems, in fact all his creations, are synonymous with sobriety; and, if they lack certain freshness and vigor, they possess by contrast autumnal reflection and coloring. F. T. Marinetti, better known to us as the first and foremost exponent of the futurist movement, composed poems on Egypt, his birthplace. *Il fascino dell'Egitto* (*The Fascination of Egypt*; Milan) presents a canvas of pictorial impressions couched in "reality and life."

LITERARY CRITICISM, PHILOSOPHY, VARIA. Among the studies on Dante, two easily head the list. The first, Giovanni Papini's *Dante Vivo* (*Dante Alive*; Florence), a study of the life and appraisal of various phases of his creation. The study touches rather the human side of the great Florentine. Papini purposely avoids the erudite and the superman aspect of the poet. We must classify the work as belonging rather to the current, popularized type of biography built on wit, irony, and entertainment. The other work (one which Mr. Papini has thumbed as reference to his own life of Dante), is along a more scholarly plan. It consists of the life of the poet and various other essays which Michele Barbi, the distinguished Dantist has gathered, from his contributions to learned journals and publications (*Enciclopedia italiana*, *Pègaso*, *Studi danteschi*, etc.). *Dante, vita, opere e fortuna* (Florence) is indeed a useful text embracing within two covers the various essays of so excellent a scholar as Michele Barbi. Umberto Moricca published the second volume on *Storia della letteratura latina-cristiana* (Turin) spanning the fifth and sixth centuries from Saint Augustine to Gregory the Great. Polemics and discussions on the dialogues of Plato are to be had in Luigi Stefanini's *Platone* (Padova). Giuseppe Rensi translated and annotated Frederick Jodl's excellent work on criticism of idealism, *Critica dell'idealismo* (Rome). Ettore Romagnoli translated into prose the Odes of Horace, *Odi* (Milan), in two volumes, with a preface and esthetic appreciation. The work is facile and penetrating, and up to date. Two works in English which we recommend are Ralph Roeder's *The Man of the Renaissance* (New York) and Luigi Pirandello's famous novel, *One, None and a Hundred Thousand* (New York) translated by Samuel Putnam. Lastly let us call attention to the indispensable handbooks on information on all authors, *Almanacco degli scrittori* (Naples) and Bompiani's *Almanacco letterario*. Both of these year books are profusely illustrated and handsomely prepared.

ITALIAN SOMALILAND, sô-mâ'lê-lând'. A colony of Italy on the east coast of Africa reaching from the Gulf of Aden to Kenya. Total area about 194,000 square miles; total population (1931), 1,010,815 of whom 1658 were Europeans. Mogadiscio, the capital and chief port had 29,562 inhabitants (675 Europeans) in 1931. Agriculture and cattle raising are the principal occupa-

tions of the people. In 1931, imports were valued at 128,789,227 lire (lira equals \$0.0526 at par); exports, 78,823,060 lire. Highways extended 6200 miles in 1931; railway, open to traffic, 71 miles. The total budget for 1932-33 was estimated to balance at 71,640,000 lire. For the year 1932 the military force numbered 3047 including a detachment of the flying corps. The colony is administered by a governor. Governor in 1933, Murice Rava.

ITALY. A constitutional monarchy of southern Europe, upon which a Fascist dictatorship was superimposed. Capital, Rome. Ruler in 1933, King Victor Emanuel III, who ascended the throne July 29, 1900.

AREA AND POPULATION. With an area of 119,713 square miles, Italy had an estimated population of 41,806,000 on Jan. 1, 1933, as compared with 41,176,671 at the census of Apr. 21, 1931. The number of Italians living abroad in 1932 was estimated at 9,600,000. In that year emigrants numbered 83,309 (165,864 in 1931) and the number of Italians returning to Italy was 73,213. The movement of population in 1932 was: Living births, 983,276 (1,027,638 in 1931); deaths (excluding still-births), 603,313 (606,489 in 1931); marriages, 283,408 (276,740 in 1931 and 303,214 in 1930). The birth rate per 1000 inhabitants in 1932 was 17.3 (17.4 in 1931) and the death rate 15.8 (16.3 in 1931). Populations of the chief cities at the census of 1931 were: Rome, 1,008,083; Milan, 992,036; Naples, 839,390; Genoa, 608,096; Turin, 597,260; Palermo, 389,699; Florence, 316,386; Venice, 260,247; Trieste, 249,574; Bologna, 246,280; Catania, 227,765. In the 1931 census, 99.6 per cent of the population were classified as Roman Catholics; there were 82,481 Protestants, 47,435 Jews, and 17,474 atheists.

EDUCATION. Primary education is free and compulsory for children under 14 years. In 1930-31, there were 9425 infant schools, with 745,933 pupils; 92,204 public elementary schools, with 4,382,185 pupils; and 1172 private elementary schools, with 167,999 pupils. For secondary education, there were 1223 government schools of various types, with 230,847 pupils, and 612 private schools, with 46,127 pupils. The 21 state and four free universities had 30,101 students and 4474 teachers in 1930-31.

PRODUCTION. Agriculture and its related industries is the main support of the population. Of the 76,637,877 acres in Italy, 17,887,438 acres were devoted to cereals in 1932, 2,255,351 acres to leguminous plants, 554,384 to industrial crops, 1,138,974 to vegetables, 1,954,974 to vines, 1,499,466 to olive trees, 12,306,125 to woods and forests, and 12,220,603 to forage and pasture. A 1930 agricultural census showed 6,088,088 males and 2,704,349 females whose main occupation was agriculture. For 1,207,850 males and 2,938,912 females farming was a secondary occupation. The chief crops in 1932, with 1931 figures in parentheses, were (in 1000 metric quintals of 220.46 pounds): Wheat, 75,151 (66,220); barley, 2512 (2408); oats, 6068 (5729); rye, 1626 (1656); corn, 28,080 (19,332); rice, 6566 (6622); beans, 5912 (4874); potatoes, 28,237 (19,646); sugar beets, 24,943 (24,732). The 1933 wheat crop attained the record figure of 81,003,200 metric quintals, a crop sufficient to meet Italy's total wheat requirements for the ensuing year. It compared with a 1909-14 average of 49,300,000 quintals and a 1920-25 average of 51,300,000 quintals. The grape yield in 1932 was

74,450,000 metric quintals; olives (1931), 13,599,000 metric quintals.

Italy has relatively small mineral resources, but hydro-electric power production has expanded rapidly, reducing the need for coal imports. Mineral and metallurgical output in 1932, with 1931 figures in parentheses, was (in metric tons): Pig iron, 460,538 (509,174); raw steel, 1,391,357 (1,452,694); rolled steel, 1,355,447 (1,637,480); coal, 252,000 (236,000); lignite, 372,000 (304,000); coke, 672,000 (740,000); petroleum, 27,000 (16,000); iron ore, 473,000 (575,000); pyrites, 515,000 (646,000); lead, 31,000 (24,900); zinc, smelter production, 16,600 (16,900); aluminum, smelter production, 13,300 (11,100); superphosphates of lime, 667,000 (792,000); sulphur, 374,000 (374,000); marine salt, 758,000 (518,000); copper, 437 (721); mercury, 858 (1189); antimony, 238 (267).

Cotton textiles constitute the leading manufacturing industry. There were 5,357,000 cotton-spinning spindles installed on Jan. 31, 1933, of which 75 per cent were active during 1932. Silk culture is an important industry, the output in 1931 totaling 5393 metric tons. The output of artificial silk (1932) was 32,071 metric tons (34,585 in 1931). Beet sugar production (1932-33) was about 3,231,000 metric quintals. The production of electric energy in 1932 was approximately 11,185,000,000 kilowatts (10,627,000,000 in 1931). The number of unemployed was 905,000 in June, 1932, rose to 1,229,000 in February, 1933, and then declined to 824,000 in July, 1933, after which it again increased. Most of the economic indices showed gradual improvement during 1933, as compared with 1932.

COMMERCE. The decline in Italian imports and exports, excluding gold bullion and specie, during the years 1930-32 is shown in the accompanying table.

ITALY. IMPORTS AND EXPORTS
[In 1,000 lire, worth \$0.0526 at par]

Year	Imports	Exports	Excess of imports
1930	17,346,624	12,119,181	5,227,443
1931	11,643,059	10,209,503	1,433,556
1932	8,257,437	6,811,226	1,446,211
1933*	7,882,000	5,939,000	1,443,000

* Preliminary.

Imports of gold bullion and specie in 1932 were valued at 90,242,000 lire (261,038,000 lire in 1931) and exports at 14,874,000 lire (17,521,000 lire in 1931). The chief import items, in order of value in 1932, with 1931 figures in parentheses, were (in 1,000,000 lire): Raw cotton, 738 (772); coal and coke, excluding Reparation deliveries, 686 (1085); wheat, 505 (836); machinery and parts, 365 (487); raw wool, 302 (318); cereals other than wheat, 335 (417); timber, 285 (397). Leading export items in 1932 and 1931, respectively, were (in millions of lire): Cotton manufactures, 512 (732); silk manufactures, 350 (544); citrus fruits, 329 (402); artificial silk, 318 (417); machinery and apparatus, 293 (312); thrown silk, 252 (597); cheese, 241 (332).

Germany took 11.4 per cent of all Italy's exports, by value, in 1932 (10.8 per cent in 1931); Great Britain, 10.8 per cent (11.8); United States, 9.4 per cent (13.5); Switzerland, 8.5 per cent (3.8); France, 7.6 per cent (5.9). The chief sources of Italian imports in 1932 were the United States, which supplied 13.5 per cent (11.4 in 1931); Germany, 13.4 per cent (13.2); Great

Britain, 8.9 per cent (9.4); France, 5.9 per cent (7.1); Argentina, 5.8 per cent (4.8).

In 1933 Italy's imports from the United States were valued at \$61,239,586 and exports to the United States were \$38,571,390, compared with \$49,135,439 and \$42,402,603, respectively, in 1932.

FINANCE. Closed accounts of the national budget for the fiscal year ended June 30, 1933, showed revenues of 17,965,900,000 lire and expenditures of 21,903,600,000 lire, leaving a deficit of 3,937,700,000 lire. This compared with a deficit of 4,274,000,000 lire in the 1931-32 budget and one of 503,000,000 lire in 1930-31. The budget for 1933-34 provided for receipts of 20,064,900,000 lire and expenditures of 23,152,800,000 lire, the anticipated deficit being 3,087,900,000 lire. The 1934-35 budget, as approved by the Council of Ministers Dec. 9, 1933, placed receipts at 17,662,000,000 lire and expenditures at 20,636,000,000 lire, the expected deficit being 2,974,000,000 lire. The budget for the Ministries of War, Navy, and Air was cut 260,000,000 lire.

The national debt as of Mar. 31, 1933, stood at 98,125,400,000 lire, compared with 93,178,100,000 lire on June 30, 1931. Of the 1933 total, 1,653,400,000 lire represented the foreign debt (exclusive of war debts) and 96,472,000,000 lire the domestic debt. Of the latter, 88,374,000,000 lire comprised the funded debt and 8,098,000,000 lire the floating debt.

COMMUNICATIONS. Railways at the beginning of 1932 extended 13,983 miles, of which 10,495 miles were state railways. Goods carried by the railways on trade account in 1932 aggregated 37,055,000 metric tons (44,192,000 in 1931). The state lines carried 88,000,000 passengers in 1931. National highways in 1931 extended 12,860 miles. Air lines, which extended 11,608 miles, carried 33,650 passengers in 1931. The mercantile marine on July 1, 1932, consisted of 1091 steam and motor ships of 3,331,304 gross tons and 232 sailing vessels of 56,268 gross tons. On July 1, 1933, 512,000 gross tons of steam and motor shipping were idle (847,000 tons on July 1, 1932). In August, 1933, the new Italian liner *Rex* established a new speed record for the Atlantic crossing, covering the 3188 miles from Gibraltar to New York in 4 days 13 hours 58 minutes, or an average speed of 28.92 knots. The previous speed record, set by the *Bremen* in June, 1933, was an average of 28.51 knots for the 3199 miles from New York to Cherbourg.

GOVERNMENT. All political parties except the Fascist party were declared illegal by the law of Nov. 25, 1926, and all opposition periodicals and newspapers were suppressed or transformed into Fascist organs. The law of Dec. 9, 1928, made the Fascist Grand Council the "supreme organ coordinating and uniting all the activities of the régime." The Grand Council designated the Deputies for the Lower Chamber and passed on all constitutional questions. Under the laws of Dec. 9, 1928 and Dec. 14, 1929, the Council consists of three classes of members: (1) The Quadrumvirs of the March on Rome, who hold office for life; (2) *Ex-officio* members, such as the Presidents of the Senate and Chambers of Deputies, Cabinet Ministers, President of the Italian Academy, the Secretary and two Vice-Secretaries of the Fascist party, the presidents of Fascist confederations and syndicates, etc.; and (3) extraordinary members, appointed for three years for special services to the nation and the Fascist party. The Fascist party in 1932 consisted of

1,007,231 adult male "Fasci," 608,669 youths in "Fasci" combat units, 50,996 Fascist students, and 145,210 female "Fasci."

The Senate at the beginning of 1933 had 374 members, including 9 princes of the royal house and 365 members nominated for life by the King for distinguished services. The Chamber of Deputies consisted of 400 members selected by the Fascist Grand Council from a list of some 1000 names proposed by the National Syndicate Confederations and other associations. The Council submitted the 400 candidates to the nation as a single electoral constituency. If the list was rejected new elections were to be held. In the election of Mar. 24, 1929, 98.3 per cent of the voters approved the national list. The term of Deputies was five years.

The Cabinet, as reconstituted July 20, 1932, was composed as follows: Prime Minister, Chief of the Government, and Minister of Interior, Foreign Affairs, and Corporations, Benito Mussolini; War, Gen. Pietro Gazzera; Navy, Admiral Giuseppe Sirianni; Air, Gen. Italo Balbo; Public Works, Araldo di Crollanza; National Education, Francesco Ercole; Agriculture and Forests, Giacomo Acerbo; Colonies, Gen. Emilio de Bono; Finance, Guido Jung; Justice, Pietro de Francisci; Communications, Admiral Costanzo Ciano. For changes in 1933, see *History*.

HISTORY

The year 1933 opened the second decade of the Fascist régime in Italy. There was, however, none of the increased conservatism and the decline of initiative anticipated after 10 years of intense revolutionary activity. On the contrary, Premier Mussolini launched the nation upon a bold and largely experimental modification of the capitalist economic system. At the same time, the Fascist party underwent a thorough house cleaning. There was another important reorganization of the Cabinet. Plans were formulated for the abolition of the Chamber of Deputies and for other changes in the structure of the Fascist government. No less sweeping were the changes in Italian foreign policies during the year. The feud with France was to a large extent liquidated. Mussolini, who had assumed leadership of the powers seeking revision of the Peace Treaties, emerged as the chief opponent of Hitler in the latter's effort to absorb Austria.

THE ECONOMIC PROGRAMME. At the beginning of 1933, the Fascist leaders announced that in the second decade of fascism they expected to rehabilitate and reorganize Italian industry as thoroughly as they had succeeded in doing with agriculture during the first decade. During the course of the world economic depression, the government had been forced increasingly to intervene to prevent the collapse of normally sound industrial enterprises. In 1933 Mussolini completely discarded *laissez-faire* capitalism. While retaining private capitalism, he carried through measures for regulating it within the corporative state.

The first of these measures (Royal Decree No. 590 of May 15, 1933) forbade the construction of new factories or the expansion of old ones without the consent of the Technical Board. The board used its far-reaching powers to divert capital from over-expanded or speculative industries into others in which surveys indicated a prospect of legitimate profit or whose development was

considered essential to the national welfare. This action was based on the concept that the nation existed as a result of productive effort and that all productive effort must therefore be "disciplined" for the benefit of the nation as a whole.

This principle was carried out in the reorganization in March of the Banca Commerciale Italiana, Italy's largest bank, which early in the depression had been rescued from insolvency by the state's intervention. In accordance with Mussolini's demand for concentration of responsibility, the board of directors was reduced from 25 to 11 and new managing directors were installed. On November 9, the government blazed a new path in Italian finance by inviting the public to subscribe to a state-guaranteed loan for the relief of private companies forced to the wall by the depression. The loans were to be administered by the Institute for Industrial Reconstruction, created the previous January. The state thereafter became a leading channel for public investments in business. One of the Institute's largest salvage operations involved the Societa Hydroelettrica Piemontese, one of the greatest Italian electric companies, which was on the verge of collapse. Through pre-depression speculation and manipulation the company had gained control over a variety of other industrial enterprises and forced its shares of an original nominal value of 125 lire each up to 250. With the depression the value of the shares fell to less than 20. The Institute refinanced the Societa Hydroelettrica, split it into three separate and independent companies, and reduced the nominal share value from 125 to 50 lire. The share reduction involved a theoretical loss of more than 500,000,000 lire to stockholders. The actual value of their shares was more than doubled and the moribund industry was placed on its feet. The 400,000,000 lire of state-guaranteed bonds issued to refinance one of the new companies bore 4 per cent interest and were payable in 20 years. The bondholders were to receive 80 per cent of any profit earned by the company in excess of 4 per cent on the share capital.

A further step in the Fascist new economic programme was Mussolini's announcement on November 13 that legislation affecting economic matters was to be entrusted to the National Council of Corporations under a new and powerful guild system. The following day, Il Duce defined the proposed corporations as "instruments which, under the ægis of the state, effect the integral, organic, and unitarian discipline of the productive forces with a view to the development of the wealth, political power, and welfare of the Italian people." His corporative system, still in process of evolution at the end of the year, appeared to stand midway between communism and economic liberalism. On December 30, Mussolini announced the appointment of 13 commissioners to assume control of the confederations and centralize them under the Premier.

The corporations, through which the State regulated industry, were to consist of guilds representing the employing and employed classes in the divisions of agriculture, trade, industry, and other fields. The functions of the corporations were defined in the *New York Times* of Dec. 10, 1933, as follows:

The corporation must be an organization to link up masters and men, to settle disputes, to lay down general rules for the firms and undertakings with which it is concerned. It must express its views within its special

sphere regarding all questions brought before it by the State departments, and promote, encourage, and help all enterprises aiming at the coordination and better organization of production as well as establishing labor exchanges and regulating apprenticeship. The corporations would have the faculty, through the National Council of Corporations, of promulgating laws. This is the most important point and the really revolutionary change.

The government supplemented these economic measures by others of a more conventional nature. In June the tariff was drastically increased—25 per cent on raw materials, 30 per cent on foodstuffs, 40 per cent on finished goods, and 20 per cent on goods formerly on the free list. An extensive new programme of public works was adopted, including a 10-year plan for the electrification of some 4000 miles of railway line. The government announced a continuance of its policy of guaranteeing export credits. The maximum for the fiscal year ending June 30, 1934, was fixed at about \$10,500,000. On November 21, Mussolini prohibited further imports of foreign wheat for domestic use, since the record-breaking 1933 domestic crop was sufficient for all requirements. He held tenaciously to the gold standard, despite the handicap which the depreciation of numerous other currencies placed upon Italian export industries. Rather than abandon gold, he chose to continue the deflationary policy followed throughout the depression. On December 11 plans were announced for a nation-wide and simultaneous reduction in salaries, wages, and the cost of living in order to stimulate exports. This was a repetition of the deflationary scheme adopted in October, 1930, when the government ordered a 10 to 12 per cent reduction in all salaries, wages, and charges for light, heat, food, and transport.

At the end of 1933, the trend of a number of economic indices was encouraging. Italian securities had steadily appreciated in value. Unemployment was relatively less prevalent than in most of the other great European nations. Depositors and deposits in savings banks showed a substantial increase. On the other hand, the budget remained considerably out of balance and there was an increasingly unfavorable trade balance.

POLITICAL REORGANIZATION. The decision to abolish the Chamber of Deputies and transfer its functions to the National Council of Corporations was the most far-reaching political change in 1933. This step was complementary to the decision to permanently abandon economic liberalism and to establish the corporative state in the economic as well as the political field. Premier Mussolini stated in a speech before the National Council of Corporations November 14 that the Chamber of Deputies would be elected as usual in the spring of 1934, but that the new chamber would be called upon to legislate itself out of existence. It was, he said, "an institution which we have found to be extraneous to our mentality and to our fashion as Fascists." Details of the new governmental set-up remained to be worked out.

The reorganization of the Cabinet commenced on July 20, when Mussolini assumed the portfolio of War, held by Gen. Pietro Gazzera for the preceding five years. On November 6, Admiral Siriani, Minister of Marine, and Air Marshal Balbo, Minister of Aeronautics, handed in their resignations. The two departments were to be merged with the Ministry of War into a single Ministry of National Defense, administered by Il Duce. Marshal Balbo was appointed Governor

of Libia, replacing Marshal Badoglio, who retained his post as chief of staff of the Italian Army. This reorganization left Mussolini in charge of 6 of the 13 Cabinet posts.

In January, the Fascist party directorate carried out one of the periodical "cleansings" of the party. More than 5000 local leaders were demoted and replaced by younger men. The membership rolls were opened to outsiders, some 200,000 out of the 600,000 applicants for membership being admitted. During the summer, the secretary general of the party issued new instructions to the provincial and regional leaders to observe and enforce stricter discipline. He forbade ostentation or display in dress or living and urged more intimate and sympathetic contact with the masses. On August 1, enrollment in the party from without ceased, admission thereafter being obtainable only through the Fascist youth organizations.

Dissension within the Fascist ranks was indicated by the resignation of Deputy Leandro Arpinati, Under-Secretary of State for Home Affairs, after a disagreement with the secretary general of the Fascist party. During the summer 24 students at the University of Rome were arrested on charges of entertaining anti-Fascist sympathies. The special military tribunal for the defense of the state on November 10 sentenced 13 men to a total of 74 years in prison for membership in an illegal political party. On October 17, the government announced that three men arrested in connection with the bombing of the basilica of St. Peter's on June 25 had confessed that the outrage was part of an anti-Fascist plot.

FOREIGN RELATIONS. The advent of the Hitler régime in Germany and the Reich's subsequent withdrawal from the Disarmament Conference and the League of Nations was the primary factor in the disintegration of the European peace structure during 1933. The accelerated drift toward war was signaled by feverish diplomatic activity in all the capitals of Europe. Italy occupied the key position in these diplomatic negotiations, due chiefly to Mussolini's foresightedness and careful groundwork during the preceding years. Assuming the rôle of "honest broker," Il Duce attempted to prevent the division of Europe into two hostile camps, while claiming concessions from his neighbors for his services.

Hitler's appointment as Chancellor in January was greeted with enthusiasm by the Italian press and he responded with expressions of friendship and sympathy for Italian Fascism. It appeared more than likely that Germany, Italy, Hungary, and Bulgaria, with the possible support of Austria, would form a closer bloc for revision of the territorial clauses of the peace treaties. The fears of the pro-treaty bloc—France, Poland, and the Little Entente—were increased by Mussolini's coolness toward the new French Ambassador in Rome, M. de Jouvenel. Also, there was alarm at Italy's attempt to force a customs union upon Albania (q.v.) and at the discovery that arms were being shipped from Italy to Austria and Hungary, in violation of the Versailles Treaty (see AUSTRIA under *History* for the so-called Hirttenberg Arms Affair). The Italian press violently denounced the Franco-British note of Feb. 10, 1933, demanding that Austria return the arms to Italy or destroy them.

These menacing developments led to the closer union of the Little Entente states in the convention of February 16 (see LITTLE ENTENTE) and

to their negotiations for a military agreement with Poland. At this juncture, Prime Minister MacDonald of Great Britain presented a new disarmament plan before the Geneva Disarmament Conference (March 16). Immediately thereafter he visited Rome to enlist Mussolini's support for his proposals.

THE FOUR-POWER PACT. Mussolini seized the opportunity to launch his project for an agreement among France, Great Britain, Germany, and Italy designed to safeguard the peace of Europe for 10 years. He secured the British Prime Minister's support of the project, in return for Italian support of the MacDonald Disarmament Plan (see **DISARMAMENT**). The Four-Power Pact originally provided: (1) for an effective policy of cooperation among the four powers with a view to the maintenance of peace, (2) for "revision of the peace treaties in accordance with the League of Nations Covenant in case a situation susceptible of leading to a conflict among states should arise," (3) that if the Disarmament Conference failed, Germany, Austria, Hungary, and Bulgaria would be permitted to achieve equality of armaments "by stages which will be fixed by successive understandings" among the four powers, (4) that the four powers would adopt, in so far as possible, a common line of conduct on all questions.

The British and German governments immediately accepted the Four-Power Pact in principle and the French Cabinet on March 29 accepted it subject to further study. However, the project was violently attacked by France's allies and by many of the smaller League powers. They considered it an attempt to revise the peace treaties without consulting the smaller European powers and to sabotage the League in order to permit the control of European affairs by the four great powers. Under pressure of its allies and of criticism within France, the French government secured extensive alterations in the pact before it was finally signed in Rome on June 7 by representatives of the four powers. In the new pact the signatories reiterated their support of the League Covenant, the Locarno treaties, and the Kellogg-Briand pact and stated that the rights of every state remained inviolable except with that state's consent. They undertook, within the framework of the League, to pursue a policy of effective cooperation for the maintenance of peace, and to consult regarding all economic questions of European interest. No provision was made for German rearmament in case the Disarmament Conference failed. The signatories merely agreed to make every effort to secure the Conference's success and to reexamine those questions which remained unsettled by the conference. Finally, they agreed to examine all proposals calculated to give effect not only to Article XIX of the Covenant, providing for treaty revision, but also to Articles X and XVI, which provided for preservation of the territorial integrity of all League members and for sanctions against an aggressor. Any territorial revision could be undertaken only with the consent of the states involved.

Franco-Italian Rapprochement. The months of negotiation previous to the signing of the pact were marked by a growing estrangement between Germany and Italy and a rapprochement between France and Italy. The Nazi attempt to incorporate Austria in the Third Reich aroused the opposition of Mussolini, who did not desire a

greater Germany on his own frontier, eager to reclaim the German-speaking population of the Italian Tirol. Meanwhile France and Italy found common ground in opposing the policy of non-gold countries at the World Economic Conference as well as in supporting Chancellor Dollfuss of Austria.

The Hitlerite propaganda in Austria led to the first test of the Four-Power Pact, and emphasized its obvious weaknesses. Italy, France, and Britain chose to register their opposition to Hitler's policy under the pact rather than through the medium of the League. Mussolini, by "private" and "friendly" admonitions, secured Hitler's promise that his propaganda in Austria would be discontinued. The British and French, however, were openly rebuked for their oral protest. The Nazi propaganda in Austria continued, despite Hitler's promise. Accordingly Mussolini set about isolating Germany through the establishment of a Danubian economic confederation. He conferred with Chancellor Dollfuss in Rome in August. Their joint communiqué of August 20 announced that independent Austria would follow "a policy of peace and collaboration with all neighbors, in a particular manner with Italy and Hungary, and also Germany as soon as possible."

Later Mussolini advanced a plan for Danubian economic collaboration which won the support of France and was accepted in principle by Germany. As outlined by the *New York Times* of November 14, the project called for (1) bilateral accords among the Danubian countries, (2) preferential treatment for agricultural products of these states and for the industrial products of Austria, (3) the waiving by outside nations of their most-favored-nation rights if they had favorable trade balances with the Danubian states, and concessions by the Danubian states of part of their markets to other nations if the latter granted them preferential duties. A trade pact embodying some of these principles was signed between Italy and Austria on August 31. Among other things, Italy agreed to concede a free zone in Trieste for Austrian overseas trade.

Meanwhile the Italo-German rift continued to widen. The Nazi economic programme, and particularly the high tariff placed on agricultural imports, aroused charges in Italy of discrimination against Italian products. The Italians resented also the new Nazi laws against foreign workmen, which resulted in the expulsion from Germany of thousands of Italian laborers. The Italian press displayed marked coolness toward Hitler's victory in the election of November 12. Mussolini, however, continued his efforts to find a basis of collaboration between France and Germany on the disarmament problem. He gave warning through the Italian press that Europe was faced with the alternatives of "conciliation or a grave and final rupture of the European accord."

Attack Upon the League. The conviction that the League of Nations no longer offered a basis for European collaboration was expressed by the Fascist Grand Council on December 5. It announced that Italy's further participation in the League depended upon "radical changes in that organization to be brought about within the shortest possible time, which changes must affect the League in its constitution, in its methods, and in its objectives." It was reported that Mussolini wished to divorce the League Covenant from the Treaty of Versailles, to bring the United States,

the Soviet Union, Germany, and Japan into the League, and to superimpose a "committee" of great powers on the League structure. At the end of 1933 there was no evidence that the Italian ultimatum would result in any changes in the League structure (see LEAGUE OF NATIONS).

Soviet-Italian Developments. Dissatisfied with the results of the trade agreement concluded Aug. 2, 1930, and implemented on Apr. 27, 1931, the Italian government on Jan. 18, 1933, denounced the treaty. A new trade agreement and a tariff convention were signed May 6, 1933. The trade agreement provided that the Italian government would continue to guarantee 75 per cent of the credits for Soviet purchases in Italy up to 200,000,000 lire annually. Under the customs accord, each country granted to the other general most-favored-nation treatment. Both treaties entered into force immediately through an exchange of notes. A protocol providing for the continuation of the trade agreement during 1934 was signed at Rome Dec. 5, 1933.

On Sept. 2, 1933, a Soviet-Italian treaty of friendship, non-aggression, and neutrality was signed in Rome. Its provisions were similar to those of a series of non-aggression pacts which the Soviet Union had concluded with European countries during 1933 and preceding years. The pact was ratified by the Italian Council of Ministers September 16.

OTHER EVENTS. Unsuccessful in his attempt to establish a united front among the European nations to withhold war debts to the United States government, Mussolini during 1933 followed the British example of making "token" payments on debt installments. Thus Italy paid \$1,000,000 on account of \$13,545,438 on June 15 and \$1,000,000 on account of \$2,133,906 on December 15. A friendly gesture toward the United States, which increased Fascist prestige in Italy as well, was the dramatic flight of Italo Balbo's armada of 24 seaplanes from Rome to the Century of Progress Exposition in Chicago and return.

Consult Muriel Currey, *Italian Foreign Policy, 1918-32* (London, 1932); H. R. Spencer, *Government and Politics of Italy* (1932); B. Z. Goldberg, "Franco-Italian Rivalry," *Current History*, June, 1933; V. M. Dean, "Political Realignments in Europe," *Foreign Policy Reports*, May 10, 1933.

IVORY COAST. See FRENCH WEST AFRICA.

JAMAICA, ja-ma'ka. A British West Indian colony south of Cuba, comprising the island of Jamaica (4450 sq. miles; population, 1931 estimate, 1,050,667) and the dependencies of Turks and Caicos Islands (166 sq. miles; pop. 5300), Cayman Islands (100 sq. miles; pop., 6182) and the Morant Cays and Pedro Cays. The principal towns are Kingston, the capital, 62,707 inhabitants in 1921; Spanish Town, 8694; Montego Bay, 6580; Port Antonio, 6272.

Agriculture is the chief industry of the people, the area under cultivation in 1931-32 totaled 951,546 acres. Livestock (1931-32); 109,859 cattle; 7830 sheep; 11,171 horses, mules, and asses. Chief exports (1932) were: Bananas, £1,869,111; sugar, £342,909; coffee, £224,057; pimento, £61,687; cacao, £48,102. In 1932, total imports amounted to £4,754,152; total exports, £3,271,357.

For the fiscal year 1932-33, revenue totaled £2,169,301; expenditure, £2,081,635; public debt, £5,725,099. A governor administers the colony assisted by an executive council and a legislative council of 5 *ex-officio*, 10 nominated, and 14 elected

members. Governor-in-Chief and Captain-General in 1933, Sir A. R. Slater.

HISTORY. On Aug. 16, 1933 Jamaica suffered from a tropical storm and flood in which some 30 people lost their lives and damage to property was estimated at \$500,000. The hurricane of Oct. 28, 1933 destroyed approximately 7,500,000 banana trees.

JAPAN. A Far Eastern empire, comprising (1) the four principal islands of Honshu (mainland), Kyushu, Shikoku, and Hokkaido, which with some 600 smaller islands and island groups form Japan proper; (2) Formosa (Taiwan); (3) Korea (Chosen); and (4) Karafuto (southern half of Sakhalin Island). In addition Japan controlled the leased territory of Kwantung and the South Manchuria Railway Zone in Manchuria and mandated territories in the North Pacific. During 1931-33, it established a protectorate over Manchuria and Jehol in North China. Capital, Tokyo; sovereign in 1933, Emperor Hirohito, who ascended the throne Dec. 25, 1926.

AREA AND POPULATION. The area of the Empire and the population in 1932 and 1930 are shown in the accompanying table.

JAPANESE EMPIRE: AREA AND POPULATION

Island	Area, sq. miles	Population, 1932 esti- mates	Population, 1930 census
Japan proper . . .	147,593	66,296,000	64,450,005
Korea	85,288	20,262,958*	21,058,305
Formosa	18,889	4,932,433	4,592,537
Karafuto	18,934	287,377*	295,196
Japanese Empire	260,614	91,778,768	90,396,043
Kwantung ^b	1,438	938,288	1,328,011
Pacific Islands . . .	830	69,626 ^c	69,626

* 1931 figures. ^b Including South Manchuria Railway Zone. ^c 1930 figure.

The estimated population of Japan proper on Oct. 1, 1932, included 32,321,000 males and 32,975,000 females. In Japan proper 55.8 per cent of the population was concentrated in towns and cities of 5000 and over. Japanese residing abroad in 1930 numbered 634,913, of whom 269,881 were in the Americas. The number of foreigners resident in Japan at the end of December, 1930, was 40,290, including 30,836 Chinese and 2026 Americans. The movement of population in 1931 was: Births, 2,102,784; deaths, 1,240,891; marriages, 496,574; divorces, 50,609. The birth rate per 1000 of population in 1931 was 32.17; death rate, 18.98. The census population of the chief cities in 1930 was: Tokyo, 2,070,529 (2,100,418 on Oct. 1, 1932); Osaka, 2,453,573; Nagoya, 907,404; Kobe, 787,616; Kyoto, 765,142; Yokohama, 620,306.

EDUCATION. Primary education is compulsory and less than 1 per cent of the adult population is illiterate. In 1930-31 there were 9,832,000 pupils attending elementary schools, 687,149 in secondary schools, and 57,328 in the five Imperial universities and 32 other institutions of university rank.

PRODUCTION. Agriculture supports directly about half the population of Japan proper. Rice is the chief crop and principal diet of the people. The area sown to rice was 7,952,000 acres in 1931 and the production in 1932-33 was estimated at 328,000,000 bushels, only 37,000,000 bushels less than the normal consumption. This bumper crop further depressed farm prices and added to the agricultural depression. The 1933 wheat crop of 39,879,700 bushels was 21.6 per cent higher than in 1932 and 25 per cent over the

average for the previous five years. The output of silk cocoons in 1932 was 740,252,000 pounds (802,533,000 in 1931); rice (rough), 535,020,000 bushels (489,174,000 in 1931); wheat, 31,336,000 bushels (30,892,000); barley, 77,744,000 bushels (76,522,000); oats, 7,653,000 bushels (11,081,000); tobacco, 138,230,000 pounds (155,757,000). The 1933 cocoon crop was 837,039,579 pounds. Fish ranks second to rice as an article of diet. The value of the chief marine raw products in 1931 was 147,806,000 yen, and that of manufactured fish products, 130,708,000 yen.

Copper is the only mineral found in quantities more than sufficient for domestic requirements. The mineral production in 1932, with 1931 figures in parentheses, was: Copper, 156,227,045 pounds (166,805,998); coal, 26,081,727 metric tons (27,987,271); sulphur, 77,085 metric tons (81,499); kerosene, 2,496,754 hectoliters, of 26.42 U. S. gallons (3,057,602); silver, 163,035,355 grammes (173,765,205); gold, 12,334,390 grammes (13,373,333). Metallurgical production, in metric tons, in 1932 and 1931, respectively, was: Pig iron, including Korea and Manchuria, 1,542,054 (1,405,869); steel ingots and blooms, in Japan proper, 2,360,492 (1,883,125); steel products, 1,945,373 (1,601,800).

Japanese industries manufacturing for export enjoyed a boom during the latter half of 1932 and the year 1933, due chiefly to the depreciation of the yen. In 1933, Japan took second place in rayon production, displacing Great Britain, and flooded the world markets with cheap cotton and wool textiles (see under *History*). Production of leading manufactured commodities in 1932 and 1931 are shown in the accompanying table, compiled by the U. S. Department of Commerce.

JAPAN. MANUFACTURED PRODUCTION

Manufactured products	1931	1932
Raw silk (semi-) . . 1,000 lbs.	96,585	Y424,756 ^b
Silk fabrics value . . 1,000 yen	Y475,540 ^b	(Y232,303)
Cotton yarn " 1,000 lbs.	1,028,800	1,123,600
Cotton textiles " . 1,000 sq. yds.	1,405,000	1,658,000
Rayon " 1,000 lbs.	46,764	64,400
Wool fabrics " . . . 1,000 yds.	201,439	139,029 ^b
Sulphate of ammonia met tons	592,532	686,000
Printing paper " . . 1,000 lbs.	1,224,861 ^b	1,198,031 ^b

^a Figures for cotton yarn and textiles are those of the Japan Cotton Spinners' Association, representing about 97 per cent of the total power looms in Japan. ^b Eleven months ending November.

Both cotton and yarn production in 1932 established a new record for the industry. Exports of cotton yarn in 1932 were 89,470 bales, or three times the 1931 exports; exports of cotton cloth, totaling 2,031,722,000 square yards, were about 44 per cent larger than in 1931. The number of unemployed industrial workers in May, 1933, was 429,295 (483,109 in May, 1932).

COMMERCE. Developments in Japan's foreign trade during the course of the world depression are shown in the accompanying table. The divergence in the yen and dollar values of imports and exports during this period is due to the abandonment of the gold standard by Japan on Dec. 13, 1931, and the yen's subsequent rapid depreciation. Conversions from yen to dollars were made at average exchange rates, which were \$0.4610 in 1929, \$0.4939 in 1930, \$0.4936 in 1931, \$0.2811 in 1932, and \$0.2554 in 1933.

Including Japan proper and Karafuto, Korea, Formosa, and the Mandated Territories, exports of the Japanese Empire in 1932 were valued at

1,457,296,000 yen or \$409,645,000, as compared with 1,179,211,000 yen (\$582,058,000) in 1931. Imports were valued at 1,524,529,000 yen (\$428,545,000), as against 1,319,406,000 yen (\$651,259,000) in 1931. In 1933 exports of Japan proper increased 32.4 per cent over 1932 and imports increased 33.8 per cent. The total unfavorable trade balance, including the trade of Korea and Formosa, amounted to 78,664,000 yen, an increase of 17 per cent over 1932.

JAPAN PROPER: VALUE OF FOREIGN TRADE

Year	Thousands of yen General imports	Thousands of yen General exports	Thousands of dollars General imports	Thousands of dollars General exports
1929	2,216,240	2,148,619	1,021,687	990,513
1930	1,546,051	1,469,852	763,595	725,960
1931	1,235,675	1,146,981	609,928	566,150
1932	1,431,461	1,409,992	402,384	396,849
1933	1,863,399	1,814,046	475,912	463,307

The quantity and dollar value of the leading imports in 1932 were: Raw cotton, 1,685,140,000 lbs. (\$125,765,000); crude and heavy oils, 708,309,100 gals. (\$27,051,000); wool, 204,224,000 lbs. (\$24,613,000); drugs, chemicals, medicine, and explosives, \$22,767,000; iron and its manufactures, 2,766,980,000 lbs. (\$18,293,000); machinery and parts, \$16,534,000. The quantity and dollar value of the chief export items were: Raw silk, 72,297,000 lbs. (\$107,483,000); cotton textiles, 2,021,722,000 sq. yds. (\$81,157,000); clothing and accessories, \$25,309,000; rayon textiles, \$17,018,000; silk textiles, \$14,136,000. Of Japan's 1932 imports, 58.6 per cent consisted of raw materials for industrial purposes; 15.3 per cent of articles fully manufactured; 14.1 per cent of semi-manufactures; and 11.2 per cent of food, drink, and tobacco. Of the exports, 49.7 per cent were fully manufactured articles, 34.5 per cent raw silk and other semi-manufactures, 7.4 per cent food, drink, and tobacco, and 3.6 per cent raw materials.

The United States was the principal factor in Japan's 1932 trade, taking 31.6 per cent of all her exports (37 per cent in 1931) and furnishing 35.6 per cent of all imports (27.7 in 1931). British India in 1932 took 13.7 per cent of the exports (9.6 in 1931); China, including Hong Kong, 11.3 per cent (16.8); Kwantung and Manchuria 9.6 per cent (5.7); and Netherland India, 7.1 per cent (5.5). Imports from Australia in 1932 were 9.4 per cent of the total (9.2 per cent in 1931); from British India, 8.2 per cent (10.8); Kwantung and Manchuria, 7.2 per cent (7.3); China, including Hong Kong, 7.2 per cent (11.8). The decline in trade with China in 1932 was due largely to the Chinese boycott. Especially noteworthy was the increase in exports to India, consisting mainly of cotton textiles, which continued during 1933 and served as a severe irritant to Anglo-Japanese relations. In 1932 Japan had an unfavorable balance of trade with the United States for the first time in history; it amounted to \$528,000, as compared with a favorable balance of \$156,634,000 in 1931 and \$172,745,000 in 1929.

FINANCE. Baron Seinosuke Goh, president of the Tokyo Chamber of Commerce and Industry, writing on Japan's economic and financial situation in the New York *Times* of Oct. 8, 1933, placed the deficit in the Japanese budget for the fiscal year ended Mar. 31, 1932, at 680,000,000 yen and the deficit in 1932-33 at 950,000,000 yen. These deficits he attributed to (1) military ex-

penditures in Manchuria and replenishment of armaments; (2) the abandonment of retrenchment after Japan went off gold; (3) relief expenditure; and (4) the fall in revenue. Between September, 1932, and June, 1933, the national government floated internal loans of 1,055,000,000 yen with which to balance the budget. Including these loans, the closed budget for 1932-33 showed revenue of 2,045,275,000 yen and expenditure of 1,950,140,000 yen, leaving a nominal surplus of 95,135,000 yen. Final accounts for 1931-32 showed revenue of 1,531,082,000 yen (including loans) and expenditure of 1,476,875,000 yen. The budget for 1933-34, as approved by the Diet, balanced at 2,309,414,000 yen. Of this sum, 1,381,330,000 yen was to be raised from usual revenue sources and 948,084,000 yen from the issue of public loans.

The national debt on Aug. 31, 1933, totaled 7,104,834,000 yen (6,333,241,000 yen on Aug. 31, 1932). Of the 1933 figure, 5,683,622,000 yen represented internal loans and 1,421,211,000 yen external loans.

COMMUNICATIONS. On Mar. 31, 1931, there were 13,363 miles of railway lines in Japan proper, of which 9002 miles were state and 4361 miles private railways. For the year ended Mar. 31, 1931, all lines carried 1,252,523,158 passengers and 87,036,976 tons of freight, with a gross income of 520,299,825 yen and an operating expenditure of 337,297,415 yen. Highways extended 585,449 miles. In March, 1931, there were 100,734 motor vehicles in the country, including 57,547 passenger cars. At the same time there were 32,210 miles of telegraph lines, 3,277,739 miles of telephone wire, and 913,157 telephone instruments. Statistics of civil air lines in 1930-31 show 30,018 flights, 15,459 hours flown, and 2,356,052 kilometers covered. The registered merchant marine of Japan proper on Jan. 1, 1931, consisted of 3351 steamers, of 3,907,908 tons, and 15,379 native sailing vessels of 896,321 tons. A total of 17,887 steamers, of 56,807,994 tons, and 43 sailing vessels, of 4824 tons, entered the ports during 1931. Idle Japanese shipping on July 1, 1933, totaled 147,000 tons, as compared with 226,000 tons on July 1, 1932.

ARMY AND NAVY. Service in the army or navy is compulsory for all Japanese men between the ages of 17 and 40. Conscripts are normally called to the colors at 20 and serve two years in the army and then five years and four months in the reserve. In 1932 the strength of the active army and of the first and second reserves was 17,343 officers and 259,304 of other ranks. The army air corps personnel numbered 6944. See MILITARY PROGRESS.

The accompanying table from the *Statesman's Year Book* for 1933 shows the classification of the Japanese Fleet for the three years ending with 1932. Also see NAVAL PROGRESS.

JAPANESE FLEET

	Completed at end of		
	1930	1931	1933
Battleships and battle cruisers	10	10	9
Armored cruisers	7	7	7
Aircraft carriers	3	3	3
Cruisers	27	27	31
First-class gunboats	2	2	2
Destroyers	106	110	101 ^a
Submarines	67	67	62 ^b

^a Including 67 first-class and 34 second-class.

^b Including 27 first-class and 35 second-class.

GOVERNMENT. Executive power is vested in the Emperor who acts with the advice and aid of a ministry appointed by, and responsible to, himself; legislative power is in the Emperor and the Imperial Diet of two chambers, namely, the Upper House or House of Peers, composed of membership based on rank, wealth, and other qualifications, and numbering 404 members; and the Lower House or House of Representatives, elected for four years, unless sooner dissolved, and numbering 466 members. There is a Privy Council, consulted by the Emperor on important national problems. The Cabinet in office during 1933 was appointed May 26, 1932. It was a coalition group, composed of representatives of the Seiyukai and Minseito parties, the military, and non-party men. The members were: Prime Minister, Makoto Saito; Foreign Affairs, Count Yasuya Uchida (replaced Sept. 14, 1933, by Koki Hirota); Home Affairs, Tatsuo Yamamoto; Finance, Korekiyo Takahashi; War, Lieut.-Gen. Sadao Araki; Marine, Admiral Keisuke Okada; Justice, Matsukichi Koyama; Education, Ichiro Hatoyama; Agriculture and Forestry, Fumio Goto; Commerce and Industry, Kumakichi Nakajima; Communications, Hiroshi Minami; Railways, Chuzo Mitsuchi; Overseas Affairs, Ryutaro Nagai.

HISTORY

Continuing its defiance of the Powers and of the League of Nations, Japan in 1933 aggressively developed the policy of imperialistic expansion upon which it had embarked in September, 1931. Early in the year Japanese military forces conquered the Chinese province of Jehol and incorporated it in the puppet state of Manchoukuo (q.v.). Carrying their drive into China proper, they forced the Chinese to conclude a truce in which China tacitly accepted the independence of Manchoukuo and agreed to the establishment of a demilitarized area extending south from the Great Wall. The Japanese government countered efforts of the League of Nations to curb Japan's military expansion in North China by announcing its withdrawal from the League, effective in two years. It proceeded rapidly to consolidate its military and economic position in China and launched a vigorous diplomatic campaign to secure recognition by the Powers of Japan's paramountcy in the Far East. Meanwhile the military elements dominating the government prepared for a possible conflict by the rapid expansion of military and naval expenditures.

THE CONQUEST OF JEHOI. In a series of military operations carried out in sub-zero weather during the three weeks beginning Jan. 1, 1933, Japanese forces captured the strategically located town of Shanhaikwan south of the Great Wall, occupied adjacent passes in the Wall, and advanced some 50 miles westward into Jehol. The main offensive against Jehol was launched from these positions on February 21, three days after Chinese officials had ignored an ultimatum to evacuate the province.

Marshal Chang Hsiao-liang, the young Chinese war lord who had been ousted from Manchuria by the Japanese in 1931, sent about 100,000 troops from the Peiping area into Jehol to aid the forces of Gov. Tang Yu-lin in defending the province. Although outnumbering the Japanese and occupying strong positions in the mountains along the eastern border, they offered no effective resistance. Advancing in four columns from



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VISCOUNT MAKOTO SAITO

Premier of Japan, Appointed May 26, 1932



Wide World

KOKI HIROTA

Japanese Foreign Minister, Appointed Sept 14, 1933



Acme

JAPANESE INVADING JEHOL

Nipponese troops moving across the barren wastes of Jehol enroute to Lingyuanm from Chaoyang during the offensive which won the Province for Japan

JAPAN



Keystone

GAZI MUSTAFA KEMAL PASHA
President of Turkey



Wide World

GHAZI I
King of Iraq, crowned Sept 10, 1933



Copyright, International

FUAD I
King of Egypt



Copyright, International

ABDUL-AZIZ IBN SA'UD
King of Saudi Arabia

RULERS IN THE NEAR EAST

Suichung, Chaoyang, Suitung, and Kailu, the invaders smashed through the Chinese lines, their airplanes and artillery inflicting heavy losses upon their poorly equipped opponents. The Japanese occupied Jehol City (Chengteh), capital of the province, without firing a shot on March 4, six days ahead of their own schedule. Governor Tang fled from the capital after commandeering 242 badly needed army trucks to remove his personal effects.

Continuing their rapid advance to the Great Wall, the Japanese met a more determined resistance from Marshal Chang's troops at the Kupei Pass but captured that strategic point on March 10. Marshal Chang resigned his command on the same day, turning over some 150,000 disorganized troops to Gen. Ho Ying-ching, Nanking's Minister of War. While the Japanese consolidated their position along the Great Wall, General Ho strove to organize a more effective resistance. Sporadic Chinese attacks along the Great Wall caused the Japanese to renew their offensive on April 1. One column pushed northward across the border of Chahar province and broke up a Chinese concentration in Dolon Nor (Tolunnoerh). Four others debouched into the triangle in North China formed by the Great Wall, the Lwan River and the sea. Meeting stiffer Chinese resistance than in Jehol, the Japanese required until April 22 to clear the Lwan triangle of Chinese troops. Meanwhile they had captured Chinwangtao, summer camp of the 15th U. S. Infantry stationed at Tientsin, and bombed Tungchow and Miyun, towns near Peiping with long established American mission stations. After hurriedly withdrawing from their advanced positions on April 25, the Japanese resumed their offensive on April 30, charging that truces concluded with individual Chinese generals had been violated. After heavy fighting in which the Chinese lost from 15,000 to 30,000 killed besides uncounted wounded, the Chinese concluded a truce at Tangku May 31 to avoid Japanese occupation of Peiping.

By the terms of the truce, a demilitarized area, policed by Chinese more or less friendly to Japan, was established between the Great Wall and a line drawn roughly between Peiping and Tientsin. The Japanese evacuation proceeded slowly until the conclusion of an agreement at Dairen July 7 among Chinese, Manchoukuo, and Japanese representatives for the administration of the demilitarized area. An effort of the Chinese general, Feng Yu-hsiang, to continue the struggle against Japan from the province of Chahar was frustrated by the refusal of other Chinese leaders to join him and by a Japanese expedition which drove him from Kalgan.

The Nanking government, in signing the Tangku truce, had tacitly accepted the loss of Manchuria and Jehol. Thereafter, by a combination of diplomatic and military pressure, the Japanese strove to secure Nanking's formal recognition of Manchoukuo. This policy, which promised to nullify the effect of the non-recognition policy toward Manchoukuo adopted by the United States and the League powers, met with considerable success. It was reported that only the Fukien revolt prevented the formal recognition of Manchoukuo by Gen. Chiang Kai-shek's régime before the end of 1933. See *CHINA under History*.

WITHDRAWAL FROM THE LEAGUE. The effort to restrain Japan in Manchuria through the peace machinery of the League of Nations reached a

climax early in 1933. The Lytton Report, adopted by the League in 1932, had condemned Japan's course (see *LEAGUE OF NATIONS and JAPAN in 1932 YEAR BOOK*). At the beginning of 1933, the League's Committee of Nineteen, attempting to mediate between Japan and China, submitted draft resolutions for the approval of the two powers which would have authorized a settlement favorable to China. They called for Japan's withdrawal from Manchuria, supervision of Chinese-Japanese negotiations by the Committee, and the enlargement of the Committee to include the United States and the Soviet Union. The Japanese representatives, led by Yosuke Matsuoka, rejected all efforts to reach a settlement on this basis. Accordingly the failure of the League's efforts to mediate the dispute was announced before the Assembly February 21. On February 24, the Assembly adopted the draft report of the Committee of Nineteen, thus passing unprecedented censure upon Japan. With Japan casting the sole vote in the negative, 42 of the 57 League members voted in the affirmative. Representatives of 13 small countries were absent and Siam abstained from voting.

The Committee's report reaffirmed Chinese sovereignty over Manchuria, approved the Chinese boycott, rejected Japan's plea of self-defense, condemned its failure to seek a pacific settlement of its dispute with China, denied the Japanese contention that Manchoukuo was established by the spontaneous action of the Chinese population, and denied Chinese responsibility for the armed conflict. It recommended withdrawal of Japan's troops to the South Manchuria Railway Zone, non-recognition of Manchoukuo, and the establishment in Manchuria of an autonomous régime under Chinese sovereignty in accordance with the suggestions made in the Lytton Report.

Following the Assembly's momentous action, Mr. Matsuoka arose, declared that Japan had now reached the limit of its "endeavors to cooperate with the League regarding the Sino-Japanese differences," and strode from the Assembly hall, followed by the other members of the Japanese delegation. The League continued its efforts toward an international settlement through the Advisory Committee, on which the United States was represented. On June 7 this committee adopted a report proposing a detailed plan for the application of the Stimson non-recognition doctrine to Manchoukuo.

In the meantime Japan had notified the Secretary-General of the League (March 27) of its intention to withdraw from that organization. The decision was based on the belief that "further coöperation" was rendered impossible by "the existence of an irreconcilable divergence of views, dividing Japan and the League on policies of peace, and especially as regards the fundamental principles to be followed in the establishment of a durable peace in the Far East." Japan's resignation, under the League Covenant, would become effective two years later (Mar. 27, 1935). In repudiating the good offices of the League, the Japanese contended that as China was not an organized state, the treaties and machinery governing relations between ordinary countries required modification in their application to China.

THE JAPANESE MANDATED ISLANDS. Japan's decision to quit the League raised the question whether it could legally retain the Caroline, Marshall, and Marianne (Ladrone) islands in the Pacific which were captured from Germany

during the World War and administered under a mandate from the League. In statements issued to the press and transmitted to Japanese envoys in foreign capitals, the Tokyo government gave notice that it would forcibly oppose any effort to dispossess it in these islands. It was asserted that the mandate was conferred on Japan by the Allied Supreme Council before the League existed, in accordance with the secret treaties regulating the disposition of the German colonies. Recalling that an Armenian mandate had been offered to the United States after that country refused to join the League, the government held that mandates might be held by other than League members.

As one of the victors in the World War, the United States government had always insisted upon its right to be consulted in connection with the disposition of mandates. The Japanese statement was accordingly studied with care by the American State Department, particularly in view of harbor improvements undertaken in some of the islands during 1932. Charges that these expenditures were not justified from a commercial standpoint were aired before the Mandates Commission of the League in 1932. Situated near Guam and between the Hawaiian and Philippine Islands, the harbors would have naval value as bases for seaplanes and submarines in the event of war between Japan and the United States.

JAPAN'S MONROE DOCTRINE. Japan's stand on the mandated islands was in line with the aggressive revival of the policy of Japanese domination of the Far East. The Japanese Monroe Doctrine, as it was called, was first formulated after the Russo-Japanese War, found wide application during and immediately after the World War, and was then superseded by a "friendship" policy toward China. As developed in 1931-33, the Japanese policy (1) forbade the acquisition of further territory in the Far East by European or American powers, (2) opposed independent action by other Powers in China without previous approval of the Tokyo government, (3) demanded the right to exploit Chinese natural resources, with or without Chinese consent, and (4) envisaged Japanese guardianship and control over China.

This doctrine was set forth in part in Foreign Minister Uchida's address on foreign policy before the House of Peers Jan. 20, 1933. Asserting that Japan was the "mainstay of tranquillity in this part of the world," Count Uchida indicated that Japan would not permit the intervention of the League or of separate powers in her controversy with China. He hinted that the high tariff policy of the Powers made the principle of the Open Door no longer applicable to China. On September 15 the New York *Times* revealed that Japanese envoys to the United States, Great Britain, France, Italy, Germany, and Switzerland had warned these governments against giving economic aid to China. Objection was raised to such aid on the ground that it strengthened China's power to oppose Manchoukuo and defy Japan. All the governments were reported to have replied that they would conduct their economic relations with China in any way they saw fit.

The extension of the Japanese Monroe Doctrine to distant parts of the Far East was indicated by the protest made to France by the Tokyo Foreign Office August 21 against the annexation of a group of small islands in the China Sea. The islands, whose sheltered waters might be used as seaplane or submarine bases, are situated some

2500 miles from the Japanese mainland between the Philippines and French Indo-China. While not claiming sovereignty over the islands, the Japanese contended that France had no right to annex the islands without previously consulting them.

Another move toward the maintenance of Japanese domination of the Far East was the announcement of the Foreign Office in May that at the 1935 naval conference, Japan would demand parity with the United States and Great Britain. This move led the United States government to launch a large programme of naval construction. Due to a voluntary naval building holiday, the American fleet was only about 65 per cent of its quota strength. The Japanese, whose navy was about 95 per cent of quota strength, responded to the American construction programme with a plan for additional construction which would bring their navy up to the maximum strength permitted under the Washington and London naval treaties. These treaties fixed the ratios for Great Britain, the United States, and Japan at 5-5-3, respectively, for battleships and at 10-10-7, respectively, for other categories. See **NAVAL PROGRESS.** The revival of Port Arthur as a Japanese naval base was announced during June.

The American naval programme, the continued presence of the entire American fleet in the Pacific, the \$50,000,000 United States wheat and cotton loan to China, and American plans to develop Chinese aviation aroused much hostility and suspicion in Japan. General Sadao Araki predicted a crisis in Japanese-American relations within two or three years. The military party in control of the government, by repeatedly calling attention to Japan's diplomatic isolation and America's alleged hostility, aroused the nation to a state of feverish nationalism and won public support for the largest defense programme in Japanese history. Military and naval appropriations for the 1934-35 fiscal year were 45 per cent higher than those for 1933-34.

The plan of Secretary of the Navy Swanson for a fleet capable of defending the Philippines was in open conflict with Japan's determination to maintain a navy capable of defeating either the United States or Great Britain in the Western Pacific. The Roosevelt Administration showed some disposition to moderate the anti-Japanese policy followed by the Hoover Administration. In his conversations with Viscount Ishii in Washington May 25, President Roosevelt was said to have recognized "Japan's special position in Manchuria." The move in the U. S. Congress for repeal of the Japanese exclusion act had a favorable effect in Japan. But up to the end of 1933, the basic policies of the United States and Japan with regard to the Japanese Monroe Doctrine appeared irreconcilable.

RELATIONS WITH OTHER POWERS. Japan's relations with the other Powers were equally unpromising. The Soviet Union maintained a conciliatory attitude toward Japan despite considerable provocation, but the conviction was expressed by Japanese military leaders that the Soviet policy would change when internal conditions in the Soviet Union improved and the development of heavy industry had made further progress. Japanese military operations in Manchuria had left Vladivostok and the Soviet Pacific provinces at Japan's mercy. The completion in 1933 of a new railway route into North Manchuria via Rashin on the Korean coast and of another strategic line

from Hailun northward to make possible the cutting of the Trans-Siberian railway near Blagoveshchensk further consolidated the Japanese military position. The Soviet Union protested sharply at attempts by Manchoukuo authorities to oust it from its half-share in the management of the Chinese Eastern Railway. Under Japanese pressure and the interruption of traffic on the line, the Russians finally entered into negotiations for the sale of their share of the railway to Manchoukuo. The procedure for the negotiations fixed by the Japanese Cabinet May 23 provided for Japanese guidance of the Manchoukuo negotiators and the purchase of mining and timber concessions held by Russia, "thus eliminating Soviet influence in North Manchuria." The negotiations opened in Tokyo June 26. Progress was hindered by repeated Russo-Japanese clashes over fishing rights along the Siberian coast and by the alleged maltreatment of Soviet officials on the Chinese Eastern. On October 8 the Soviet government published four alleged Japanese official documents containing detailed plans for seizing the railway and imprisoning the Soviet railway officials. Immediately before publication of the documents in Moscow, the Manchoukuo authorities arrested seven Soviet railway officials marked out for arrest in one of the documents.

Convinced that Japan was determined upon war, the Soviet government abandoned attempts to appease the Japanese by concessions and began to concentrate large military forces and supplies in eastern Siberia. The Soviet leaders, from Stalin down, gave frequent forceful warnings that Moscow had reached the limits of compromise in Manchuria. The Soviet position had been strengthened by a good harvest, the conclusion of non-aggression pacts with its western and southern neighbors, and recognition by the United States. In the face of Soviet determination, the Japanese attitude was modified. Foreign Minister Hirota on November 10 went part way toward meeting the Soviet proposal for a non-aggression treaty. He suggested the extension to the Siberian-Manchoukuo border of those provisions of the Portsmouth Treaty whereby Russia and Japan agreed to refrain from military measures along their mutual frontiers. At the end of 1933, however, both countries were actively preparing for war. Meanwhile the Soviet government on December 7 had withdrawn its representatives sent to Tokyo to negotiate the sale of the Soviet share in the Chinese Eastern railway. Manchoukuo authorities offered only \$14,000,000, whereas the lowest price acceptable to Moscow was \$103,000,000.

The long friendship between Great Britain and Japan appeared during 1933 to be drawing definitely to a close. The Japanese Monroe Doctrine was no more palatable to Great Britain, with its long established investments and trade in China and the Far East, than it was to the United States. The problem of defending British possessions in Malaya and the Orient was made difficult by Japan's naval expansion. Japanese merchant ships were actively competing with British ships all over the world for the carrying trade. The competition between British and Japan cotton goods and other manufactures developed into an open trade war following the depreciation of the yen in 1932. British manufactures were being gradually driven from large markets, not only in Manchuria and China, but also in Malaya, India, and Africa by cheap Japanese products made by poorly paid, efficient labor working long hours.

The British defended their position in their own colonial markets by imposing additional duties on Japanese imports into West Africa, India, and the Federated Malay States. Japanese cotton spinners proposed a boycott on Indian cotton. To protests at the British tariff increases and threats of retaliation from the Japanese Economic Federation, the Federation of British Industries and associated groups warned the Japanese that retaliation "might lead to a series of measures having disastrous results on the relations between the two countries in both economic and political fields." An Indo-Japanese conference was called in Simla, India, in September to negotiate a new Indian-Japanese commercial treaty. An agreement under which India would admit 400,000,000 yards of cotton piece goods annually from Japan, which in turn would purchase 1,500,000 bales of India raw cotton, was reported ready for signature at the end of December.

The Dutch also viewed developments in the Far East during 1933 with disquiet, particularly because the preceding years had witnessed a steady increase in Japan's interest in Netherland India. Japanese colonies and plantations had been established in New Guinea and other unsettled parts of Holland's rich colonial empire. In 1932 a party of Japanese scientists studied the possibilities of growing cotton in New Guinea and reported that suitable areas were available. Netherland India supplied over 75 per cent of the fuel oil used by the Japanese navy. New Japanese shipping lines to points in the islands had been established and adjacent ports in Japanese mandated territories developed. Dutch fears that the Japanese were casting covetous eyes on Netherland India were increased when in March, 1933, Yosuke Matsuoka, chief of the Japanese delegation which withdrew from the League of Nations, suggested to Dutch newspapermen at The Hague that Holland and Japan conclude a non-aggression treaty. He further urged that more Japanese colonists be sent to undeveloped parts of Dutch New Guinea. The non-aggression treaty was opposed at The Hague on the ground that it would make it more difficult for Holland to maintain its neutrality in the event of war between Japan and another power. Oil from Netherland India was declared vital to the prosecution of a war by Japan.

DOMESTIC POLITICS. Premier Saito's coalition cabinet, while it served to check the movement for a military dictatorship, came increasingly under the dominance of Gen. Sadao Araki, the Minister of War, and other military leaders. A few courageous criticisms of Japan's foreign policy in the Diet produced no apparent effect, while the resignation of Minister of Justice Koyama on April 6 and of Foreign Minister Uchida on September 14 permitted the appointment of new members more in sympathy with the War Minister's aggressive policies. Count Uchida was succeeded by Koki Hirota, former Ambassador to Moscow.

The strength of reactionary, Fascist, and anti-parliamentary sentiment in Japan was demonstrated during the court martials of the young army and navy officers charged with the assassination of Premier Ki Inukai on May 15, 1932. The defendants boldly admitted their guilt, offering as their sole defense their patriotic desire to eradicate political corruption, purify the state, improve the status of the oppressed farmers, and

register their protest at the inferior naval ratio allotted to Japan under the London Naval Treaty. Widespread sympathy with their point of view was indicated by the petitions for clemency addressed to the War and Naval Offices. The naval court martial received more than 1,000,000 such appeals, 1022 of which were signed in blood. Deferring to public sentiment the army court martial sentenced 11 army cadets to four years' imprisonment instead of the eight-year terms demanded by the prosecution. On November 9, the chief assassins and conspirators received 15-year sentences from the naval court martial, instead of the death sentences asked. The militarists skillfully utilized the evidence presented at the trials to discredit parliamentary government and justify a strong foreign policy.

Despite more open criticism of the extremist military policies on the part of Baron Wakatsuki, negotiator of the London Naval Treaty, and other civilians and business leaders, the militarists remained in practically complete control of the government. Regulations issued for the Naval General Staff, September 27, increased its independence of the Cabinet. Finance Minister Takahashi, the spokesman for business, Baron Wakatsuki, and others of liberal views agreed with the military that national preparedness should take precedence over "sound finance." The army and navy secured most of their demands in the budget finally approved by the Cabinet Dec. 2, 1933, for the fiscal year 1934-35. Total expenditures were fixed at 2,112,000,000 yen, of which the navy was to receive 487,000,000 yen and the army 449,000,000 yen. Loans of 780,000,000 yen were to be raised to balance the budget. The combined army and navy budget required 44 per cent of all expenditures.

CROWN PRINCE BORN. The long-awaited birth of a Crown Prince of Japan occurred on December 23, when the first son of Emperor Hirohito and Empress Nagako was born. On December 29 he was named Akihito, meaning "enlightened benevolence."

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JAPANESE BEETLE. See ENTOMOLOGY, ECONOMIC.

JAVA. See NETHERLAND INDIA.

JAY, PETER AUGUSTUS. An American diplomat, died in Washington, D. C., Oct. 18, 1933. Born in Newport, R. I., Aug. 23, 1877, he was graduated from Harvard University in 1900 and two years later entered the diplomatic service as third secretary of the American embassy in Paris. In 1903 he was transferred to the American legation in Constantinople as second secretary and in 1906 when it was changed to an embassy was made its secretary. From 1907 to 1909 he was attached to the American embassy in Tokyo in the same capacity, and from 1909 to 1913 was diplomatic agent and consul general in Cairo. His next appointment as secretary of the Amer-

ican embassy in Rome was followed by that of counselor at that embassy during the World War.

In 1920 Mr. Jay was elevated to the ministerial rank, serving first as Minister to Salvador (1920-21) and then as Minister to Rumania (1921-25). During his residence in Bucharest he investigated the restrictions imposed upon American oil companies by the Rumanian government after 1920 so as to prevent foreign monopolization and in 1924 presented a strong note from the United States government demanding that discriminations against the rights of these companies under the new mining measure be stopped immediately. This measure had been designed to prohibit after a certain period foreign concessionaries from acquiring additional oil fields, unless 60 per cent of the capital were in Rumanian bonds.

Mr. Jay's last diplomatic post was that of Ambassador to Argentina during 1925-27. In 1928 he was appointed American member of the Permanent International Commission established under the Treaty of 1914 between the United States and Spain.

JEHOL. See JAPAN under *History*.

JERRAM, ADMIRAL SIR (THOMAS HENRY) MARTYN. A British naval officer, died at Alverstoke, Hampshire, England, Mar. 19, 1933. Born Sept. 6, 1858, he received his naval training aboard the *Britannica* and joined the navy in 1871. His first distinguished exploit was in 1884 when he commanded the torpedo boat *Childers* on her maiden trip to Melbourne, Australia. In the Vitu expedition of 1890 he commanded, as first lieutenant of the *Conquest*, a battalion of seamen, and the following year acted as vice-consul at Beira and Mapondas during the crisis which led to the fixing of the boundary of Portuguese East Africa. As a result of the successful training ideas which he introduced as commander of the *Northampton* and the *Curacao* during 1894-99 he received his captaincy, serving thereafter as commander of the *Boscawen*, *Albion*, *Russell*, and the Royal Naval Engineering College at Devonport. In 1908 Sir Martyn was promoted to the rank of rear admiral, commanding the third division of the Home Fleet. From 1910 to 1912 he was second in command of the Mediterranean Fleet, and on his promotion in 1913 to the rank of vice-admiral was made commander-in-chief of the China station.

Recalled to England in 1915 as commander of the second battle squadron of the Grand Fleet, Sir Martyn led this squadron, which consisted of the battleships *King George V*, *Ajax*, *Centurion*, *Erin*, *Orion*, *Monarch*, *Conqueror*, and *Thunderer*, into action at the battle of Jutland, May 31, 1916. He became an admiral in 1917 and after the war served as chairman of the Committee on Naval Pay and Allowances, more commonly known as the Jerram Committee. He was created a Companion of the Bath in 1911, a Knight Commander of the Bath in 1914, a Knight Commander of St. Michael and St. George in 1916, and a Knight of the Grand Cross of St. Michael and St. George in 1919. Among the other honors which he received were the Queen's Jubilee medal in 1897, the Coronation medal in 1911, and the War and Victory medals in 1918. The French government made him a commander of the Legion of Honor; the Japanese, a member of the Order of the Rising Sun; and the Chinese, a member of the Order of the Striped Tiger.

JEWS. GERMANY. As early as February, 1933, even before Adolf Hitler's seizure of

power had been confirmed by the election of March 5, there were plain indications that the National Socialists meant to inaugurate a reign of terror not only against Marxists but also against Jews. From the middle of February until the middle of March open atrocities were being committed throughout Germany and this despite Hitler's order to the Storm Troopers to end acts of political terror. On March 26, as a result of the strong representations made by Americans and following inquiries that had been addressed to American diplomatic and consular representatives in Germany, Secretary of State Hull issued a statement which, among other things, declared that "whereas there was for a short time considerable mistreatment of Jews, this phase may be considered virtually terminated. There was some picketing of Jewish merchandising stores and instances of professional discrimination. These manifestations were viewed with serious concern by the German government." Nevertheless the American and English press continued to be filled with alarming tales of terrorization, commercial discrimination and the like. Before March was over the National Socialists had set up concentration camps for political prisoners, and here there were lodged as many so-called enemies of the Third Reich as could be apprehended. Jews, of course, were included. All the time, however, the German government insisted that atrocities had ceased and in order to still the clamor of the foreign press and the growing massing of opinion abroad against Germany, it announced officially that German Jews would be used as hostages to force the cessation of these activities and that it would also take drastic legal counter measures against those Jews who it insisted were responsible for the spreading of atrocity stories outside the country. It was also announced that Nazi "Committees of Action" would be organized in retaliation for the purpose of boycotting Jewish business men in Germany and introducing restrictions on the continuance in practice of Jewish doctors and lawyers. On March 28 the Nazi party headquarters issued a manifesto establishing a national boycott of Jewish goods and Jews in the professions to commence on April 1. Also pressure was brought to bear on Jews resident in Germany to compel the circularization of their kinspeople abroad for the purpose of denying the continuance of atrocities. On March 31, declaring that foreign agitation had to a large extent ceased, the Nazi government ordered the boycott against Jewish merchants and Jewish professional people to be carried out for the single day, April 1. On this day all Jewish concerns with the exception of banks and newspapers were placed under guard by Storm Troopers who sought to keep out all persons endeavoring to enter the boycotted establishments, posted on windows signs announcing that "no German buys from Jews," scrawled the word "Jew" over windows and doors, and disfigured the name plates of doctors and lawyers. This boycott was merely the first step in a long series of official measures against all Jews resident in the Reich. Not only were the 564,379 persons in the total population of Germany on July 16, 1925 who were listed as Jews the victims of this terror but the measures were also applied against the so-called "non-Aryans" who included persons one of whose parents or grandparents was Jewish. It was estimated that in this non-Aryan group there were at least 2,000,000

Germans, making a total of 2,500,000 persons against whom the terror was being applied. The first act in the terror against Jews, or, as it became to be known, the "cold pogrom," was the Civil Service Law, promulgated on Apr. 7, 1933, whose purpose was the "restoration of the professional civil service." This law and the decrees which were promulgated by the Ministers of Finance and Interior in order to carry it out, applied to all officials of the Reich, the states and the municipalities, employees in the social services having the rights and duties of officials, judges, all court officials, notaries, teachers in schools, professors, officials of the old and new army, members of the police force of the states, elected municipal officials, office employees and workers in public enterprises. This law provided that all officials who were of non-Aryan descent were to be retired. Every official was required to fill out a detailed questionnaire giving information as to the names, professions, addresses, places and dates of birth, religion, and places and dates of death and marriage of himself, his wife and their respective parents and grandparents. The ruling was to apply equally to all Aryan officials who were married to non-Aryans; such persons, too, were to be dismissed. Exceptions were made in the cases of non-Aryan officials who held office on or before Aug. 1, 1914, or who fought in the World War at the front for the German Reich or its allies, or whose fathers or sons fell in the war. However, the civil service law provided that officials who lacked requisite education and training might be dismissed, and that an official might be transferred to a post lower in rank and salary. This meant simply that non-Aryan officials who had been permitted to continue their jobs because of war service and the like could be demoted in rank. Also the law either eliminated or reduced the pension allowances of retired officials who had fallen under the ban.

At the time of the boycott Jewish judges and lawyers had been excluded generally from the courts of the Reich. On April 7 a decree was promulgated barring all non-Aryan lawyers from practice up to Sept. 30, 1933 with the same exceptions as to persons who had seen service and the like that were laid down in the civil service law. On May 13, the Prussian Ministry of Justice presented the following statistics as relating to lawyers in that state. Before the application of the cold pogrom there had been 11,814 lawyers in Prussia, of whom 3515 were Jews. Of these, 1383 had been admitted to the bar before 1914 and 735 had been at the front during the war. Nine hundred and twenty-three Jews and 118 communists were dropped, leaving a total of 2158 Jewish lawyers with the right to practice in Prussia, the number in Berlin thus being allowed totaling 1203. However, unofficial measures were utilized which succeeded in contracting the number of Jewish lawyers still further. In July the Berlin Federation of Lawyers prohibited Aryan lawyers from becoming partners of or of sharing offices with Jewish lawyers as well as ordering the dissolution of such partnerships which had been entered into since September, 1930. At the same time the press was reporting that a boycott was being carried out against Jewish lawyers who theoretically were being permitted to continue their practice. The doctors fell under similar disabilities. The cold pogrom against Jewish physicians and dentists was particularly severe in view of the fact that from 80 per cent

to 90 per cent of German practitioners derived their income from membership in the panels of the health insurance offices. These health insurance offices were closed to Jews as a result of the operations of the Civil Service Law. It was reported that in the health insurance clinics of Berlin alone 1500 Jewish physicians had been expelled, and that at least 6000 Jewish physicians had been dropped from such offices throughout Prussia. As in the case of the lawyers, unofficial measures similarly contracted opportunities for practice among Jewish physicians. The medical association issued an order forbidding German and non-Aryan physicians to substitute for each other; German physicians were not permitted to send patients to non-Aryan physicians, call non-Aryans into consultation or form partnerships with them.

In the field of education, if anything, the measures aimed at the Jews were even more serious. The Civil Service Law applied directly to professors, instructors, and teachers. The exemptions allowed in the cases of persons who had seen service and the like in effect do not hold because non-Aryan teachers have been compelled to relinquish their posts by Nazi students who organized demonstrations and made the continuance of their activities impossible. Similar restrictions and coercion were applied toward Jewish students. On April 25 a law was promulgated "against the overcrowding of the German universities" and under this Jewish students are practically barred from institutions of higher learning. Under it only 1½ per cent of the students in a given institution of learning may be of non-Aryan descent. If the percentage of non-Aryans already in attendance is in excess of 5 per cent of the total, it must be lowered to that percentage by dismissal. The law does not apply to students whose fathers fought at the front during the war, or to children one of whose parents or both of whose grandparents were Aryan if the marriage took place before the promulgation of the law. Non-Aryans were not to be admitted to the inner student life of the universities, thus making the Jews in education definitely a race apart.

In order to further purify German life a law was promulgated ousting all Jewish actors, directors, producers, camera men, authors, and conductors from the German film industry and the theatre. Most non-Aryans were expelled from orchestras and no non-Aryan soloists were to appear in concerts or on the radio. Because journalism became a state monopoly, German-Jewish writers were, of course, dismissed from their positions and during the process of consolidation of the non-Aryan press, Jewish directors and editors of newspapers and publishing houses were removed from their jobs. The national press law, promulgated on October 5, provided that every working newspaper man was to be regarded as a servant of the state and was to be held morally and legally responsible for his professional activities. The Aryan provisions of the civil service law were incorporated into the code governing the press.

While in the fields of private enterprise the cold pogrom against Jews did not have the official sanction that underwrote its application against civil servants, professional men, students, and journalists, it was apparent that the Nazis meant to cleanse commerce and industry of their Jewish influences also. In small towns, particularly,

the boycott of April 1 continued to have its effect in its refusal to trade with Jewish merchants or utilize the services of Jewish technicians. In Berlin the municipal authorities have excluded Jewish merchants from the public market; in Munich the city fathers refused to allow Jewish merchants in the auction room of the city pawnshop or to participate in the October Fairs; in Hamburg non-Aryans were not to have public telephone booths in their shops. On Sept. 30, 1933, the government rescinded the permits of Jews to trade on the stock exchange. The article on GERMANY has pointed out that during the first weeks of the Nazi revolution many important German firms and trade associations were coordinated. During this process many Jewish industrialists were ousted from their positions and a purification of business went on under the direction of Nazi cells operating in the particular industries. In July, with the completion of the revolution, Hitler urged his followers to cease these activities. On July 7 he went so far as to say that "an industrial leader cannot be removed if he is a good business man merely because he is not yet a National Socialist, especially if the National Socialist being put in his place knows nothing about industry." Despite this on July 14 the Cabinet ordered that no government contracts were to be awarded to non-Aryan firms if bids submitted by Aryan firms were the same. While Jewish business men were not specifically banned from continuing their activities and certainly while no efforts were directed against large industrialists and financiers merely because there were Jews, the position of Jewish white collar and factory workers was less anomalous. Jewish labor was excluded from the government trade union organization called the German Labor Front. While trade unions were still accepting dues from Jewish members, it apparently became a rule not to represent Jews before the labor courts with the result that these non-Aryans were without legal protection. Apparently, too, the Nazi government meant definitely to exclude Jewish workers from the land. On October 2 the hereditary homestead law created a peasant aristocracy consisting only of Aryans. Under this law Aryans were defined as those whose families had been free of Jewish blood since 1800.

What the status of the Jews as citizens will be, has not yet been determined at the time of this writing. It is significant that the official pogrom of the National Socialist party declares that no Jew may be regarded as a member of the German race and that, therefore, those who were not citizens might live in Germany only as guests and must be governed by laws regulating foreigners. On July 14 the government decided to withdraw German citizenship at its discretion from "undesirables," naturalized between Nov. 9, 1918 and Jan. 20, 1933. Citizenship also was to be withdrawn from Germans who had fled abroad if they conducted anti-German propaganda or if they did not return to the Reich if so ordered. In conclusion we may quote the dispassionate remarks of Miss Mildred S. Wertheimer, writing in the "Foreign Policy Reports" of the Foreign Policy Association for Oct. 11, 1933:

... the position of all "non-Aryans" in the Reich is uncertain and precarious for, aside from the humanitarian and social aspects of the situation, their economic future appears black. The younger generation of "non-Aryans" will not only be unable to earn a livelihood, but the educational opportunities open to them even now are strictly limited.

It was apparent that the Nazis meant to eliminate root and branch the Jewish influence from national German life, certainly as far as the public services and the fields of law, medicine, education, and general culture were concerned. Jewish small business men and workers were finding it increasingly difficult to locate opportunities for employment; the cultivation of the land was closed to them; because of restrictions for opportunity in professional training the sphere of Jewish participation in the German national life was being increasingly contracted for future generations. Flight remained—into an uncertain world everywhere hedged around by immigration restriction decrees—for those who still had small financial means. For the Jews who were compelled to remain in Germany a return to the medieval ghetto seemed the only future prospect. Those still exempt were the great industrialists and financiers who apparently still maintained their important places in the heavy industries and in banking. But how long these would remain untouched one could not, as the year 1933 closed, foretell.

The problem of Jewish refugees became increasingly one that took on international aspects, not only because Jews were seeking to flee from Germany but also because German exchange restrictions which forbade the exportation of currency out of the country practically made such refugees who had succeeded in getting out of the country penniless and dependent upon public and private support. The matter came before the attention of the Assembly of the League of Nations when on September 29 the Dutch Foreign Minister, Jonkheer de Graeff, presented a resolution asking the League Council "to consider as soon as possible methods for bringing about a practical arrangement" for solving "the economic, financial, and social problems raised by refugees from Germany." The resolution was referred to a subcommittee of the Assembly's Economic Commission, which on October 6 adopted a resolution providing for the creation of a High Commissioner to be named by the League of Nations Council, and the establishment of an autonomous governing board, on which non-members of the League and private organizations might be represented and to which the High Commissioner was to report. On October 26, Mr. James G. McDonald, chairman of the Foreign Policy Association of New York, was named High Commissioner for German Refugees. The League's secretariat on the same day indicated that Secretary of State Hull accepted the League's invitation to the United States to be represented on the autonomous governing body to which Mr. McDonald was to be responsible. On October 7, Germany had warned the League that it would oppose the adoption of the refugee resolution if relief was administered by a League agency; and this as well as the quarrel over rearmament was an important factor in Germany's withdrawal from the League during the same month. (See LEAGUE OF NATIONS.)

On December 5, when the governing board met for its first meeting at Lausanne, Switzerland, Mr. McDonald reported that 60,000 persons had fled from Germany since Adolf Hitler's accession to power. Of these, 51,065, or 86 per cent, were Jews by religion, 16,520 of these persons being non-Germans or Polish citizens. Nearly one-half of the refugees, or 25,000, had sought havens in France, 6500 had fled to Palestine, 6000 to

Poland, 5000 each to Czechoslovakia and Holland, 3000 to England, 2500 each to Belgium and Switzerland, 1500 to Scandinavian countries, 8000 to Austria and 1500 to other countries, including the United States. According to Mr. McDonald, one-fifth of the Jewish refugees were temporarily dependent upon assistance. Thirty-four thousand Jews were seeking work. One-half of this number were industrialists, merchants, and mercantile employees, one-fifth were intellectuals, one-fifth were artisans and working men, and the remainder were without an occupation. Mr. McDonald reported to the governing board that direct relief should properly be delegated to private organizations but that the functions of the international body should consist of coordination and negotiations with governments. As regards the latter, these would largely involve refugee passports and property rights with particular emphasis on the lowering of immigration bars so that refugees might be absorbed into new countries. Viscount Cecil of Chelwood was elected president of the governing board. Its permanent headquarters were established at Lausanne. Speaking for the Jewish Agency Dr. Chaim Weizmann expressed the hope that most of the refugees might be absorbed in the United States, the British Dominions, particularly South Africa and Australia, in French dependencies and mandates, in some South American Republics, and in Palestine. Dr. Weizmann said further: "We are unfortunately driven to the melancholy conclusion that a wave of anti-Semitism is sweeping over the world" with the result that the "peculiar social and economic structure of Jewry—forced on us by centuries of history during which we were merely in the rôle of passive sufferers—cannot be maintained in the face of a changing world."

Immediately after the beginning of the cold pogrom, Jewish forces throughout the world were mobilized for the purpose of bringing aid to distressed German Jews. Early in the spring the Joint Distribution Committee of the United States, in cooperation with the Jewish Colonization Association and the Alliance Israelite Universelle, set up what was known as the Provisional Central Committee to handle immediate German emergency problems. A total of \$95,000 was expended during the first stages of the emergency. Almost immediately following, the Joint Distribution Committee, on the basis of consultation with the British Central Committee of Relief and important German-Jewish leaders, decided to allot an additional \$254,000 for the relief and rehabilitation of German Jews. These moneys have been expended for the following purposes; to the German Central Committee of Relief for the maintenance of Jewish institutions of philanthropy and welfare service; for the continuance of education of children denied schooling; for the promotion of vocational training of older people who have to be readjusted; for the training of German-Jewish young people for agriculture and manual work; for the aid of emigration activities. Outside Germany allotments were being given through national and local refugee aid committees for actual housing, food, and other reconstruction aid through free loan bureaus and employment exchanges. Also emigration aid societies outside of Germany were given grants; special allotments were given for child care in Palestine in behalf of German-Jewish children; to the Hebrew University of

Palestine to place a number of German-Jewish professors; to the Emergency Committee in Aid of Displaced German Scholars, and the like. Before the year had closed there had been allotted close to \$450,000 or more than one-half of the sum collected for these various activities. Under the direction of the Joint Distribution Committee there was organized in Germany the Central Committee known as the Zentral Ausschuss der Deutschen Juden fuer Hilfe und Aufbau for the purpose of carrying on the relief programme in Germany. There were also established consultation offices for Jewish physicians and Jewish lawyers, a special committee on education, and a chain of loan and credit unions to advance small sums to persons engaged in small businesses and the handicrafts. The Hebrew Sheltering and Immigrant Aid Society directly and through its affiliates was actively assisting more than 10,000 Jewish refugees in various countries. These refugees were either sent to new countries or repatriated.

More spectacular than these relief activities was the decision taken by the American League for the Defense of Jewish Rights in May to enforce an economic boycott of Germany. The American movement was led by Mr. Samuel Untermyer and it had the close coöperation of a similar committee of Jews in England headed by Lord Melchett, as well as comparable groups in France, Poland, and other countries. It was the purpose of these bodies not only to make the boycott of German goods nation wide among the 4,000,000 Jews in the United States but also to enlist all Americans sympathizing with the movement. A powerful impetus was given to the boycott when the American Federation of Labor at its convention in October voted to refuse to have any economic intercourse with Germany as long as the terror continued. The American League for the Defense of Jewish Rights, in order to make the boycott effective, organized district and trade committees and carried on its activities in an effort to affect all branches of German trade, industry and shipping. Mr. Untermyer at a general meeting of the League on May 15 declared: "This boycott can and must be made so effective that it will strike at the very foundations of the campaign that is being waged against the Jews in Germany."

Mr. Untermyer was particularly severe on those groups in the Jewish community who opposed the boycott and yet could offer no other programme of defense. He said in part:

If not a boycott, what are you going to do? Are you going to sit idly by while your brethren in Germany are humiliated, degraded, deprived of their rights of citizenship, and kicked out of their professions and employment and left to starve . . . ? That is not my conception of your right and duty. You are no more peace-loving than the rest of us. The only difference between us is that you lack the will and courage to fight. It is so easy to counsel "peace" when there is no peace. What you recommend is virtually a counsel of despair and surrender to the most inhuman forces that have dominated government in centuries.

Certainly as far as the utilization of German shipping and the purchase of German goods in retail establishments went, the boycott was beginning to show evidences of real strength. Large department stores were reporting a willingness to leave unreplaced depleted stocks of German goods and to seek substitutes of equal quality and value in other countries. It was impossible from an examination of German foreign trade statistics to ascertain how effective was the boy-

cott that was being waged not only by Jews in the United States, Great Britain, France, and Poland, but also by trade unionists throughout the world. The purchase of blocked marks at a sizable discount and the transmission of Jewish funds out of Germany by means of the sale of goods at reduced prices abroad were two factors which maintained the German foreign trade at its customary levels and, therefore, concealed the normal interference with trade and industry due to the boycott. There was no question, however, that if it was not crippling German life, it was at any rate having serious effects.

PALESTINE. The German-Jewish situation had its immediate reflex in Palestine where efforts to lower the immigration bars in favor of Jewish refugees met with hostility and mob violence on the part of Palestine Arabs. Jewish immigration into Palestine has continued to be fairly small. According to officials of the mandatory power in London, 6730 Jews were admitted into the country in 1932 and an additional 5500 were allowed to enter in the six months between April and September, 1933. For the six months' period following, 5500 more immigration certifications were issued, though a large number of these were used to cover persons who had originally entered Palestine on a temporary basis. Against this comparatively small group the Jewish Agency, whose activities have been previously described in these columns, sought permission for the entrance of 25,000 immigrants during 1933. This demand was based upon a revival of recovery in Palestine beginning with 1931, a process which has continued unabated while most of the world has remained in the depths of depression. Against these requests for relaxation of immigration restrictions Arab leaders have been inflexible, insisting that the absorptive capacity of the country was being exceeded to the economic detriment of the Arabs. The Arabs also have constantly been afraid of the fact that the Jews would obtain supremacy in Palestine. It is important to note that the riots of 1933 unlike those of 1929, as Mr. William Schack has pointed out, were directed against the government and not against the Jews. High Commissioner Wauchope forbade Arab demonstrations which led to bloodshed; with the ignoring of his orders fighting between Arabs and the police broke out. The support given to the High Commissioner by the Colonial Secretary of London indicated that the British government meant to maintain law and order at any cost. Nevertheless protests by Palestine Arabs as regards the relaxed immigration policy were beginning to have their effect and on November 14, it was announced that the Palestine government had decided to enforce stringent measures against illicit Jewish settlement in the country. The government announced its intention to prevent Jewish travelers from being smuggled across the frontiers, and to deport Jewish tourists who overstayed the allotted visa period, ordinarily three months. Also entry to the ports of Jaffa and Haifa for third and fourth class immigrants from America and Europe was to be restricted and visas to holders of Nansen and other temporary passports were to be refused. Admission of capitalist settlers were to be confined to those who could produce evidences of the possession of £1000 or more. Tourists were to show return tickets and deposit \$300 guarantees which were to be forfeited and tourists prosecuted on failure to leave when the visas expired. See PALESTINE.

RUMANIA. Anti-Semitic activities again broke out with increasing violence in this country during the year 1933. In large part atrocities directed against Jews centred about the Iron Guard, which was founded about three years ago and which made it its purpose to attack not only Jews but those political leaders of Rumania who sought to befriend the race. Apparently this organization had as its purpose, by allying itself with reactionary politicians, to create embarrassments for new governments by stirring up anti-Semitic riots. This weapon had been used with increasing frequency during the period of the depression and it had not become infrequent for the peasantry to turn upon the village shopkeepers and innkeepers, who usually were Jews, and destroy the records of indebtedness and wipe the financial slates clean. The leader of the Rumanian anti-Semites was Professor Cuza who had openly declared on many occasions that he was not prepared to rest until every one with a drop of Jewish blood in his veins had been deported to Palestine or central Africa. This anti-Semitic characteristic of a considerable part of the Rumanian population was aggravated with the importation of Facism along the lines of the German model; in other words, attacks on corrupt officials and the creation of a profound and jingo nationalistic spirit. Persons who became sympathetic with Rumanian Fascism in large part rallied around the banner of the Iron Guard, of which Monsieur Codreanu was the leader. The Iron Guard drew its support not only from the unemployed intelligentsia and university students but from hundreds of high army officers and officials. With the advent of the new Premier, Ion G. Duca, it became plain to the Iron Guard that a new liberal officialdom had come into power in the country and that anti-Semitism would be rigorously suppressed. However, Monsieur Duca, on December 29, was cold-bloodedly murdered, just after having had an audience with his monarch, by persons attached to the Iron Guard, and it was apparent that anti-Semitism would once more flourish in the country. It was generally conceded by informed observers that the lot of the Jews in Rumania was every whit as bad as it had been under Czarist Russia. See **RUMANIA**, under *History*.

JOHNE'S DISEASE. See **VETERINARY MEDICINE**.

JOHNS HOPKINS UNIVERSITY, THE. A nonsectarian institution of higher education for men and women in Baltimore, Md., founded in 1876. The enrollment for the autumn of 1933 was 3524, distributed as follows: School of higher studies of the faculty of philosophy, 426; school of higher studies in education, 52; school of engineering, 34 (graduate), 304 (undergraduate); college of arts and sciences, 470; school of business economics, 107; school of medicine, 283; school of hygiene and public health, 98; afternoon and evening courses, 1750. The enrollment in the 1933 summer session was 734. The faculty numbered 604. The productive funds amounted to \$30,798,453, and the income from all sources for 1932-33 was \$2,915,771. The main library contained 446,206 volumes. President, Joseph Sweetman Ames, Ph.D.

JOHNSTON, MAJ.-GEN. WILLIAM HARTSHORNE, U. S. A., RET. An American soldier, died in Nice, France, Feb. 20, 1933. He was born in Cincinnati, Ohio, Oct. 19, 1861. After studying law at Washington University he entered the 16th Infantry of the United States Army as a

2d lieutenant in 1883, having been first attached to the Lafayette Guard of St. Louis and to the Arizona Territorial Militia. He later attended the Infantry and Cavalry School at Fort Leavenworth (1887) and the Army War College in Washington (1907-08). He served in Cuba during the Spanish-American War and after acting as governor of the province of Isabela in the Philippines was commander of the Philippine Scouts in the campaign against the Pulajanes during 1905-07. On the entry of the United States into the World War General Johnston organized the 180th Infantry (Texas) Brigade, which served overseas with the 90th Division of the 1st Army Corps in the Toul sector. In August, 1918, he was assigned as major-general to the 91st Division, which he commanded during the St. Mihiel and Meuse-Argonne offenses in France and in the Ypres-Lys campaign in Belgium.

During 1920-21 General Johnston was chief of staff of the American Forces in Germany and during 1922-23 general liaison officer of the French Army of the Rhine. He also acted during the latter year as senior military adviser to the delegation representing the United States on the Commission of Jurists that was studying the rules of war at The Hague. On his return to the United States in 1923 he was stationed at Fort McPherson, Ga., as commander of the 4th Coast Artillery District. The following year he was made commander of the 3d Division of the United States Army with the rank of major-general. He retired in 1925. Among the honors conferred on him were the Distinguished Service Cross, the Distinguished Service Medal, the Victory Medal, and the French Croix de Guerre (with palm). He was also made a commander in the French Legion of Honor and in the Order of Leopold I of Belgium.

JOHORE. See **UNFEDERATED MALAY STATES**.

JOLY, J^oll, JOHN. An Irish physicist, died in Dublin, Dec. 8, 1933. Born in 1857, he was educated at Trinity College, University of Dublin, where he was demonstrator of civil engineering during 1882-91 and of experimental physics during 1893-97. In the latter year he became professor of geology and mineralogy. Professor Joly devised a diffusion photometer known by his name; made valuable experiments in the early '90s on color photography, perfecting a system of trichromatic ruled screens and a method which was used after 1897 for lantern slides; and determined with great accuracy the melting points of many minerals, inventing a meldometer for this purpose. He invented also in 1894 a steam calorimeter, which enabled the physicist to determine more accurately the specific heat of substances and the heat of gases of constant volume determinations, and in 1914 perfected with Dr. Walter Stevenson a method of obtaining uniform radiation in radium therapeutics. In the field of geology he devoted most of his research work to crust formation, estimating the age of the earth from the quantity of sodium in the ocean.

The Royal Society conferred on Professor Joly its medal in 1910 and the Royal Dublin Society its Boyle Medal in 1911. In 1908 he was president of the geological section of the British Association for the Advancement of Science and at the time of his death, president of the Royal Dublin Society. He visited the United States in 1918 as a member of the British Educational Mission. Besides many contributions to the *Proceedings* of the Royal Society and the Royal Dublin Society, he wrote

Radioactivity and Geology (1909); *The Birthtime of the World and Other Scientific Essays* (1915); *Reminiscences and Anticipations* (1920); *The Surface History of the Earth* (1925).

JONES, SIR ROBERT. A British surgeon, died at Llanfairfechan, Wales, Jan. 15, 1933. He was born at Rhyl, Wales, June 26, 1858, and attended the medical school of the University of Liverpool. Specializing in orthopedic surgery, he was consulting surgeon in a number of hospitals, chiefly in Liverpool, and was a member of the medical advisory board to the War Office and honorary adviser to the Ministry of Pensions. He also lectured on orthopedic surgery at the University of Liverpool. His most successful cures were of infantile paralysis and spinal tuberculosis, while during the World War, as chief of the division of orthopedic surgery of the British medical service corps, he was accredited with having reduced from 80 to 20 per cent the mortality from shell fractures.

In addition to presiding over the section of orthopedics of the International Congress of Surgeons, held in London in 1913, Sir Robert served as president of the British Orthopedic Association during 1921-25 and of the British Association of Surgeons in 1924. He was English editor of the *International Journal of Orthopedic Surgery* and an honorary member of medical societies in Great Britain, France, Germany, Italy, Sweden, and the United States. Knighted in 1917 for his war services, he received in 1919 the Distinguished Service Medal of the United States and in 1926 was created a baronet.

JUDICIARY. See LAW.

JUGOSLAVIA. See YUGOSLAVIA.

JULLIAN, CAMILLE. A French historian, died in Paris, Dec. 12, 1933. Born in Marseilles, Mar. 15, 1859, he attended the Superior Normal School and the French School in Rome and in 1891 became a member of the faculty of the University of Bordeaux. At Bordeaux he distinguished himself through his archaeological investigations of the region and through his writings on the Gallo-Roman era of French history. Among his early publications were: *Gallia* (1892); *Histoire de Bordeaux* (1895); *De la Littérature poétique des Gaulois* (1899); *Vereingétoria* (1901); *Recherches sur la religion gauloise* (1904); and *Histoire des institutions politiques de l'ancienne France* (1904).

Called to the College of France in 1905 as professor of history and national antiquities, Jullian continued his researches, publishing *Le Rhin gaulois* (1915); *La Tradition française* (1916); *De la Gaule à la France* (1922); and *Le Paris des Romains* (1925). His monumental work, however, was the eight-volume *Histoire de la Gaule*, on which he was engaged from 1884 to 1926 and which on its completion was crowned by the Academy. In addition to being an officer of the Legion of Honor he was elected in 1913 a member of the Academy of Inscriptions and Fine Arts and in 1924 a member of the French Academy.

JURIES. See LAW.

KAJANUS, KÄ-YÄ'NUS, ROBERT. A Finnish conductor and composer, died July 6, 1933, in Helsingfors, where he was born Dec. 2, 1856. His musical education was obtained at the Leipzig Conservatory, where he studied under Richter, Jadassohn, and Reinecke, and in Paris where he was a pupil of Svendsen, the Norwegian composer. In 1882 he founded in his native city an orchestral association (Orchester-föreningen)

which under his leadership developed into one of the finest bodies of instrumentalists in Europe. With it there were amalgamated in 1885 an orchestra school and in 1898 a symphony choir, its name being changed on the latter occasion to the Helsingfors Philharmonic Society and in 1914 to the Helsingfors Municipal Orchestra. Through the concert tours of this orchestra he was successful in awakening in other European musical centres an appreciation of the works of Sibelius, Merikanto, and other Finnish composers. He was also from 1897 to 1926 professor of music and musical director at the University of Helsingfors.

One of the first of the Finnish composers to strive consciously for distinct national expression, Kajanus drew his inspiration for such symphonic poems as *Kullervo* (1881) and *Aino* (1885) from the *Kalevala* and other national sagas. Among his other works were two *Finnish Rhapsodies*, founded upon Finnish folk melodies; *Memories of Summer*, an orchestral suite; a symphonietta, several cantatas, piano pieces, and songs.

KAMERUN. See CAMEROON.

KANSAS. POPULATION. The population of the State on Apr. 1, 1930, according to the Fifteenth Census, was 1,880,999; in 1920 it was 1,769,257; in 1933, 1,900,000 (Federal estimate). Kansas City had (1930) 121,857 inhabitants; Wichita, 111,110; Topeka, the capital, 64,120.

AGRICULTURE. The following table shows the acreage, production, and value of the principal crops for 1933 and 1932:

Crop	Year	Acreage	Prod. Bu.	Value
Wheat ...	1933	6,774,000	57,504,000	\$40,245,000
	1932	10,365,000	120,178,000	34,848,000
Corn	1933	6,994,000	80,431,000	28,151,000
	1932	7,362,000	186,197,000	20,430,000
Hay (tame)	1933	1,142,000	1,608,000 *	9,809,000
	1932	1,077,000	1,800,000 *	8,460,000
Oats	1933	1,528,000	25,976,000	7,273,000
	1932	1,608,000	34,572,000	4,494,000
Grain sorghum ..	1933	1,607,000	16,070,000	5,946,000
	1932	1,328,000	17,264,000	3,108,000
Barley ...	1933	408,000	3,264,000	1,077,000
	1932	704,000	9,856,000	1,380,000
Potatoes ..	1933	42,000	2,436,000	2,626,000
	1932	44,000	5,148,000	1,493,000

* Tons.

MINERAL PRODUCTION. General compliance with the requirements of the State's public-service commission limiting production on a pro-rata basis resulted in a decline of the State's output of petroleum by 7 per cent, to 34,300,000 barrels, for 1932, from the total for 1931. The number of oil wells drilled in 1932 was 363, as against 229 drilled in 1931. A number of new pools were opened, notably the Johnson, Mabce, Chase, and Steckel pools. The development of resources in natural gas was discouraged by the lack of sufficient markets for this product. The Hugoton natural-gas field in southwestern Kansas, accounted the second greatest in the country, was estimated to have an open-flow rate of 690,000 M cu. ft. a day from 115 existing wells but was not being utilized to any substantial extent.

There were mined, in 1932, 6490 short tons of lead and 26,277 of zinc, which quantities combined attained the value of \$1,966,020. The production of lead was some 9 per cent below the 7082 short tons of 1931; that of zinc, about two-thirds of the 39,051 short tons of 1931.

The State's production of salt, fairly maintained, reached the quantity of 262,432 short

tons for 1932, as against 270,630 for 1931; in value, \$1,934,148 (1932) and \$1,977,097 (1931).

FINANCE. State expenditures in the year ended June 30, 1932, as reported by the U. S. Department of Commerce, were: for maintaining and operating governmental departments \$16,512,832 (of which \$623,079 was for local education); for conducting public-service enterprises, \$207,933; for interest on debt, \$1,049,747; for permanent improvements, \$15,844,461; total, \$33,654,973 (of which \$18,787,843 was for highways, \$3,832,965 being for maintenance and \$14,954,378 for construction). Revenues were \$33,855,684. Of these, property and special taxes furnished 24.1 per cent; departmental earnings and compensation to the State for officers' services, 9.6; sale of licenses, 45.4 (in which was included a gasoline sale tax that produced \$8,036,841). Funded debt outstanding on June 30, 1932, totaled \$22,500,000. Net of sinking-fund assets, the debt was \$20,900,561. On an assessed valuation of \$3,673,577,370 the State levied in the year ad-valorem taxes of \$7,189,416.

EDUCATION. According to data issued by the National Education Association, the lack of revenue with which to meet the expense of holding school compelled some 700 of the rural schools in the State to remain unopened at the outset of the academic year 1933-34. No figures were available as to the presumption that other schools in great number either had previously been obliged to curtail their annual periods of instruction or were compelled to arrange for curtailment affecting the year 1933-34.

In contrast with rural schools, the city school systems were reported at the end of the year to be undertaking to provide the full usual duration of school terms, although in general they had reduced budgets by some 30 per cent.

CHARITIES AND CORRECTIONS. A Board of Administration, under the law as existing in 1933, maintained control of the State institutions for the care and custody of persons. This board subsisted, substantially, as created in 1905. It was composed of three ordinary members and of the Governor, serving *ex officio* as a fourth member. It had as its executive aid a business manager. Institutions under its control fell into three groups: the charitable, the correctional, and the educational of special types. Charitable institutions, with their respective populations of October, 1933, were: for the mentally afflicted, State hospitals at Topeka (1833), Osawatimie (1610), and Larned (967); State Hospital for Epileptics (789) at Parsons; State Training School (feeble-minded, 1025) at Winfield; State Sanatorium for Tuberculosis (257), Norton; State Orphans' Home (238), Atchison. Correctional institutions were: State Penitentiary (784), Lansing; State Industrial Reformatory (682, at ages from 16 to 25), Hutchinson; Women's Industrial Farm (106), Lansing; Boys' Industrial School (250, aged from 11 to 16), Topeka; Girls' Industrial School, Beloit (149 aged from 11 to 18). The educational institutions under the board were: School for the Blind (118), Kansas City; School for the Deaf (242), Olathe; Western University (Negroes, 130), and Kansas Vocational School (Negroes, 114) at Topeka.

LEGISLATION. The Legislature met in regular session on January 10. It took a major step in governmental organization, by creating a legislative council. This body was to be composed of 10

State Senators and 15 State Representatives, appointed respectively by the presiding officers of their houses, who were themselves to be *ex-officio* members. The council was to examine the operation of existing laws, recommend amendments thereto, prepare legislative programmes, and recommend changes in administrative set-up. It was to maintain its organization in recess. The minority party was expected to have representation on the council in proportion to its strength in the Legislative houses.

A State income tax was enacted, imposing 2 per cent on incomes of corporations and a graduated tax on individual incomes, from 1 per cent on \$2000 up to 4 per cent on the excess over \$7000. Authority was given receivers of insolvent State banks to pledge assets of such banks as security for the benefit of depositors only. A law for the licensing of automobiles and motor trucks provided license fees for passenger cars according to their age, the fee for the older cars being reduced; for trucks fees were graduated by carrying capacity, up to \$50 a ton or fraction for all over five tons. No action was taken by the session on the subjects of Federal and of State prohibition.

A special session in November passed an act to restore capital punishment but the act was vetoed as defectively framed.

POLITICAL AND OTHER EVENTS. In the course of the banking panic the State banks were limited to the payment of 5 per cent of the total of deposits by a State order of March 3. The State banks found to be in sound condition reopened after the general Federal closure, on March 12. The legislative council created by enactment, to draw up programmes of legislation for future sessions held its first meeting on May 15, receiving recommendations from Governor Landon.

Forged bonds to the total of \$1,000,000 or more were discovered in August to have been sold or placed as security for loans with institutions in the State, on the representation that they were bonds of Kansas municipalities. The fraud caused the closing of several banks holding such bonds among their resources. Though the leading part in the fraud was attributed to a private individual, at least one State official was accused of having part in it. The State, to prevent the entry of untaxed gasoline, imposed rules requiring clearance papers at a "port of entry" for all haulers of liquid fuels entering or leaving the State.

OFFICERS. The chief officers of the State serving in 1933 were: Governor, Alfred M. Landon; Lieutenant-Governor, Charles W. Thompson; Secretary of State, Frank J. Ryan; Auditor, Will J. French; Treasurer, Tom B. Boyd, and (later) W. M. Jardine; Attorney General, Roland Boynton; Superintendent of Public Instruction, W. T. Markham.

Judiciary. Supreme Court: Chief Justice, W. A. Johnston; Justices, R. A. Burch, John S. Dawson, W. W. Harvey, William E. Hutchison, William A. Smith, and Walter G. Thiele.

KANSAS, UNIVERSITY OF. A State institution of higher education in Lawrence, Kan., founded in 1864. The 1933 autumn enrollment was 3672, of which 2442 were men and 1230 women. The 1933 summer session had an enrollment of 1049, of whom 580 were men and 469 women. The full-time teaching staff, exclusive of deans, numbered 207. The endowment fund amounted to \$240,000, and the income for the year, including the bal-

ance carried over from 1932, was \$1,400,000. There were 256,000 volumes in the library. Chancellor, Ernest Hiram Lindley, LL.D., Ph.D.

KANSAS WESLEYAN UNIVERSITY. A coeducational institution under the auspices of the Methodist Episcopal Church, in Salina, Kan., founded in 1885. The enrollment for 1933 was 530. The faculty numbered 31. The endowment amounted to \$226,000, while the budget for the fiscal year ending July 31, 1933, amounted to \$93,000. President, L. B. Bowers, D.D.

KARAFUTO, ká-rá-fóo'tó. The portion of the island of Sakhalin lying south of 50° north latitude, belonging to Japan. Total area, 13,935 square miles; total population, 1930 census, 295,196. Fishing, mining, lumbering, and agriculture are the chief industries. Coal mined in 1932 amounted to 677,389 tons. Marine products in 1932 were valued at 12,715,419 yen of which the herring fisheries accounted for 8,020,723 yen. The budget for 1932-33 was estimated to balance at 23,092,628 yen (yen averaged \$0.2811 for 1932). Governor in 1933, S. Agata.

KARA-KALPAK AUTONOMOUS AREA.

See SOVIET CENTRAL ASIA.

KARIKAL. See FRENCH INDIA.

KEDAH. See UNFEDERATED MALAY STATES.

KEELING ISLANDS. See STRAITS SETTLEMENTS.

KEEWATIN. See NORTHWEST TERRITORIES.

KELANTAN. See UNFEDERATED MALAY STATES.

KELLAWAY, FREDERICK GEORGE. A British industrialist, died at Westerham Hill, Kent, England, Apr. 13, 1933. Born at Bishopston, Bristol, Dec. 3, 1879, he received his education in the common schools there, and after 1898 was engaged in editing a series of local newspapers at Lewisham. In 1910 he entered Parliament as Liberal member for Bedford Borough and continued to represent that constituency until 1922. He became Joint Parliamentary Secretary of the Ministry of Munitions in 1916, and Deputy Minister of Munitions two years later. In 1920 he was appointed Secretary to the Department of Overseas Trade, holding the double titles of Additional Under-Secretary of State for Foreign Affairs and Additional Parliamentary Secretary to the Board of Trade. He was also made Privy Councillor.

As Postmaster-General during 1921-22 Mr. Kellaway sponsored the amalgamation of the various broadcasting and wireless telephony interests in Great Britain, which led to the formation of the British Broadcasting Co.; from this he gained the sobriquet of the "Father of British broadcasting." After 1924 he was vice-chairman and managing director of Marconi's Wireless Telegraph Co., Ltd., and chairman and managing director of the Marconi International Marine Communication Co. He served also as deputy governor and joint managing director of Imperial Cables and Wireless, Ltd.; and joint managing director of Imperial and International Communications, Ltd., which were organized in 1929 so as to prevent the domination of either the radio-wireless or cable systems in linking the various parts of the British Empire.

KENDRICK, JOHN BENJAMIN. A United States Senator, died at Sheridan, Wyo., Nov. 3, 1933. Born in Cherokee Co., Texas, Sept. 6, 1857, he received a public school education and in 1879 migrated to northeastern Wyoming where he became a cattleman, operating one of the largest range ranches in the West. He was a member of

the Wyoming State Senate from 1910 to 1914. Elected governor of Wyoming in 1914 for a four-year term, he resigned in 1916 on his election to the United States Senate. As a Democrat, he supported President Wilson's war and League of Nations policies. He was also one of the staunchest advocates of a fair deal to returning veterans, being the author of a bill to enlarge the homestead rights of service men from 160 to 640 acres. His demand for Federal regulation of the meat-packing industry to prevent unfair, unjustly discriminatory, or deceptive practices resulted in the passage in 1921 of the Packers and Stockyards Act. In 1923 he was one of the principal agitators for investigation into the circumstances under which Teapot Dome and other oil reserve lands of the Navy Department had been leased to private interests.

During his two succeeding terms (1923-35) Senator Kendrick advocated such reclamation projects as the Casper-Alcova project, approved by the Public Works Administration previous to his death, and also the development of the great rivers of the United States for irrigation and power purposes, as is being carried out at Boulder Dam.

KENTUCKY. POPULATION. The population of the State on Apr. 1, 1930, according to the Fifteenth Census, was 2,614,589; in 1933, by Federal estimate, 2,648,000. Louisville, the chief city, had (1930) 307,745 inhabitants; Frankfort, the capital, 11,626.

AGRICULTURE. The following table shows the acreage, production, and value of the principal crops for 1933 and 1932:

Crop	Year	Acreage	Prod. Bu	Value
Tobacco ...	1933	477,000	369,780,000 ^a	\$37,508,000
	1932	424,000	315,862,000 ^a	31,367,000
Corn	1933	2,727,000	68,175,000	31,360,000
	1932	2,811,000	67,464,000	18,215,000
Hay (tame)	1933	1,178,000	1,260,000 ^b	11,340,000
	1932	1,225,000	1,249,000 ^b	9,617,000
Potatoes ..	1933	62,000	4,092,000	4,092,000
	1932	60,000	4,620,000	2,541,000
Wheat	1933	270,000	3,240,000	2,722,000
	1932	270,000	2,835,000	1,304,000
Oats	1933	122,000	1,952,000	742,000
	1932	162,000	2,349,000	517,000
Sweet potatoes .	1933	20,000	1,840,000	1,196,000
	1932	25,000	2,200,000	1,078,000

^a Pounds. ^b Tons.

MINERAL PRODUCTION. The production of coal suffered less diminution in 1932 than in the majority of other producing States. It declined by 10.9 per cent, to the quantity of 35,010,000 net tons (1932) from 39,963,621 (1931). This relatively favorable showing was due chiefly to increased production in the western Kentuckian field, occasioned by interruptions of mining in Illinois and Ohio on account of labor troubles.

The production of petroleum decreased to 6,264,000 barrels (1932), which fell short of the quantity for 1931 by 3 per cent. There were drilled, in 1932, 279 oil wells, chiefly in the western part of the State.

Asphalt (native) was produced to the quantity of 314,039 short tons (1932), as against 470,491 for 1931; in value, \$1,415,427 (1932), and \$2,244,739 (1931).

FINANCE. State expenditures in the year ended June 30, 1932, as reported by the U. S. Department of Commerce, were: for maintaining and operating governmental departments \$24,383,358 (of which \$6,305,100 was for local education); for conducting public-service enterprises, \$76,-

421; for interest on debt, \$809,634; for permanent improvements, \$12,817,249; total, \$38,086,662 (of which \$17,512,892 was for highways, \$6,141,011 being for maintenance and \$11,371,881 for construction). Revenues were \$36,930,115. Of these, property and special taxes furnished 32.2 per cent; departmental earnings and compensation to the State for officers' services, 6.9; sale of licenses, 41.8 (in which was included a gasoline sale tax that produced \$8,757,283). Funded debt outstanding on June 30, 1932, totaled, \$2,674,021. Net of sinking-fund assets, the debt was \$2,290,723. On an assessed valuation of \$2,786,717,683 the State levied in the year ad valorem taxes of \$9,786,143.

EDUCATION. In connection with work of public relief for the needy the State's Department of Education carried on efforts to provide schooling for adults.

The number of persons of school age in the State was reckoned, for June 30, 1932, as 710,380. There were enrolled in the public schools, in the academic year 1932-33, 607,517 pupils; the daily attendance averaged 457,576. Of the enrolled pupils, 517,431 were in common schools or elementary grades; in high schools or secondary grades, 90,086. The line of distinction between the elementary and secondary groups, however, was not uniform, as in some cases the sixth and seventh grades were counted with the secondary. The 17,863 teachers, principals, and supervisors earned in the year an aggregate of \$12,973,511 in salaries, which was some 12 per cent less than the total of such salaries for the year before. The current expenditures of the year 1932-33 for public-school education totaled \$16,638,193 and ran about \$2,400,000 below those for the year before.

CHARITIES AND CORRECTIONS. Under an act of 1932 the management of seven institutions of the State, for the care and custody of persons, was committed to a Department of Public Welfare, which became the successor of the previous Board of Charities and Corrections. The direction of this department was placed in the hands of a body of five salaried officers, functioning as a board, the chairman of the body acting as executive head of the department. The institutions under its control, with their respective average populations of the year ended June 30, 1933, were: Eastern State Hospital, Lexington, 1752; Central State Hospital, Lakeland, 2322; Western State Hospital, Hopkinsville, 1752; Feeble-Minded Institute, Frankfort, 588; Houses of Reform, Greendale, 519; State Reformatory, Frankfort, 2462; Penitentiary, Eddyville, 1204.

LEGISLATION. A special session of the Legislature dealt in September with matters of taxation. It failed to pass a law for a general tax on sales but made other tax provisions, including a levy of 50 cents a barrel on old whisky, the proceeds of which were to be applied to expenditures for relief of the needy, and a levy of \$1.25 a barrel on beer. There was created a State convention, of delegates to be chosen by popular election on November 7, to act for the State on the proposed repeal of the Eighteenth Amendment of the Federal constitution.

POLITICAL AND OTHER EVENTS. Governor Laffoon, in order to preserve banks in the State from depletion by withdrawals during the banking panic, declared on February 28 and thereafter a series of "days of thanksgiving," which under the law of the State he had power to appoint as legal holidays. By a proclamation of February 17

he requested financial institutions to observe a voluntary moratorium on foreclosures. The State Court of Appeals decided in June that without need of State legislation to that effect, it was lawful to transport and sell in the State beer of the alcoholic content of not more than 3.2 per cent sanctioned by Federal act.

A report of the State inspector and examiner submitted to Governor Laffoon on February 1 recommended that the Legislature in 1934 abolish Clay County, the scene of repeated mountain feuds, and divide its territory among counties adjacent. For the adornment of the Pioneer State Park at Harrodsburg, the Federal government commissioned Ulric Ellerhusen to execute a statuary group representative of the old Northwest.

The taxes on whisky and beer that had been imposed by the special session of the Legislature in September proved wholly inadequate to bring in the receipts required by the State to cover the \$250,000 a month of disbursements necessary for the support of the indigent part of the population. Governor Laffoon, whose demands for a State tax on the gross receipts from merchants' sales the Legislature had rejected, telegraphed on November 5 an appeal to President Roosevelt. He stated not only that the new taxation had failed to bring in the required money but that the State was unable to sell its tax-anticipation warrants in order to raise the monthly sum, that the State director of relief had resigned, and that the State had no means to furnish aid for 92,000 cases of destitution on its rolls after November 15. It was announced on November 7 that President Roosevelt had authorized Federal relief administrator Hopkins, in accordance with the Governor's plea, to take over the entire work of caring for the destitute in the State; the Administration thus altered the position it had taken in refusing a similar plea from the Governor of Ohio.

At the election of November 7 there were chosen a body of delegates, favorable to repeal, to meet in State convention on November 27 and vote the State's adoption of the repeal of the Eighteenth Amendment to the Federal Constitution, through the superseding amendment proposed by Congress. The popular vote of November 7 also, apparently, by a slight margin adopted an amendment to the State constitution, in order to empower the Legislature to abandon the State's direct tax on real property. In a proclamation of December 16, Governor Laffoon called upon the sellers of Burley tobacco to stop sales until a Federal arrangement favorable to this important product of the State should be made.

OFFICERS. The chief officers of the State, serving in 1933, were: Governor, Ruby Laffoon; Lieutenant-Governor, A. B. Chandler; Secretary of State, Sara W. Mahan; Treasurer, Elam Hudleston; Auditor, J. Dan Talbott; Superintendent of Public Instruction, James H. Richmond; Attorney General, Bailey P. Wootton; Commissioner of Agriculture, Labor and Statistics, Eugene Flowers.

Judiciary. Court of Appeals: Chief Justice, William H. Reese; Associate Justices, Richard Priest Deitzman, William Rogers Clay, Gus Thomas, J. Basil Richardson, Wesley Vick Perry, Alex L. Ratliff.

KENTUCKY, UNIVERSITY OF. A coeducational State institution of higher learning in Lexing-

ton, Ky., founded in 1866. The enrollment in the autumn of 1933 was 2477. There were 1347 students registered in the 1933 summer session. The faculty numbered 258. The productive funds amounted to \$184,075, and the income for the year was \$1,084,733.50. The library contained 140,000 volumes. President, Frank LeRond McVey, Ph.D., LL.D.

KENYA, kě-nyā' or kěn-yā. A British colony and protectorate in East Equatorial Africa. Area, 224,960 square miles; total population, 3,076,343 (estimate) including 17,249 Europeans. Nairobi, the capital, had 85,722 inhabitants of whom 7164 were Europeans; Mombasa had 54,894 including 1023 Europeans.

The colony is mainly agricultural and pastoral. Coffee, maize, sisal, wheat, tea, and wattle are extensively raised in the higher altitudes; maize, sisal, coconuts, sugar, and cotton are grown in the lower altitudes. Kenya and Uganda constitute one administrative unit for customs purposes; the principal imports were cotton piece goods, textiles, automobiles, tobacco, and gasoline. In 1932, imports (Kenya and Uganda) totaled £4,662,859; exports (Kenya only), £2,280,982. Revenue amounted to £3,010,214 and expenditure to £3,119,713 for the year 1932.

The protectorate consists of the territories on the coast leased from the Sultan of Zanzibar since 1895. Kenya is governed by a governor who is aided by executive and legislative councils. The country is divided into nine provinces. Governor and Commander-in-Chief in 1933, Sir J. A. Byrne.

KENYON, WILLIAM SQUIRE. An American jurist, died at Sebasco, near Bath, Maine, Sept. 9, 1933. He was born at Elyria, Ohio, June 10, 1869, and after attending Iowa (later Grinnell) College was graduated in law from the State University of Iowa. Admitted to the Iowa bar in 1890, he began his practice at Fort Dodge, serving during 1892-96 as prosecuting attorney for Webster County and during 1900-02 as district judge for the Eleventh Judicial District of Iowa. In 1904 he was appointed district attorney for the Illinois Central Railroad Co. and in 1907 its general attorney. During 1910-11 he acted as assistant to George W. Wickersham, United States Attorney-General, playing a prominent part in various trust prosecutions, including the beef trust of Chicago meat packers, the grocery trust of the Southern Wholesale Grocers' Association and others, and the butter and egg trust of the Chicago Butter and Egg Board.

Elected to the United States Senate by the Iowa Legislature in 1911 to fill the unexpired term of Jonathan P. Dolliver, Judge Kenyon was reelected by popular vote for the terms 1913-19 and 1919-25. He attracted national attention by his advocacy of progressive legislation regarding child labor, lobbying, and government ownership of railroads and by his leadership of the so-called "Farm Bloc." In 1922 he resigned from the Senate to accept President Harding's appointment as judge of the United States Circuit Court of Appeals, Eighth Judicial District. His most famous decision was that of Sept. 28, 1926, whereby there was cancelled as fraudulent the lease by Albert B. Fall, former Secretary of the Interior, of the Teapot Dome oil reserve in Wyoming to the Sinclair oil interests for operation by the Mammoth Oil Co. In 1929 President Hoover appointed Judge Kenyon as member of the National Commission on Law Observance and Enforcement, headed by George W. Wickersham. In

the conclusions reached by the commission he was one of five members who urged a further trial of the Eighteenth Amendment and of the prevailing liquor regulations.

KENYON COLLEGE. A college of arts and sciences for men in Gambier, Ohio, established in 1824 by the Protestant Episcopal Church and associated with it. The enrollment for the autumn term of 1933 was 202. The faculty numbered 25 members. The endowment funds amounted to \$2,100,000, and the income for the year was \$128,670. The value of buildings and equipment was \$1,592,500. The library contained 84,000 volumes. President, William F. Pierce, L.H.D., D.D., LL.D.

KIDNAPING. See CRIME.

KINDERGARTEN ASSOCIATION. See NATIONAL KINDERGARTEN ASSOCIATION.

KING, BRIG.-GEN. CHARLES, U. S. A., RET. An American soldier and author, died in Milwaukee, Wis., Mar. 17, 1933. He was born at Albany, N. Y., Oct. 12, 1844, and was graduated from the United States Military Academy in 1866. After serving in the 1st artillery and the 5th cavalry, he was retired as captain in 1879 on account of wounds received in the Apache campaign of 1874 and other Indian skirmishes. Assigned as inspector and instructor to the Wisconsin National Guard in 1882, he was commissioned colonel in 1890 and adjutant-general in 1895. During the Spanish-American War he served as brigadier-general of a brigade of Wisconsin volunteers which participated, under General Lawton, in suppressing the Philippine insurrection. In 1904 General King again retired from the Army, but on the entry of the United States into the World War resumed his connection, helping to train units of the Wisconsin National Guard that formed part of the 32d Division. For several years he served as superintendent of the Michigan Military Academy and instructor in military tactics at St. John's Military Academy, Delafield, Wis.

Among the 50-odd books, mostly of a military nature, which General King published were *The Colonel's Daughter* (1883); *Famous and Decisive Battles* (1884); *Marion's Faith* (1885); *Between the Lines* (1889); *Campaigning with Crook* (1890); *Captain Blake* (1892); *Under Fire* (1894); *The General's Double* (1897); *Ray's Daughter* (1900); *A Tame Surrender* (1901); *The Iron Brigade* (1902); and *Medal of Honor* (1905): At the time of his death he was engaged in writing a history of the Indian wars at the request of military authorities.

KING'S CUP RACE. See AERONAUTICS.

KIRGHIZ A.S.S.R. See SOVIET CENTRAL ASIA.

KIWANIS INTERNATIONAL. An organization of clubs made up of not more than two of the leaders in each business and profession, united for the rendering of civil and social service to the community. Each club enjoys autonomy but at the same time functions in direct connection with district and international administrations. There are 29 geographical districts, each with a governor, in the United States and Canada. The first club was organized in Detroit, Mich., in January, 1915; by 1917 the organization had spread into Canada. At the close of 1933 the international organization consisted of 1860 clubs, with an approximate membership of 78,000. Some 35,000 civic and welfare projects were carried out by these clubs during the year.

The 1933 convention was held in Los Angeles, Calif., June 25-29. The international objectives

for 1933-34 were: Service to under-privileged children; intelligent, aggressive, and serviceable citizenship; friendly understanding among all citizens, rural and urban; vocational guidance; and boys' and girls' work. Two special objectives were the maintenance of adequate educational facilities, especially those making for character development, and business-like methods in administrative government, with special application to local government. The officers elected were: President, Joshua L. Johns, Appleton, Wis.; American vice-president, Arch A. Schramm, Marietta, O.; Canadian vice-president, Andrew Whyte, Edmonton, Alberta; secretary, Fred. C. W. Parker, Chicago; and treasurer, H. G. Hatfield, Oklahoma City. Headquarters are at 520 North Michigan Avenue, Chicago, Ill.

KLAIPEDA. Same as MEMEL (q.v.).

KNIGHTS OF COLUMBUS. A society of Roman Catholic men organized under a special charter, granted by the Connecticut General Assembly in 1882, permitting it to do business as a fraternal benefit society and to promote and conduct educational, charitable, religious, and social welfare work. The four principles of the order are charity, unity, fraternity, and patriotism.

The order is composed of a supreme council, the governing body and highest authority; a supreme board of directors, the executive body; 61 State councils; and 2536 subordinate councils. The total membership as of June 30, 1933, was 496,128, which represented an associate membership of 248,135 and an insurance membership of 247,993. In the 51 years of its existence the society has paid out more than \$36,000,000 to the beneficiaries of its members. Death claims paid during the fiscal year amounted to \$2,415,167.

At the international convention of the supreme council held in Chicago, Aug. 15-17, 1933, support of President Roosevelt's policies was pledged. Martin H. Carmody of Grand Rapids, Mich., was reelected supreme knight. William J. McGinley of New Haven, Conn., was supreme secretary in 1933, and D. J. Callahan of Washington, D. C., supreme treasurer. The order publishes *Columbia*, a monthly magazine. Headquarters of the supreme council are in New Haven, Conn.

KOREA (CHOSEN). A formerly independent country of eastern Asia, annexed by the Japanese Empire on Aug. 22, 1910, and incorporated as an integral part of Japan by an Imperial Rescript of 1919. Capital, Keijo-fu (Seoul).

AREA AND POPULATION. Korea has an area of 85,288 square miles. The census population on Oct. 1, 1930, was 21,058,305 (provisional), compared with 19,522,945 at the census of Oct. 1, 1925. At the end of 1930, the population comprised 19,685,587 Koreans, 501,867 Japanese, and 69,109 foreigners. The chief cities, with their 1930 populations, are: Keijo-fu (Seoul), 350,426; Fusan-fu (Pusan), 130,397; Heijo-fu (Pyongyang), 136,927; Taikyu-fu (Tai-Ku), 101,078; and Chemulpo, 63,658. The Korean language is intermediate between Japanese and Mongol.

EDUCATION. More than 60 per cent of the population is illiterate. For the education mainly of Koreans there were in 1931, 1176 common schools, with 476,246 pupils; 80 private common schools, with 23,464 pupils; 42 higher common schools (20 private), with 17,548 students; and a number of vocational schools. Mainly for Japanese, there were 467 elementary schools, with 71,836 pupils; 11 middle schools, with 6026 pupils; and various professional, vocational and normal

schools. The University at Seoul had 534 students (1931).

PRODUCTION. Korea is predominantly agricultural. Rice is the stable agricultural product, followed by barley, Italian millet, soy beans, wheat, and red beans. Fruit, cotton, hemp, tobacco, and ginseng are produced. Silk raising and livestock are subsidiary occupations. Japanese own about one-half of the tilled area. The value of the principal agricultural products in 1931 was: Rice, 268,804,979 yen; barley, 39,720,415 yen; soy beans, 32,103,209 yen; foxtail millets, 31,027,568 yen; cattle, 15,797,330 yen; straw manufactures, 13,642,122 yen; wheat, 10,696,978 yen; silk cocoons, 9,397,754 yen; cotton, 9,177,272 yen; fruits, 6,580,556 yen. Mineral production (1932) was valued at 35,029,767 yen (21,741,519 yen in 1931). The chief minerals are gold, silver, zinc, copper, lead, iron, tungsten ore, and graphite. The 1931 fish catch was valued at 46,578,000 yen. The chief manufactured products are textiles, paper, pottery, metal ware, manufactured tobacco, brewed drinks, and leather. New industries, such as the manufacture of cement, beet-sugar, matches, foundry iron, and fertilizers were developing. In 1932 there were 253 factories employing 50 or more hands, the total number of workers employed being 57,153.

COMMERCE. Exports in 1932 amounted to \$87,522,000 (\$129,224,000 in 1931) and imports to \$90,052,000 (\$133,502,000 in 1931). The chief 1932 exports were: Rice, \$40,854,000; soy beans, \$5,774,000; fertilizers, \$5,196,000; raw silk, \$3,279,000; fish, \$3,106,000 (conversions to dollars made at average yen exchange rates of \$0.2811 in 1932 and \$0.4885 in 1931). Cotton, silk and wool fabrics, millet, heavy iron, machinery, and sugar were leading imports. Japan in 1932 supplied 80.7 per cent of Korea's imports (China, 14.4 per cent) and purchased 90.6 per cent of Korea's exports (China, 9.0 per cent).

FINANCE. For the fiscal year ended Mar. 31, 1932, actual government revenues totaled 214,954,099 yen (ordinary, 174,713,672; extraordinary, 40,240,427) and expenditures totaled 207,782,798 yen (ordinary, 158,276,780; extraordinary, 49,506,017). The budget for 1932-33 balanced at 219,381,469 yen, with ordinary expenditures fixed at 163,558,402 yen and extraordinary expenses at 55,823,067 yen. The 1933-34 budget balanced at 231,938,384 yen (ordinary expenditures, 170,097,296; extraordinary, 61,841,088). The public debt on Mar. 31, 1933, amounted to 431,876,306 yen (406,996,000 yen on Mar. 31, 1932).

COMMUNICATIONS. Government railways open to traffic on Mar. 31, 1933, extended 1952 miles and 204 miles of line were under construction. In addition there were 709 miles of private lines. The government lines in 1932-33 carried 20,591,638 passengers and 6,248,863 metric tons of freight. Earnings were 39,309,000 yen and expenses 25,863,000 yen. The highway network covered 11,872 miles in 1931 and consisted mainly of graded earth or gravel roads. An air line linked the chief cities with Japan and with Manchuria. The shipping tonnage entered at the open ports in 1931 was 9,653,786; tonnage cleared, 9,679,305.

GOVERNMENT. Korea is governed as an integral part of Japan through a governor-general entrusted with large administrative powers. Governor-General in 1933, Gen. Kazunari Ugaki (appointed June, 1931).

KU KLUX KLAN, KNIGHTS OF THE. An American benevolent, eleemosynary, and fraternal institution, incorporated under the laws of the State of Georgia in 1915. "The membership is made up of white, male, Gentile persons, native-born American citizens, 18 years of age. They must be of sound mind, good character, commendable reputation, and respectable vocation; must believe in the tenets of Christian religion; and must owe no allegiance to any foreign government, nation, institution, sect, ruler, prince, potentate, people, or person, and whose allegiance, loyalty, and devotion to the Government of the United States of America in all things is unquestionable." The Klan continued its activity in matters of civil government affecting its ideals or principles. The programme adopted in 1933, "Communism must be destroyed in America," will be continued for 1934. The officers are President, Hiram W. Evans; secretary, H. C. Spratt; treasurer, Sam H. Venable. Headquarters are in Atlanta, Ga.

KUOMINTANG. See CHINA under *History*.

KURDISTAN, kūr'dī stān'. A region in eastern Asia Minor, comprising portions of Turkey, Persia, Soviet Transcaucasia, and Iraq. It is inhabited by approximately 1,500,000 semi-nomadic Kurds, a people related to the Persians in race and language. Due to their nationalistic aspirations the Kurds have remained in a state of revolt against their respective governments.

KUWAIT. See under ARABIA.

KWANGCHOW (KWANGCHOWAN). See FRENCH INDO-CHINA.

KWANTUNG, kwān'tōōng'. Leased territory at the southern extremity of the Liaotung Peninsula in Manchuria, which lease was transferred from Russia to Japan by the Treaty of Portsmouth, Sept. 5, 1905, and agreed to by China on Dec. 22, 1905. Total area, including the adjacent islands, 1336 square miles; total population on Jan. 1, 1933 was estimated to be 961,146 (excluding the army and navy), of whom 832,488 were Chinese, and 127,937 were Japanese. Dairen, the capital, had 258,793 inhabitants in 1930.

The area of land under cultivation at the end of 1931 amounted to 488,640 acres. The principal agricultural products are maize, millet, beans, wheat, buckwheat, rice, tobacco, hemp, and numerous vegetables. Fishing is an important industry. The production of salt in 1931 was 204,345 metric tons from a total area of 17,087 acres. There are factories for the manufacture of bean-oil and bean-cake, paint, glass, cement, lime, etc., with an output valued at 70,000,000 yen in 1932. Imports in 1932 amounted to 207,586,925 yen; exports, 305,067,978 yen. The special account budget for 1932-33 was estimated to balance at 22,736,016 yen; and the local expenses budget at 5,210,878 yen. The territory is administered by a Japanese governor-general. Governor-General in 1933, S. Tsukamoto.

KYLE, MELVIN GROVE. An American clergyman and archaeologist, died in Pittsburgh, Pa., May 25, 1933. Born near Cadiz, Ohio, May 7, 1858, he was graduated from Muskingum College in 1881 and from the Allegheny Theological Seminary in 1885. Ordained to the ministry of the United Presbyterian Church in 1886, he held the chair of Biblical archaeology at the Xenia Theological Seminary from 1908 to 1915. In 1922 he was elected president of that institution which, on its merger in 1930 with the Pittsburgh Theological Seminary, was renamed the Pittsburgh-

Xenia Theological Seminary and was transferred from St. Louis to Pittsburgh. From 1930 until his death he was research lecturer there.

As lecturer at the American School of Oriental Research in Jerusalem in 1921, Dr. Kyle became interested in Palestine archaeology, leading in 1924-26-28 and 1930-31-32 the joint expeditions sponsored by the Xenia Theological Seminary and the American School of Oriental Research. Among the important discoveries of these expeditions were the old fortress of Moab, the region of Sodom and Gomorrah, and the ruins of the Canaanite city of Kirjathi-Sepher. Besides contributing to scientific journals, he wrote *The Deciding Voice of the Monuments in Biblical Criticism* (1912); *Moss and the Monuments* (1920); *The Problem of the Pentateuch* (1920); and *Explorations at Sodom* (1928). He was also editor after 1911 of the archaeological department of the *Sunday School Times*, and in 1929 was revising editor of the *International Standard Bible Encyclopædia*. The General Assembly of the United Presbyterian Church of North America elected him moderator in 1927.

LABOR. There was every indication, as the year progressed, that American labor was entering upon a new and, perhaps, the most important chapter in its history. After almost ten years of virtual self-abdication, organized labor was once again becoming militant and closely pressing government and industry for protection of its rights to organize and to obtain a living wage. Frankly, organized labor looked upon Section 7 (a) of the National Industrial Recovery Act as a declaration banning the closed shop; and the increasing outbreak of strikes to effect this end demonstrated that most of the trade unions of the country would have nothing to do with company unions. The membership of the American Federation of Labor, by the end of the year, had already approached, if not exceeded, the highest strength of the World War days. The number of strikes, which despite efforts at mediation of the National Labor Board and its local mediators, showed that labor's only real weapon was being utilized to the full in order to obtain union recognition, higher wages, shorter hours, and better working conditions. Particularly encouraging from the point of view of organized labor was the rise to power once more of the United Mine Workers of America and the appearance of trade union organizations in industries which had hitherto successfully resisted all activities of organizers, notably the heavy industries of automobiles, steel, and oil. There was no question, too, that the rank and file were increasingly becoming progressive and forcing its leadership to take definite stands on questions vital to labor. The record of achievement over the year was a noteworthy one; and there was no question that the future of trade unionism in America was to hold many surprises and, from labor's point of view, many victories as well.

There were a number of important questions whose solution was undoubtedly to preoccupy labor in the near future. The issue of industrial versus craft unionism, particularly as it affected the mass production industries of automobiles, steel, rubber, oil, and the radio, had to be faced. However, trade unionists were quick to see the danger in the suggestion of General Johnson that trade unions be formed on vertical lines, each organization to be separate and distinct within its own industry and having no relations with

labor organizations in other industries. General Johnson's proposal that a government representative be placed in each labor organization in the same way that the government was being represented in each industry, was looked upon by many observers as being an effort of government control of trade unionism very much along the lines of similar achievement in Italy, Germany, and Russia. Undoubtedly the continued outbreak of jurisdictional disputes, which brought out from President Roosevelt at the unveiling of the Gompers' Memorial the warning that: Questions of jurisdiction have to be "settled quickly and effectively in order to prevent the slowing up of the general programme," added to the importance of the debate between industrial unionism and craft unionism.

Another difficulty was the uncertain character of the federal charters which had been issued to individual plants without any relationship to craft or industrial unions. These local plant unions included anywhere from a few hundred to several thousand workers and as many as 700 such groups had been organized with a total membership of 300,000. How to merge these separate bodies into the general army of organized labor was an important question that was not resolved at the 1933 convention of the American Federation of Labor.

Specifically the executive council of the American Federation of Labor would soon have to consider the matters raised in three resolutions which were submitted to the A. F. of L. and were turned back to the council for further debate and determination. One of these resolutions called for the establishment of a strategy board of seven trade unionists to "map out general plans and policies for strengthening the united action of the regular craft unions and at the same time extending organization into those industries in which the present form of organization has obviously not been successful." A second resolution proposed that the question of jurisdiction be held in abeyance for a year to permit an intensive unionization campaign among the 700,000 utility workers. A third resolution, which was sponsored by the metal trades departments, declared that organization by those unions was being hampered by the issuance of charters to federal labor unions into whose membership mechanics were being included. The executive council was requested to prevent the inclusion in federal unions of any laborers or mechanics over whom the international unions had jurisdiction.

The reader is referred to the following articles for other discussions of various aspects of the history of labor during the year: LABOR, AMERICAN FEDERATION OF; LABOR ARBITRATION AND CONCILIATION; LABOR LEGISLATION; MINIMUM WAGE; OLD AGE PENSIONS; STRIKES AND LOCK-OUTS; UNEMPLOYMENT; WOMEN IN INDUSTRY; WORKMEN'S COMPENSATION; and to the articles dealing with the respective countries. See also TRADE UNIONS; COMMUNISM; and SOCIALISM for special aspects of the labor subject.

LABOR, AMERICAN FEDERATION OF. The fifty-third annual convention of the American Federation of Labor met in Washington during October 2-13, with 506 delegates in attendance. The organization's executive council's report, which was released prior to the formal sessions, showed an average total membership for the year ended Aug. 31, 1933, of 2,126,796 persons. This was a

decline of 405,465. However, due very largely to the impetus given to trade union organization by Section 7(a) of the National Industrial Recovery Act, following its signing late in June, the membership of the American Federation of Labor increased by leaps and bounds almost daily. It was not far from the truth to say, therefore, that at about the time of the opening of the convention the total membership was at least 4,000,000. Further, Mr. Green was quite justified in pointing out that included in the trade union strength of the American Federation of Labor was to be reckoned the membership of the railroad brotherhoods, which while not in actual affiliation, essentially represented the same trade union philosophy. Adding the million odd members of the railroad brotherhoods the American Federation of Labor, therefore, made a conservative trade union strength of 5,000,000 persons. As further indicative of the increased activity of the American Federation of Labor during the NRA might be cited the fact that during July and August there were issued 340 charters to local trade and federal labor unions. Also, during the fiscal year ended Aug. 31, 1933, the international and national unions associated with the American Federation of Labor issued 2953 local charters. The 29,315 local unions of the national and international organizations and the 673 local labor unions made a total of 29,988 local bodies associated with the American Federation of Labor, as compared with 26,669 for the previous year, or a gain of 3319.

The executive council devoted the major part of its report to a consideration of the National Industrial Recovery Act. However, space was also given to the following subjects: unemployment, relief, discrimination against the older worker, trade union benefits, national legislation, convict labor, child labor amendment, repeal of the Eighteenth Amendment, old age security, non-partisan political policy, jurisdictional troubles, developments for railroad workers, the shorter work day and work week, the German labor movement, public schools and the Workers' Education Bureau. In the table that follows is indicated the American Federation of Labor's estimate of the total number of persons unemployed in the United States from 1930 to 1933 by months.

AMERICAN FEDERATION OF LABOR'S ESTIMATE
OF TOTAL NUMBER OUT OF WORK IN THE
UNITED STATES, 1930 TO 1933, BY MONTHS
[In thousands]

Month	1930	1931	1932	1933
January	3,216	7,160	10,197	13,100
February	3,565	7,345	10,486	13,294
March	3,543	7,098	10,739	13,689
April	3,188	6,739	10,990	13,256
May	3,090	6,750	11,470	12,896
June	3,250	6,841	11,853	12,204
July	3,714	7,198	12,300	11,798
August	4,101	7,857	12,344	10,960
September	4,150	7,303	11,767	10,108
October	4,639	7,778	11,586	10,122
November	5,364	8,699	12,008	10,651
December	5,541	8,908	12,124	10,769

The following is the basis of these calculations. The figures were derived from the Federal census, brought up to date by employment indexes furnished monthly by the Labor Department and other government agencies. The estimates include all workers in the United States whether engaged in agriculture, management, the professions, public service, and the industrial groups. However, the following were not included in the estimates:

domestic servants, automobile service, restaurants, clerical workers in banking, insurance and real estate, and semi-professionals. The following note made by the American Federation of Labor is interesting: "There are three groups counted as employed because, lacking data on which estimates for their unemployment may be based, they automatically fall into the employed groups: 1. Teachers who are teaching school but not being paid. 2. Those unemployed who have gone to the country to live with relatives on farms and are provided with at least food and shelter. 3. Those who were living on income from investments and are now forced to seek work; we have no way of estimating them."

The Federation's report also showed that during 1933 the following proportion of trade union membership was unemployed: January, 25.8 per cent; February, 26.0 per cent; March, 26.6 per cent; April, 26.1 per cent; May, 25.8 per cent; June, 24.5 per cent; July, 24.1 per cent; August, 23.7 per cent; September, 22.6 per cent. And the following proportion of trade union membership was on part time: January, 20 per cent; February, 20 per cent; March, 22 per cent; April, 21 per cent; May, 20 per cent; June, 21 per cent; July, 21 per cent; August, 20 per cent; September, 20 per cent. The executive council's report made the following recommendations. On the question of relief: 1. That the American Federation of Labor insist on adequate relief appropriations from Federal funds by Congress immediately after its reconvening in January so that moneys would be available by February when it is expected that the present appropriations will be exhausted. 2. That the surplus agricultural product be made available for distribution to the unemployed. 3. That the American Federation of Labor and all its affiliated bodies bend every effort to educate public opinion to the great need for relief during the winter of 1933-34. On this point the report said further: "There is danger that taxation and appropriations for relief may not have the necessary public support, since there is widespread belief that the re-employment of millions has greatly reduced relief needs, and that relief needs are, therefore less than last winter." 4. The American Federation of Labor report also insisted that higher incomes and surplus profits should be made to bear their fair share of the tax burden. In 1932 the international and national unions of the American Federation of Labor paid out in benefits to trade union membership \$51,448,348 as compared with \$39,961,873 in 1931. In 1932 unemployment benefits totaled \$19,970,556 as compared with \$9,146,724 in 1931.

President William Green, in addressing the convention of the American Federation of Labor, called attention to the fact that despite the marked reemployment effected as a result of the operations of the codes under the NRA, there were still 11,000,000 persons out of work in the country. It was true, he said, that as a result of the return of some 2,800,000 workers from March to August, 1933, the total buying power of the workers of the country had increased about 25 per cent; but because living costs had also increased the total increase in buying power approximated only about 17 per cent. He also stressed the fact that the increase in buying power was due completely to reemployment and not to the increase in buying power to the individual worker. For the average monthly in-

come of the individual worker increased only 6.9 per cent since March while the cost of living had increased 7.1 per cent. According to Mr. Green, it was impossible to return the whole body of unemployed to industry and the services without the establishment of the 30-hour week and increases in the wage rates. While he thus adverted to the inadequacies of the NRA, President Green called upon the assembled trade unions to have faith in the government. Said he: "We must have faith—faith in the New Deal, faith in the principles of this act, faith in those who are honestly and liberally administering it, and most important of all, faith in that great, fearless leader—the President of the United States." Also significant was President Green's flatfooted objection to any effort to inflate the currency. This was particularly interesting in view of the fact that the report of the executive council had made no mention of currency questions. President Green demanded that the wages of labor be paid in "honest dollars" and said, "labor knows that this is a problem that affects us very vitally because we know that when dollars are cheapened commodity prices rise, but wages stand still. Until they can assure labor that we will get more of these cheap dollars for the day's work we perform, so that it will conform to the increase of commodity prices, it is my judgment that labor will stand unflinchingly against inflation." President Green hailed the rising tide of unionization as a phenomenon that "even the old and tried veterans in our movement never saw before." He continued: "From every city and every town and hamlet . . . the workers are marching, organizing, keeping step, coming with us in the great American Federation of Labor." Other persons to address the convention were President Roosevelt who spoke at the unveiling of the Gompers Memorial on October 7; Hon. Frances Perkins, U. S. Secretary of Labor; Hon. James A. Farley, Postmaster General; General Hugh S. Johnson, Administrator of the NRA; Miss Elizabeth Christman, fraternal delegate, National Women's Trade Union League of America; Mr. James Rowan and Mr. Joseph A. Hale, fraternal delegates, British Trades Union Congress; Mr. Fred J. White, fraternal delegate, Trades and Labor Congress of Canada; Rev. Francis J. Haas, member of the Labor Advisory Board of the NRA; Spencer Miller, Jr., Secretary, Workers' Education Bureau of America; Hon. Robert F. Wagner, United States Senate; and Hon. James J. Davis, United States Senate. President Roosevelt, in referring to Samuel Gompers' service to the national cause during 1917 said: "We are engaged in another war, and I believe from the bottom of my heart that organized labor is doing its share to win this war. The whole of the country has a common enemy; industry, agriculture, capital, labor are all engaged in fighting it. Just as in 1917, we are seeking to pull in harness; just as in 1917, horses that kick over the traces will have to be put in a corral."

The extraordinary advances made by labor under the NRA were everywhere voiced in the addresses before the convention. Secretary Perkins said, for example: "I think that for the only time in my memory the people of the United States are united in the acceptance of one common idea, and that is the idea that upon the prosperity of the wage earners of America depends the prosperity of the whole United States."

Since we all see that, if we can all be but patient and have the character necessary to carry through this responsibility, I think we shall win through." The accomplishments of the NRA particularly attracted the attention of the British fraternal delegates, one of whom hailed the step as "a departure in the economic life of nations" which other countries would be compelled to follow. It was pointed out, however, that in order to seize adequately its opportunities American trade unionism would be forced to consider the fundamental questions of a reorganization of labor on industrial rather than craft lines, and the elimination of wasteful jurisdictional disputes. As regards the first matter, Miss Elizabeth Christman expressed the sentiments of many of the delegates when she declared:

I believe that we shall have to make some structural changes in our present trade-union set-up. While I fully recognize the value of craft unions, I am in sympathy with the idea now being advanced here and there of a great need for the functional union in such many-sided industries as the rubber, textile, automobile, meat packing, for example. I urge, therefore, a functional organization of unions in industries which comprise a great diversity of occupations. Looking toward such a development I have in mind the formation of something that we might call a stratory board. Such an agency could map out general plans and policies for strengthening the united action of the regular craft unions and at the same time extending organization into those industries in which the present form of organization has obviously not been successful.

This was the position of Messrs. James O'Connell and John P. Frey, respectively president and secretary-treasurer of the Metal Trades Department of the American Federation of Labor, who in their report to the convention indicated the only way for the trade union movement to organize the mass production industries was through a vertical set-up similar to that existing in the industries themselves. A resolution of this effect was presented to the convention by Miss Christman and it was indicated that in addition to the metal trades officials it had the support of such powerful union officials as John L. Lewis, president of the United Mine Workers of America, and George L. Berry, president of the International Printing Pressmen and Assistants Union. However, on October 10, in what was the first test of this outstanding question before the labor world as represented by the American Federation of Labor, the delegates by a total of 13,872 votes to 5859 votes accepted the executive council's decision to refuse permission for the creation of an industrial union in the brewing industry. In its decision the executive council had ruled that teamsters, firemen and oilers, and engineers did not belong in the United Brewery Workers Union but under the jurisdiction of their respective craft unions. Supporting the brewers were the miners, the railway clerks, the bricklayers, the pressmen, and the railroad telegraphers.

Senator Wagner made a strong appeal for industrial peace. He insisted that in view of the fact that labor had received a new charter under the New Deal certain responsibilities devolved upon it in the observance of industrial peace. While the strike as a first resort was not prohibited by law, machinery had been created in the National Labor Board to adjudicate disputes between factory owners and operators and the workers. He insisted that the strike was never more than a protest and said: "It has no constructive force. It creates hundreds of new problems, but cannot solve a single one. It should be used only as the very last resort." General

Johnson, as Administrator of the NRA, was even more emphatic. On October 10, during a night session in the course of which he reviewed the conditions which had led up to the passage of the National Industrial Recovery Act and the exact rights of labor under its new charter as set forth in Section 7(a), General Johnson characterized the strike as being nothing less than "economic sabotage." He went on: "The plain stark truth is that you cannot tolerate the strike. Public opinion is the essential power in this country. In the end it will break down and destroy every subversive influence." In the same address General Johnson came out in favor of industrial or "vertical" unionism as against craft unionism. The significance of General Johnson's speech was justly pointed out by Mr. Louis Stark, writing in the *New York Times* of October 11, when he said: "... the issue was definitely drawn between the implicit policy of the government toward the unions—federalization of labor under government sponsorship, with the government's decision final in disputes which heretofore might have resulted in strikes—and the stand of the American Federation of Labor upon the more conservative craft unionism."

Labor quickly replied to General Johnson's challenge when remarks made on the floor indicated that government interference would be opposed and that strikes would continue as long as codes were willing to grant payment of only \$0.40 an hour for skilled mechanics, and as long as men who joined unions were discriminated against.

On October 12, the American Federation of Labor, after a ringing address delivered by Mr. Green, went on record formally as adopting a boycott against German made goods and services. In the name of the membership of the Federation President Green attacked the Nazi government for having smashed the fifty-year-old trade union movement, torturing and jailing its leaders, seizing its treasuries, and placing the entire machinery of labor, the so-called German Labor Front in the hands of Dr. Ley, who had never been a worker but was a former employee of the I. G. Farbenindustrie A.G. Approval of the boycott resolution was unanimous except for one vote, that of Andrew Furuseth, president of the International Seamen's Union. The resolution adopted urged trade unionists to boycott German made goods and German services, this boycott to continue "until the German government recognizes the right of the working people of Germany to organize into bona fide independent trade unions of their own choosing and until Germany ceases its repressive policy of persecution of Jewish people."

The action of the convention, and other resolutions and recommendations, were as follows:

Organization. The decision of the Executive Council to grant a charter to the Amalgamated Clothing Workers of America was approved. This marked the return to the fold of the Federation of one of the most powerfully organized and intelligently led unions in America, the one that had given Mr. Sidney Hillman, its president, and Dr. Leo Wolman, its economic adviser, to the services of the National Labor Board of the NRA. The Amalgamated Clothing Workers had a membership in excess of 140,000 persons grouped in strong locals situated in the important clothing centres of New York, Chicago, Rochester, Cleveland, and Baltimore. A resolution which recom-

mended that the American Federation of Labor, instead of issuing federal labor union charters, be instructed to cooperate with the representatives of the national and international unions affiliated, was referred to the executive council. The convention voted down a proposal for the amendment of the Federation's constitution which was intended to increase the membership of the executive council from 8 to 25.

Government Administrations and Agencies. Approval was given to the executive council's statement to the effect that the purposes of the Recovery Act would not be achieved unless codes already approved were reopened for reconsideration of wages and hours. Support was extended to unionized and chartered locals of office workers in securing a hearing on the NRA codes relating to the wages and conditions of employment of such workers. The convention insisted on the equal representation of labor beside industry upon the local compliance boards and local mediation boards established by the NRA and the National Labor Board. A recommendation was made for continued efforts to set up the principle that the government should wherever possible purchase only such raw materials and manufactured articles as were produced in the United States; also that the use of these domestic articles be provided for in government contracts.

Federal Employees. A resolution was adopted demanding a 30-hour week for Federal employees without a reduction in the weekly pay. The American Federation of Labor also went on record as favoring a 30-year optional retirement law for such employees.

Older Workers. The American Federation of Labor demanded compulsory Federal and State old age pensions. The delegation also urged the adoption of provisions to assure every producing worker after his production years were over of an adequate income at least equal to his earned income at the time of his retirement.

Education and Research. The members adopted a resolution requesting the president of the Executive Council of the American Federation of Labor to present the convention's petition to the President of the United States to "use his good offices during this emergency to help save our schools." A resolution was also adopted requesting the Director of the Citizens' Conservation Camps to inaugurate an educational programme in these places.

Foreign Relations. The hope was expressed that the people of Cuba might establish a true trade union movement to act in unison with the trade union movement of the other nations of the western hemisphere, in cooperation with and through the Pan American Federation of Labor.

Immigration. The American Federation of Labor demanded the immediate and effective restriction of the immigration of Filipino laborers. It also reaffirmed the Federation's policy of upholding immigration quotas and demanded that Congress resist any efforts to liberalize these.

Financial. The Federation went on record as favoring the nationalization of banks, the licensing of individual firms and corporations engaged in interstate commerce, and approval of President Green's attitude against currency inflation.

Mr. William Green was reelected President of the American Federation of Labor and Mr. Martin F. Ryan and Mr. Frank Morrison were reelected Treasurer and Secretary respectively.

The 1934 convention was to meet at San Francisco, Calif.

LABOR ARBITRATION AND CONCILIATION. NATIONAL LABOR BOARD. In order to prevent stoppages of work which would hinder increasing employment, on Aug. 5, 1933, a National Labor Board was created for the purpose of mediating or arbitrating in controversies arising between employers and employees over the interpretation of the President's Reemployment Agreement. Senator Robert F. Wagner, of New York, became chairman, and Leo Wolman, William Green, John L. Lewis, George L. Berry, Gerard Swope, W. C. Teagle, Louis E. Kirstein, Edward N. Hurley, the Rev. Francis J. Haas, and Austin Finch, the other members of the board. William F. Leiserson was the first secretary of the board. The disputes which have come before the board during its first months have been many and varied. The largest number have involved the interpretation of Section 7 (a) of the National Industrial Recovery Act, which provides that "employees shall have the right to organize and bargain collectively through representatives of their own choosing," etc. Some disputes, however, have involved the equitable adjustment of pay schedules for those receiving in excess of the minimum; others have arisen because of efforts on the part of organized labor groups to hasten action on permanent codes. A few of the cases handled by the board have had no connection with the recovery programme, but jurisdiction over them has been assumed because of the menace to such a programme from a major industrial stoppage, whatever its origin. Industries in which disputes have arisen which have come before the National Labor Board include the hosiery, men's clothing, men's neckwear, ladies' garments, millinery, shirts, silk, dyeing and cleaning, shoes, dyeing and finishing textiles, metal trades, woolen knit goods, gloves, motion-picture studios, bridge construction, ship-building, cartridge manufacture, flour milling, and rubber industries. The principal centres of disturbance have been Reading and Philadelphia and their environs, Paterson and vicinity, New York City, St. Louis and southwestern Illinois. In order to facilitate settlements and to relieve the National Labor Board from some of the great pressure under which it has been working, many disputes have been referred to local National Industrial Recovery Act boards which have been set up in New York City, St. Louis, East St. Louis, and other places.

By the end of the year, the National Labor Board and its regional boards had handled cases involving about 600,000 workers. According to Senator Wagner, the chairman, there was a high proportion of settlements by agreement, a diminution of the number of strikes, increasing recourse to the labor boards by disputants and a drop in the number of cases pending. The National Board took jurisdiction in 155 cases involving 350,000 workers, of which 97 cases were strikes or lock-outs. Of the total, 104 cases were settled, 14 were pending, 25 were referred to regional boards, and 6 to the Labor Department or special committees. A notable feature of the adjustment machinery was the averting of 87 strikes by the regional boards and the settlement of 273 strikes by 11 of these boards.

The first serious labor disturbance to come before the board was a general strike in the hosiery industry of Pennsylvania over the question of unionization. The American Federation of Full-

Fashioned Hosiery Workers had been conducting a vigorous organization campaign during the early summer, and the movement had resulted by July 5 in closing down all the full-fashioned hosiery mills in Berks County, involving 10,000 workers; strikes had broken out also in other industries in the same neighborhood, involving between 3000 and 4000 workers. The board induced 25 hosiery manufacturers and the union to send representatives to a hearing in Washington, on August 10, at which an agreement was reached calling off the strike. On August 26, pursuant to the agreement, elections supervised by the board were held in the mills, which resulted in 37 mills with 13,362 workers (or 95 per cent) voting for representation through the union, while 8 mills with 720 workers (5 per cent) voted for non-union representatives. A number of the other strikes in the region were settled by resort to the same procedure. The seamless hosiery mills and 3 shoe manufacturers, a paint company, and a manufacturer of wool hats, all of Reading, accepted the same agreement. Later 3 shirt companies were induced to settle strikes in the same way. The hat manufacturer, however, agreed, before the elections could be held, to recognize the United Hatters of North America; in 2 of the shirt companies the elections were waived by agreement between the firms and their employees. In 2 concerns in the men's clothing industry, some of whose employees were on strike demanding recognition of the Amalgamated Clothing Workers, the board likewise recommended that elections be held, but the agreement of the firms to this solution was not obtained.

QUEENSLAND. Toward the end of 1932 the Queensland, Australia, legislature passed an act repealing its existing laws concerning industrial arbitration and substituting a new system of conciliation and arbitration, which was assented to Jan. 6, 1933. The new act established an arbitration court consisting of three members appointed by the governor in council, one of whom, appointed to act as president of the court, must be a judge of the supreme court of Queensland. His term is fixed by the governor, but the other two serve for seven years. No provision is made for conciliation commissioners or boards. Any member of the court, however, may convene a compulsory conference when he considers it desirable for the prevention or settlement of an industrial dispute, and any agreement reached at such a conference is enforceable as if it were an award of the court. The court is authorized to regulate the conditions of any calling by an award and in connection therewith to fix wages, overtime rates, and holiday pay, fix the number or proportionate number of women to men, of young workers to adult workers, and of apprentices and improvers to journeymen. It is specifically provided that in fixing rates of wages the same wage shall be paid to persons of either sex performing the same work or producing the same return of profit to their employer, and that the court shall be entitled to consider the prosperity of the calling and the value of an employee's labor to his employer in addition to the standard of living. Power is given to the court to make general rulings relating to any industrial matter, and such declarations shall be as binding as decisions of the court. General rulings may be made as to the cost of living, standard of living, basic wage for males and females, and standard hours. Careful provisions are made for registering industrial unions

and associations of employers. An industrial union may make an agreement with an industrial association of employers or some specified employers for the prevention or settlement of an industrial dispute, or relating to any industrial matter. Such an industrial agreement may be declared by the court to have the effect of an award and to be a common rule of any industry to which it relates.

During the year ended June 30, 1933, the Conciliation Service of the Department of Labor handled 833 trade disputes, of which 774 were adjusted. These involved, directly and indirectly, 476,919 workers. At the end of the fiscal year, 18 cases were pending and 17 remained unclassified. The following cases were characteristic of the work the Conciliation Service of the government was being called upon to handle:

Threatened strike—Aircraft mechanics, United Air Lines, Chicago, Ill.—The aircraft mechanics of the United Air Lines threatened to strike Apr. 29, 1933, because of alleged discrimination against some of the workers who had been active in collective bargaining in behalf of the craft. Six men, it was said, had been discharged, and around their dismissal the controversy centred. A Commissioner of Conciliation was assigned to the case, and his preliminary conferences indicated that the collective-bargaining activities of the discharged men had been looked upon with disfavor by the superintendent of the overhaul and repair department of the United Air Lines. This official denied discrimination, stating that the men had been laid off because of necessary reductions in the company's personnel. Subsequent investigations did reveal some discrimination on the part of the company's officials, and new expressions of dissatisfaction by the workers made a strike seem to be imminent. The Commissioner next arranged a conference with P. G. Johnson, president of the company, who stated that while he had no intention of recognizing the principle of collective bargaining, he was willing to discuss the complaints and to consider the matter fully immediately upon his return from a necessary business trip. The Commissioner at once made known this attitude to the men, with the recommendation that they take no strike action until President Johnson's return. To this, they agreed. Upon President Johnson's return, he resumed his investigation, at which time he agreed to reinstate the six discharged men in June. Upon their return to the shop, however, it was alleged that the superintendent of overhaul and repair attempted to place them on a part-time basis, to which they objected. The matter was again taken up with President Johnson, who came personally to the airport and conferred with the entire group of aircraft mechanics. At this conference the facts brought to light resulted in President Johnson's sending a special letter to each of the discharged men, instructing them to report back to work on May 29, and assuring them that they would be restored to their former status and paid in full for lost time. The company's president, Mr. Johnson, also agreed that future grievances might be taken up with the superintendent by a shop committee and, if necessary, could be appealed to him personally.

Dispute—Wage reductions, Motion Picture Studios, Hollywood, Calif.—A wage dispute arose when moving-picture producers, Hollywood, Calif., announced on March 8 that the wages of all employees would be reduced on a basis of 50 per cent for salaries over \$50 per week, and 25 per cent for salaries under \$50 per week. A series of meetings was at once called by 24 different local labor organizations represented in the studios, a number of which belonged to the four internationals, parties to the agreement between the Producers' Committee and the Carpenters, Electrical Workers, Musicians, and International Alliance of Theatrical Stage Employees. Approximately 25,000 workers were either directly or indirectly concerned in the outcome of this dispute which at the outset threatened to develop into a Nation-wide strike.

Two Commissioners of Conciliation were assigned by the Department to assist in making such a wage adjustment as might be possible.

Employees represented in the motion-picture arts and sciences not affiliated with the regular labor organizations agreed to accept the cuts, either by working four weeks without pay, or at the new rate proposed; but the federated motion picture studio crafts, in which was represented all of the local chartered by organizations outside the four internationals, refused to accept the reductions. The Actors' Equity refused to take any reduction unless so ordered by the New York headquarters.

Other details of reductions in wages included directors, actors, producers, writers, and technicians with salaries of \$100 or more per week, who were to be reduced 50

per cent, with a \$75 minimum. Those receiving \$51 to \$75 per week were to be reduced by 25 per cent; those receiving \$76 to \$100, by 35 per cent, with \$65 weekly as the minimum.

The Commissioners worked diligently to the end that an adjustment might be reached; and during their activities all employees, with the exception of certain science artists, remained on the job. Compromises were reached in some instances, with the result that by March 17 and 18, the following schedules obtained: Make-up artists \$100 per week, 25 men working, 20 per cent cut, total cut \$83.33 per day; scenic artists \$100 per week, \$4.25 per day proposed cut, 51 men working at a total reduction of \$216 per day; set designers \$90 per week, \$4.25 per day proposed cut, 50 men working, total reduction of \$212 per day; set directors \$72 per week, proposed reduction \$1 per day, 59 men working, total reduction \$59 per day. Total reduction of all of above-named classes \$570.33.

It was difficult to check up as to assistant directors, because they do not work steadily; and on March 17 and 18, there were but 70 of the normally employed 277, who were at work, and to whom no uniform wage reduction was applied.

Following such adjustments as were made, it was the Commissioners' conclusion that some effort should be made to prevail upon the producers, through their New York officers, to give consideration to the scenic artists and assistant directors. No further adjustments could be made affecting the other classes until the New York Arbitration Committee has settled the controversy affecting carpenters, electricians, musicians, and theatrical alliances.

Strike—Automobile-body workers, Hudson Motor Car Co., Detroit, Mich.—On Feb. 6, 1933, 3000 automobile-body workers at this plant went on strike because of alleged ultraradical influence.

A Commissioner of Conciliation, who was on the ground, tendered his conciliatory services, which were immediately accepted by the Hudson Motor Car Co.

Upon the Commissioner's advice it was quickly agreed to meet workers' committees, which, at their meetings, had developed very little complaint concerning working conditions, hours, or wages. It appeared, in fact, that the strike was a "sympathy" strike. At later conferences those who had dominated the strike were eliminated, their influence having waned when it became apparent to the strikers that the company was fully willing to meet any and all committees of workers and thresh out the differences presented. These differences were adjusted and on February 14 the plant resumed operations in full, including those of the additional 3000 workers whose work depended upon delivery of the motor-car bodies.

Strike—Retail clerks; controversies—Teaming trades and building trades, Butte, Mont.—A situation developed in Butte, Mont., late in the year 1932 which threatened to evolve into a bitter and long-drawn-out dispute.

The Builders' Exchange some months previous had demanded a horizontal wage decrease of 25 per cent which had been refused by the Building Trades Council and a deadlock in negotiations had been reached.

The Truck Owners' Association had also asked for a 25 per cent horizontal wage decrease, which request had been refused by the union with a resultant deadlock.

The Retail Clerks' Union, upon the expiration of its agreement with the store owners, had called the clerks on strike in nearly all the large stores in Butte, and many of the smaller ones.

The Commissioner who was assigned to the case arrived in Butte on the night of Dec. 2, 1932. He found that representatives of virtually every union in Butte had been called into conference that night with high officials of the Anaconda Copper Co. and the Montana Power Co., and advised that unless the labor difficulties were adjusted within a given time these companies would sever contractual relations with the unions, not only in Butte but throughout the State of Montana. As a start to reopening negotiations for settlements of these major disputes, the demand was made that the retail clerks be at once returned to work. The two companies mentioned employed organized labor extensively in Butte and other Montana localities, and inasmuch as they were the largest and most influential corporations in the State it was evident that a break was a very serious matter.

The Commissioner was in touch with representatives of the unions before midnight on the night of his arrival, and on the following morning was in conference with high officials of these two corporations. He was convinced from his conferences with the latter that they preferred reaching an amicable settlement rather than engage in further controversy but were prepared for a prolonged break if an early adjustment was not reached. He tendered his good offices as a friend to both sides, and was courteously received by each, receiving whole-hearted cooperation from both the companies and the union representatives, as well as from the employers involved in the trades affected.

The retail clerks returned to work the following Tuesday morning, and peace negotiations were opened up in

all the trades affected. Joint conferences between the employers and the men in each affected industry were instituted, the Commissioner going back and forth between the various conferences and sitting simultaneously.

At the end of 10 days, agreements were consummated in all three of the industries. Compromise was the order of the day on both sides, the extreme original demands of both sides being modified materially.

Union agreements witnessed by the commissioner were negotiated, to be effective until May 1, 1934. The two corporations referred to withdrew their threat to break off union relationship, and the old basis of friendly understanding was assured for the future.

LABOR CONDITIONS. See RAILWAYS.

LABOR DISPUTES. See LABOR; STRIKES AND LOCKOUTS.

LABOR LEGISLATION. Forty-three States, two territories, two insular possessions and the Congress of the United States met in regular legislative session in 1933. Special sessions in a number of these, and other, States were also held. Outstanding in the extension of legal protection for labor during 1933 is the adoption of codes of fair competition under the National Industrial Recovery Act which restrict child labor, limit hours of service, establish minimum wage levels and otherwise improve the standards and conditions of labor. Other noteworthy legislation includes the enactment of old age pension laws in ten States and the Territory of Hawaii; the enactment of minimum wage laws for women and minors in seven States; laws drastically limiting the issuance of injunctions in labor disputes in eight States; and, by Congress, the appropriation of \$3,300,000,000 to complete a comprehensive programme of public works, and the establishment of a national public employment office system providing for cooperation with the States.

Alaska. Lien laws revised; mechanics' lien law amended.

Arizona. State-wide old age pension system adopted.

Arkansas. Federal cooperation in emergency construction and relief provided for; preference for citizens in public works employment; State-wide old age pension system adopted (later declared unconstitutional).

California. Wage claimants given preference under receiverships; employees' bond law amended; receipt of wage rebate on public works made a felony; "yellow-dog" contracts voided; hours on public work limited, five-day week established for State employees; hours of truck and bus drivers limited; taking of fee for procuring employment for persons on public works prohibited; California Industrial Recovery Act enacted providing for codes in intrastate commerce; earnings of volunteer firemen defined; compliance with awards by insolvent self-insurers required; average earnings re-defined; act clarified in respect to emergency relief workers; Senate committee created to investigate feasibility of health insurance.

Colorado. Injunctions in labor disputes limited; "yellow-dog" contract voided; prevailing wage on public works required; preference granted to citizens in public works; investigation ordered into public employment of married women; preference in public employment of persons with dependents urged; emergency relief committee created; unemployment survey committee created; unemployment insurance investigating committee created; State fund investigation ordered; State fund operating expense requirements amended; county old age pension system established; State departments reorganized; abolishment of certain State mine officials authorized; public employees' salaries reduced; civil service reform amendment proposed. (Special session.) Blacklisting and boycotting laws temporarily suspended; national public employment office act accepted; emergency relief and construction act enacted.

Connecticut. Wage assignment law amended; wage payment law amended; prevailing wage required on public works; minimum wage law for women and minors enacted; hours law for women and minors strengthened; hours of motor vehicle drivers limited; Federal aid for public employment offices accepted; unemployment relief act enacted; child labor law amended; factory inspection code strengthened; registration of factories required.

Delaware. Mechanics' lien law amended; wage payments safeguarded; contractors' bond required on public works; prevailing wage required on public works; preference granted to citizens on public works; minor exclusions from workmen's compensation act.

Florida. Prevailing wage required on certain public

works contracts; public employment offices in certain counties authorized; Federal cooperation in road construction authorized; preference granted citizens in public employment; Agricultural and Industrial Relief Commission created.

Georgia. Wage garnishment law amended; bond required of insurance carriers; insurance company regulations.

Hawaii. Wage payment law amended; mechanics' lien law amended; hours of labor law amended; unemployment relief act enacted; workmen's compensation law amended relating to disability and voluntary payments; old age pension law enacted; public employees' retirement act amended; public employee wage reductions authorized.

Idaho. Public works contracts bond requirements amended; injunctions in labor disputes limited; "yellow-dog" contracts voided; preference granted citizens in public works employment.

Illinois. Wage garnishment law amended; mechanics' lien law amended; "yellow-dog" contracts voided; minimum wage law for women and minors enacted; Federal national employment system accepted; authority provided for contracting with Federal public works administration; emergency relief commission continued; unemployment investigating commission created; commissions created to investigate mine safety and mine working conditions; Federal child labor amendment ratified; workmen's compensation amendments affecting review procedure, rules, and notices; commission to investigate government reorganization created.

Indiana. Wage payment law enacted, wage payments on public works contracts safeguarded; injunctions in labor disputes limited, "yellow-dog" contracts voided; women's hours law amended; motor vehicle drivers' hours regulated, unemployment relief commission created, workmen's compensation amendment providing double compensation for illegally employed minors, county old age pension system adopted, reorganization of State government provided for, investigating committee on governmental economy created.

Iowa. Hours of commercial motor vehicle drivers reduced, workmen's compensation review and appeal procedure changed, public employees salary reduction, government economy committee created.

Kansas. Mine safety code amended.

Kentucky (Special session.) No labor laws enacted.

Louisiana (Special session.) No labor laws enacted.

Maine. Wage record of certain employees required, black list law amended, injunctions in labor disputes limited, prevailing wage and preference to citizens act enacted, unemployment insurance investigating committee created, reporting of occupational diseases required, old age pension law enacted, operation suspended; State retirement law amended.

Maryland. Workmen's compensation amendments affecting exempted employments and court appeal procedure.

Massachusetts. Commission on interstate Compacts affecting Labor and Industry created, wage assignment law exemptions, wage rate information to be furnished by employers, certain picketing activities legalized; "yellow-dog" contracts voided, women's hours law amended, authority granted to suspend certain provisions of women's hours law; one-day-rest-in-seven law amended; preference in public employment to persons with dependents continued; employment stabilization commission continued, old age pension law amended; industrial and development commission abolished.

Michigan. Wage assignment law amended; emergency relief commission created; private employment agency law amended; Federal child labor amendment ratified; workmen's compensation law amended; compulsory State-wide old age pension system adopted.

Minnesota. Prompt-wage-payment act extended; wage payment law enacted; written wage contract required; wage garnishment law amended; injunctions in labor disputes limited, "yellow-dog" contracts voided, truck drivers' hours regulated; women's hours law enacted; acceptance of employment gratuity by employer from employee prohibited, preference for handicapped persons in public employment urged, child labor act amended, workmen's compensation amendments affecting dependents, commission review, second injury fund, and election; old age pension act made compulsory and State-wide; State retirement act amended; public employees' retirement association act amended.

Missouri. Public works contract bond requirements amended; boiler rule provisions repealed; vocational rehabilitation appropriation.

Montana. Hours regulated in strip mining, cement plants, and sugar refineries; emergency relief commission created; workmen's compensation amendments affecting employers' elections and third party actions.

Nebraska. Hours of motor vehicle drivers regulated; workmen's compensation law amended in regard to insurance policies; compulsory old age pension system adopted.

Nevada. Minimum wage rate fixed for unskilled labor

on public works; hours of motor vehicle drivers regulated; board created to coordinate unemployment relief; mine inspector act amended; workmen's compensation law amended in regard to provision governing dependents; cooperation in labor law enforcement between highway department and labor commissioner provided.

New Hampshire. Minimum wage law for women and minors enacted; one-day-of-rest-in-seven law enacted; emergency relief through public works projects authorized; provision made for Federal cooperation; emergency unemployment relief act enacted; provision for investigation of unemployment insurance; Federal child labor amendment ratified; medical care under workmen's compensation extended; double compensation for illegally employed minors; workmen's compensation law amended in regard to weekly minimum and benefits made applicable to State employees; State employee salary reductions.

New Jersey. Act safeguarding wages on public works contracts amended; minimum wage law for women and minors enacted; discrimination in employment prohibited in public works contracts; certain emergency relief acts declared inoperative after Jan. 31, 1934; certain violations of National Industrial Recovery Act declared misdemeanors; cooperation with National Industrial Recovery Administration authorized including establishment of codes in intrastate commerce; child labor act amended; Federal child labor amendment ratified; emergency relief workers specifically excluded from workmen's compensation law and are to be compensated by State Director of Emergency Relief; old age pension act amended; State retirement act amended; public employee salary reduction act amended, authorization extended and further effected; civil service act amended.

New Mexico. Public employees' wage payments regulated; motor vehicle drivers' hours regulated; women's hours regulated; men's hours regulated; eight hour day established for public employees, preference granted to citizens in public employment; comprehensive mine code enacted including compulsory rock-dusting; workmen's compensation payments revised; labor commissioner reports requirements amended; labor and industrial commission provisions amended.

New York. Mechanics' lien law amended; prevailing rate of wage law amended; department required to determine wage schedules on public works contracts and minimum hourly wage rates on highway contracts; minimum wage law for women and minors enacted; five-day week on public works contracts and eight-hour day and prevailing wage rate on highway contracts is continued; law granting employment preference to citizens amended; emergency unemployment relief period extended, emergency relief act amended; participation in Federal emergency relief and construction act authorized, and amended; employment discrimination by public utilities forbidden; workmen's compensation amendments in regard to procedure for and payment on account of reclassified disabilities, assessment on appellant, State retirement act amended; State employee salary reductions; department's authority over manufacture and sale of bedding is broadened (Special session.) Cooperation with National Industrial Recovery Administration authorized including application of codes to intrastate commerce and authorization to utilize State employees, national employment office system accepted, workmen's compensation law amended in regard to procedure for and payment on account of reclassified disabilities.

North Carolina. Women's hours law enacted; unemployment insurance investigating committee created; workmen's compensation law amended in regard to electric railways, awards, certain sawmill and logging operators, third party action, free choice of physician, certain school employees; commissioner of labor's powers clarified; economy investigation ordered.

North Dakota. Bond requirements to secure wages in public works contracts amended, Federal child labor amendment ratified; workmen's compensation law amended in regard to bureau revision and coal mine operators; compulsory State-wide old age pension system adopted; industrial commission act reestablished; industrial survey commission act repealed.

Ohio. Wage exemptions from execution and attachment, minimum wage law for women and minors enacted; national employment office system accepted, State Industrial Recovery Act enacted providing for codes in intrastate commerce; elevator inspection provisions strengthened; Federal child labor amendment ratified; workmen's compensation act amended; compulsory State-wide old age pension system adopted on referendum November 7.

Oklahoma. Workmen's compensation law amended in regard to competitive State insurance fund, payments, hearings, claim-filing. (Special session.) Emergency relief and construction act amended; Federal child labor amendment ratified.

Oregon. Wage collection act amended; registration of labor unions required; injunctions in labor disputes are limited; "yellow-dog" contracts voided; private employment agency law amended; Federal cooperation in public

works provided for; emergency relief committee created; Committee to investigate unemployment insurance created; Federal child labor amendment ratified; State mining board created; factory inspection and boiler inspection fee requirements changed; workmen's compensation law amended in regard to appeal procedure, extraterritoriality, volunteer firemen, coverage, legal fees, alien payments, benefits, hazardous occupations, elective provisions, accident fund payments, defaulting employers, third party actions, State fund payments, reopened cases; vocational rehabilitation act amended; county old age pension act enacted; State employees' wages reduced. (Special session.) No labor laws enacted.

Pennsylvania. Mechanics' lien law amended; "yellow-dog" contracts voided; mine safety act amended; child labor investigation ordered; workmen's compensation law amended in regard to judgments against employers, work relief employees, State fund audit; State employees' retirement act amended. (Special session.) Old age pension law enacted.

Philippines. Wages safeguarded on public works contracts; wages declared preferential claims; mediation and conciliation of industrial disputes provided; private employment agency law enacted; employers required to furnish free emergency medical treatment; retirement gratuities provided for public employees; departmental reorganization and amendment.

Puerto Rico. Child labor act amended; workmen's compensation law amendments; public employees' retirement act amended. (Special session, 1933.) No labor laws enacted.

Rhode Island. Emergency unemployment relief act enacted and amended. (Special session.) Emergency public works act enacted providing for Federal cooperation; emergency unemployment relief act amended; investigation of working conditions in manufacturing plants and textile mills authorized.

South Carolina. Act granting preference to citizens in public works employment amended.

South Dakota. Hours of motor vehicle drivers limited; Attorney General designated Industrial Commissioner. (Special session.) Eight hour day established for public employees.

Tennessee. Garnishment laws amended; workmen's compensation law amended in regard to violations, prosecution provisions and insurance company bond requirement; departmental reorganization.

Texas. Wage payment law amended; prevailing wage required on public works; hours law for women amended; cooperation with Federal Reconstruction Finance Corporation authorized; unemployment relief commission created.

Utah. Payment of public payrolls in gold coin required; injunctions in labor disputes limited; "yellow-dog" contracts voided; minimum wage law for women and minors enacted; prevailing wage required on public works; constitutional amendment on minimum wage proposed and ratified, November 7; emergency relief commission authorized, child labor act amended; workmen's compensation law amended in regard to double compensation for illegally employed minors; committee to investigate State government created. (Special session.) No labor laws enacted.

Vermont. Wage preference act amended; minimum wage provided for highway construction; public employee salary reductions. (Special session.) Federal-State cooperation in public works.

Virginia. (Special session.) No labor laws enacted.

Washington. Lien law on crops amended; hours of certain motor vehicle drivers are limited; emergency relief act enacted; mining code amended; Federal child labor amendment ratified; workmen's compensation law amended in regard to accident fund payments, Federal vocational rehabilitation act accepted; county old age pension system adopted.

West Virginia. Prevailing wage on public works required; workmen's compensation law amended in regard to State fund investments; governor authorized to consolidate State departments. (Special session.) Committee on government efficiency authorized.

Wisconsin. Law exempting wages from garnishment amended; wage payment law extended; wage collection law revised; minimum wage established on public works contracts; national public employment system accepted; child labor act amended; workmen's compensation law amended in regard to exemption requirements, liability for occupational disease disability, procedure in certain respects, examiners' authorization to make decisions; compulsory provisions of old age pension act postponed until Jan. 1, 1935; interim investigating committee on old age pensions created; compulsory provisions of unemployment reserves act temporarily postponed and further amended.

Wyoming. Wage payment on public works contracts protected; injunctions in labor disputes are limited; women's hour law amended; mining code amended; workmen's compensation law amended in regard to coverage, procedure, accident fund payments, benefits; Department of Commerce and Industry changed.

United States. (72nd Congress.) One-day-rest-in-seven required for barbers in the District of Columbia; President is empowered to reduce, coördinate and consolidate government departments. (73rd Congress.) National public employment office system adopted, abolishing the existing employment service, creating a representative Federal advisory council and providing for cooperation with the States in establishing and maintaining public employment offices; President is authorized to provide emergency employment through public works projects including contracts with States; Federal Emergency Relief Act enacted providing for cooperation with the States and creating Federal emergency relief administration; National Industrial Recovery Act enacted providing for establishment of codes of fair competition, creating a Federal emergency administration of public works to complete a comprehensive programme of public works and construction projects and appropriating \$3,300,000,000, Emergency Railroad Transportation Act enacted creating Federal coordinator of transportation whose authority includes power to investigate and recommend methods of stabilizing railroad labor employment and improving labor conditions; public employee salary reductions; compulsory furloughs.

LABOR LEGISLATION, AMERICAN ASSOCIATION FOR. Founded in 1906, this membership organization of socially-minded economists, lawyers, journalists, labor leaders, and employers has worked along scientific lines, fearlessly attacking needless industrial evils from the general welfare viewpoint. It continues its work as the American arm of the International Association for Social Progress formed by the fusion of the three international organizations for labor legislation, unemployment, and social insurance. See SOCIAL PROGRESS, INTERNATIONAL ASSOCIATION FOR. Progress of the Association was recorded in its substantial quarterly, the *American Labor Legislation Review*, the December, 1933 issue of which contained a convenient annual summary and index of all new labor laws enacted in the United States. A cumulative index to the preceding 20 volumes of this *Review* was published in 1931.

The continuance of business depression during the year brought renewed interest in the Association's unemployment programme. As in 1915 and 1921 a country-wide unemployment survey was made in 1930 and standard recommendations concerning emergency relief measures, public employment agencies, long-range planning of public works, stabilization, and unemployment insurance were stressed. After consultation with representative authorities throughout the country an unemployment insurance bill was drafted which the Association called "An American Plan for Unemployment Reserve Funds" and which was carefully framed to meet the special conditions of American industrial life. It was revised in 1933 and printed in the June, 1933 issue of the Association's quarterly *Review*.

The twenty-seventh annual meeting was held at Philadelphia, December 27-29, several sessions being held jointly with the American Economic Association, and the American Statistical Association.

The president in 1933 was Ernest G. Draper, the secretary, John B. Andrews, with headquarters at 131 East 23rd Street, New York City. See LABOR LEGISLATION.

LABRADOR. A dependency of Newfoundland bounded west and south by the Province of Quebec; the coast boundaries are Blanc Sablon in the south and Cape Chidley in the north. Area, 112,400 square miles; population (1931 census), 4264, of whom 1300 were Eskimos. Fishing and lumbering are the chief industries. See NEWFOUNDLAND.

LABUAN. See STRAITS SETTLEMENTS.

LACROSSE. With more rules changes affecting the play materially, Johns Hopkins Univer-

sity once again was supreme in lacrosse ranks in 1933. The college team that had beaten Canada in the demonstration games at the Olympic games in 1932 went through the season undefeated, after facing a long row of worthy opponents, and was awarded the national championship. At the college where lacrosse is the major sport, the 1933 team was considered the best in the history of the institution.

Meeting before the season opened, the rules committee agreed on more changes in the playing code, supplementing the rather drastic changes made in 1932. The playing field, made smaller in 1932, was enlarged from eighty to ninety yards in length and to sixty yards in width. One important change was that declaring that three defensive men be between a player and the goal in order for that player to be "on-side." Only two were sufficient previously. Two positions were dropped—second attack and second defense—and the game was divided into quarters instead of halves and substitutions were permitted each period. These new rules served to speed up the game and make it more appealing both to the spectator and to the player, and had a beneficial effect in reducing injuries to a minimum. The year 1933 showed fewer injuries than in a decade.

Increased activity was shown in the game throughout the United States, with teams being formed in the south, mid-west and on the Pacific Coast for the first time. High school leagues were organized in Philadelphia and in Maryland, and in Baltimore, headquarters of the sport, in particular, even grammar school leagues were formed and teams played arduous schedules. The Public Schools Athletic League championship in New York City was taken by Alexander Hamilton High School.

Women also inaugurated lacrosse competition, and Baltimore won the first women's intercity matches by downing teams from Philadelphia and Boston.

LAFAYETTE COLLEGE. An institution for the higher education of men in Easton, Pa., founded in 1820. The registration in the autumn of 1933 was 900, the enrollment being restricted to 1000. The faculty numbered 93. The productive funds amounted to \$3,859,068 in 1933, and the income for the previous year was \$131,387. The number of volumes in the library was 87,134. President, William Mather Lewis, A.M., LL.D., Litt.D.

LA GUARDIA, FIORELLO H. See New York; RAPID TRANSIT.

LANDS, PUBLIC. During the fiscal year ending June 30, 1933, the total original public land entries, including those on Indian lands, fell to 3,117,781 acres from 4,551,774 acres the previous year, according to the annual report of U. S. Commissioner Fred W. Johnson of the General Land Office. The acreage included in public land entries is not, however, an infallible yardstick with which to measure the work accomplished, for each year adds to the already intricate land system many new laws that further complicate the work; 71 public land laws were enacted during the second session of the Seventy-second Congress and first session of the Seventy-third Congress that affect the system.

Homestead entries continued to account for over 87 per cent of the public lands appropriated. Nearly three-fourths of the lands homesteaded during the year were in the four Rocky Mountain States of Montana (233,237 acres), Wyoming

(678,777 acres), Colorado (254,228 acres), and New Mexico (721,579 acres). The geographic centre of homestead entries remains, as for the past 10 years, in northwestern Colorado, but the geographic centre of the vacant, unappropriated and unreserved public lands is 300 miles west on the Utah-Nevada boundary near Ely, Nev. There remained on June 30, 1933, 172,084,580 acres, exclusive of Alaska, of vacant, unappropriated and unreserved public lands.

Under authority of the Emergency Conservation Act, a camp was established in May to control a number of the coal fires in the Little Thunder Basin, Wyo. The superintendent and foremen were selected from those having years of experience in coal mining and kindred work in the coal fields of Wyoming, and at the close of the fiscal year the camp of 200 workmen was completely organized and work commenced on five separate and distinct fires.

The total cash receipts from sales, leases, and other disposition of public lands (including receipts from copies of records, sales of government property, etc.) were \$3,812,208 and from proceeds of Indian Lands \$47,222, an aggregate of \$3,859,430, all of which was deposited in the Treasury. Receipts of the Federal government from bonuses, rentals, and royalties under the act of Feb. 25, 1920, providing for the leasing of mineral rights on the public domain, aggregated \$3,256,440. The largest receipts were from mineral lands in California, the amount under this act being \$1,643,222. Wyoming came second with receipts totaling \$1,224,017. Receipts from the other States were: New Mexico, \$139,092; Utah, \$79,856; Montana, \$57,715; Colorado, \$53,400; North Dakota, \$33,515; Washington, \$9537; Alabama, \$9101; Louisiana, \$4813; Idaho, \$1225; South Dakota, \$498; Nevada, \$240; and Arizona, \$203. These figures do not include \$14,377 received as royalties on coal leases in Alaska, of which the Territory receives no share.

The aggregate receipts for the year, \$3,859,430 are distributed under the law approximately as follows: Reclamation fund, \$1,981,445; to the public-land States and certain counties within such States, \$1,328,585; general fund, \$502,176; and to the various Indian tribes, \$47,222. Total expenditures for the conduct of the business of the General Land Office (including expenses of the district land offices \$226,491) amounted to \$1,781,164.

The term "public domain" embraces all of the area that was once public land or in the control of the Federal government, including Alaska. In the United States proper it includes all the States north and west of the Ohio and Mississippi rivers except Texas, and includes in addition the States of Mississippi, Alabama, and Florida. The total area of the public domain in the United States proper is 1,442,200,320 acres. The accompanying is the disposition of this vast area as worked out from available records of disposals and with arbitrary adjustment for final entries and disposals that were later canceled and for exchanges, etc., that resulted in reissuance of patents, and with further adjustment due to purchases of patented lands by the government for special purposes. The subject, which involves the history of the growth and development of our country, is complex and changing and subject to numerous classifications and exceptions, but the accompanying table pictures the situation in its simplest form.

	<i>Acres</i>
Title passed from the United States:	
Homesteads (approximate)	274,000,000
Cash sales and miscellaneous disposals (approximate)	418,000,000
State grants for educational or other purposes	181,650,470
Canal and river improvement grants to States	6,842,920
Wagon-road grants to States	3,359,188
Railroad grants to States	38,206,390
Railroad grants to corporations	94,155,512
Total area disposed of	1,016,214,480
Pending and unperfected public land entries	23,208,704
Title remaining in the United States:	
National forests	187,576,500
National parks and monuments	8,370,989
Indian reservations (estimated net)	56,676,535
Military, naval, experimental reservations, etc. (approximate)	1,000,000
Withdrawals (estimated net)	27,068,532
Unappropriated and unreserved public land	172,084,580
Grand total	1,442,200,320

LANGMUIR MEDAL. See CHEMISTRY.

LAOS, li'ôz. See FRENCH INDO-CHINA.

LAPUAN MOVEMENT. See FINLAND under History.

LARDNER, RING(GOLD) W(ILMER). An American humorist, died at East Hampton, Long Island, N. Y., Sept. 25, 1933. He was born at Niles, Mich., Mar. 6, 1885, and after receiving a high school education attended for a short time the Armour Institute of Technology in Chicago. Discovering, however, that engineering was not his forte, he became in 1905 a reporter on the South Bend (Ind.) *Times*. Two years later he went to Chicago where he was successively a writer of sporting news on the *Inter-Ocean*, the *Examiner*, and the *Tribune*. He edited the *St. Louis Sporting News*, a weekly, during 1910-11 and then became associated with two Hearst papers, the *Boston American* and the *Chicago American*. In 1913 he succeeded Hugh E. Keogh in the conduct of the *Chicago Tribune's* sports column, "In the Wake of the News." In 1915 appeared his first published work, *Bib Ballads*.

Lardner's humorous and slangy genre sketches of the sporting world, which began to appear at this time in the *Saturday Evening Post* and other magazines, owed their origin to some of the characters he met in the dressing rooms of baseball squads or while traveling with the teams. The best of the series was *You Know Me, Al* (1915), which in its lampoon of professional athletics established a debunking school of sports criticism. He carried his satire to other circles in *Gullible's Travels* (1917), an amusing exposé of snobbery among the newly rich. It was followed by *Own Your Own Home* (1917); *Treat 'Em Rough* (1918); *The Real Dope* (1918); *My Four Weeks in France* (1918); *The Young Immigrants* (1919); *Symptoms of Being 35*; and *The Big Town* (1921), the latter depicting with fidelity and kindliness various types of Broadway hangers-on.

In 1919 Lardner removed to New York City where until 1926 he was associated with the Bell Newspaper Syndicate. He achieved artistic maturity and a seriousness of purpose with the publication in 1924 of *How to Write Short Stories*, a collection of his own stories amusingly told in the style he had found effective—a departure from conventional syntax and the use of

slang and other expressions rooted in the speech of the American lower middle-class. It was followed by two other collections, *What of It?* (1925) and *The Love Nest* (1926). *The Story of a Wonder Man* (1927) was a satire on the often "ghost-written" autobiographies of certain successful business men. In 1928 he achieved recognition as a playwright with the production of *Elmer the Great*, on which George M. Cohan had collaborated. In 1929, with George S. Kaufman, he wrote *June Moon*, acclaimed one of the ten best plays of the year. His last published work was *Round Up* (1929), a collection of all his short stories.

LARYNGOTRACHEITIS, INFECTIOUS. See VETERINARY MEDICINE.

LATIN AMERICA. See articles on the various countries of the Caribbean, Central America, and South America; also, PAN AMERICAN UNION, PAN AMERICAN CONFERENCE, UNITED STATES.

LATTER-DAY SAINTS, CHURCH OF JESUS CHRIST OF. A religious body, commonly known as the Mormon Church, organized in 1830 at Fayette, N. Y., by Joseph Smith. For the early history of this church see THE NEW INTERNATIONAL ENCYCLOPÆDIA under *Mormons*.

In 1933 the organization of this church included 104 stakes, 936 wards, and 76 independent branches, with a membership of 554,462. There were 13 missions in America with a membership of 103,327; the missions in Europe had a membership of 29,989, and those in the Pacific Islands of 16,171. Of the 1260 missionaries, 622 were at work outside the United States. The administrative affairs of the church and the performance of all church ordinances are attended to by the priesthood, consisting of the Melchizedek Priesthood, a senior order, with 84,093 members, and the Aaronic Priesthood, a junior order, with 87,379 members.

The general authorities who have jurisdiction over the entire church are the First Presidency, the Quorum of the Twelve Apostles, the First Council of Seventy, and the Presiding Bishopric. In 1933 these authorities were: First Presidency: Heber J. Grant, president, Anthony W. Ivins, first counselor; J. Reuben Clark, Jr., second counselor. Quorum of the Twelve Apostles: Rudger Clawson, president, and Reed Smoot, George Albert Smith, George F. Richards, David O. McKay, Joseph Fielding Smith, Stephen L. Richards, Richard R. Lyman, Melvin J. Ballard, John A. Widtsoe, Joseph F. Merrill, and Charles A. Callis, apostles. First Council of Seventy: J. Golden Kimball, Rulon S. Wells, Charles H. Hart, Levi Edgar Young, Antoine R. Ivins, Samuel O. Bennion, and John H. Taylor. Presiding Bishopric: Sylvester Q. Cannon, presiding bishop; David A. Smith, first counselor; and John Wells, second counselor.

The church maintains seven temples which are devoted to sacred ordinances for the living and the dead, such as baptisms, endowments, and marriages. It maintains also Brigham Young University (q.v.), the Latter-day Saints Business College, three collegiate institutes, one high school, 84 senior seminaries (schools adjoining high schools and providing special religious instructions), and 351 junior seminaries (schools for the religious training of junior high school students). Enrollment in senior seminaries was 13,438 and in junior seminaries, 20,537.

The auxiliary bodies include a women's relief society, numbering, in 1933, 67,382 members,

who care for the sick and poor. The Sunday Schools in 1933 had an enrollment of 806,313 pupils and 29,953 officers and teachers. The two mutual improvement associations, composed of young people, had an enrollment of 128,732. The primary association for those under 12 had a total membership of 113,277. The church holds in Salt Lake City, Utah, two general conferences each year, one during the first week in April and the other the first week in October, at which the work of the general authorities is reviewed.

LATTER-DAY SAINTS, REORGANIZED CHURCH OF JESUS CHRIST OF. After the death of Joseph Smith in 1844, several factions developed among the Latter-day Saints. See *THE NEW INTERNATIONAL ENCYCLOPEDIA* under *Reorganized Church of Jesus Christ of Latter-Day Saints* for the early history of this church.

In 1932 the church reported a membership of 112,000, which included members throughout the United States and in Canada, Great Britain, Australia, Germany, Isle of Pines, Holland, Switzerland, Norway, Sweden, Palestine, South Sea Islands, Hawaii, and New Zealand. There were 745 churches, 7000 ministers, and 730 Sunday schools with 50,000 pupils. The church maintains Graceland College at Lamoni, Iowa, and homes for the aged and the Independence Sanitarium at Independence, Mo. The official periodical, the *Saints' Herald*, is issued weekly. Headquarters are at Independence, Mo.

LATVIA. A Baltic republic established Nov. 18, 1918, from territories of the former Russian Empire. Capital, Riga.

AREA AND POPULATION. With an area of about 25,400 square miles, including lakes, Latvia had a population of 1,929,000 on Jan. 1, 1932, compared with 1,900,045 at the census of 1930. Letts comprised 73.42 per cent of the total population; Russians, 12.52 per cent; Jews, 4.97 per cent; Germans, 3.68 per cent; Poles, 3.12 per cent; Lithuanians, 1.36 per cent. In 1932 births numbered 36,340; deaths, 26,000; marriages, 14,750. The birth rate per 1000 inhabitants was 18.9 in 1932; death rate, 13.5. Riga (377,917 inhabitants in 1930) and Liepāja (Libau) (57,238) were the chief cities.

EDUCATION. Each national minority has its own schools, with its own language of instruction. In 1931-32 there were 2083 primary schools, with 197,540 pupils; 142 secondary schools, with 21,344 pupils; the Latvian University at Riga, with 8766 students; and 110 technical professional schools, with 10,082 students.

PRODUCTION. Latvia is predominantly agricultural, but industry is expanding. Production of the chief crops in 1932 (in metric tons) was: Rye, 299,550; barley, 192,660; oats, 332,990; wheat, 144,020; potatoes, 1,205,140; flax, 19,274; linseed, 18,610; Livestock in 1933 included 1,155,800 cattle, 585,900 swine, 1,114,300 sheep, and 370,200 horses. The forests, covering 4,098,280 acres, produced 2,285,327 cubic meters of timber (excluding firewood) in 1930-31. Industrial establishments in 1932 numbered 3032, with 66,304 employees. The value of industrial production in 1931 was 356,132,000 lats (lat equals \$0.193 at par). The number of registered unemployed on Dec. 31, 1932, was 27,200; the monthly average for the year was 14,587.

COMMERCE. Including bullion and specie, Latvian imports in 1932 were valued at 84,576,000 lats (177,083,000 lats in 1931) and exports at 96,528,000 lats (163,757,000 lats in 1932). The

balance of trade was favorable by 11,952,000 lats in 1932 and unfavorable by 13,326,000 lats in 1931. Latvia purchased 35.6 per cent of its 1932 imports from Germany, against 13.9 per cent from the United Kingdom, and 10.1 per cent from the Soviet Union. The United Kingdom took 30.8 per cent of all its exports, Germany 26.2 per cent, and the Soviet Union 14.7 per cent. The three leading export items in 1932 were: Butter, 18,600 metric tons worth 30,990,000 lats; vehicles, 11,160,000 lats; boards and planks, 10,330,000 lats. Drugs and chemicals, coal and coke, woolen yarns, metal manufactures, cotton piece goods, and refined petroleum were the chief imports.

FINANCE. The budget for the fiscal year ended Mar. 31, 1932, showed a deficit of 24,200,000 lats, with total expenditures of 152,300,000 lats. The budget for 1932-33 (preliminary results) showed receipts of 130,197,000 lats, expenditures of 127,598,000, and a surplus of 2,599,000 lats. However, a final deficit of 7,000,000 lats was anticipated. Budget estimates for 1933-34 balanced at 140,712,464 lats, of which 16,400,000 lats consisted of extraordinary expenditure to be covered by bond issue. The public debt on Apr. 1, 1932, amounted to 106,500,000 lats (116,300,000 lats on Apr. 1, 1931). Of the 1932 total, 105,600,000 lats were owed to the United States and British governments.

COMMUNICATIONS. Latvia in 1933 had 1724 miles of state railways, mostly of Russian gauge, extensively used for transshipment of goods to and from the Soviet Union. A 19-mile stretch of a new 94-mile line from Riga to Rujiena was opened in 1933. There were about 22,796 miles of highway (797 miles of macadam). In 1932 a total of 2625 vessels of 1,235,000 net registered tons entered the ports and 2623 vessels of 1,228,000 tons cleared. The merchant marine on July 1, 1932, included 106 steamships and motorships of 187,238 gross tons.

GOVERNMENT. The Constitution of Feb. 15, 1922, vested executive power in a president, elected by Parliament for three years, and legislative power in the *Saeima* (Parliament) of 100 members, elected by direct male and female suffrage for three years. There were some 25 different parties or factions represented in Parliament in 1933. President in 1933, Albert Kviesis, elected Apr. 9, 1930.

HISTORY. In domestic politics, the outstanding development of 1933 was the reelection in April of President Kviesis to serve another three-year term. In the foreign field, the main developments were the Fourth Economic Conference of the Baltic States, held in Riga September 8-9, the signing of a new non-aggression agreement with the Soviet Union, and commercial and political friction with Nazi Germany. The Baltic Conference was attended by unofficial delegates from Estonia, Lithuania, and Latvia. They adopted resolutions dealing with the projected Customs union, railway tariffs, intrusion of the state in private business, economic coöperation of the three Baltic states, currency and credit policies, shipping problems, and the establishment of a permanent conference organ.

The non-aggression pact signed by Latvia and the Soviet Union in 1932 was implemented by the multilateral treaty of July 3, 1933. The latter not only pledged the signatories to renounce aggression among themselves, but also specifically defined aggression in accordance with a formula

offered by the Soviet delegation at the Geneva Arms Conference earlier in the year. The trade war with Germany resulted from a boycott declared on German goods by Jewish and Socialist groups in Latvia. On June 12, the Hitler government retaliated by prohibiting all imports of Latvian butter into Germany. The Latvian government temporarily barred further imports from Germany, but on June 16 the Riga authorities capitulated and agreed to prohibit the boycott agitation as well as the anti-Nazi movement in Latvia. Germany then withdrew its restriction upon Latvian butter.

Nazi propaganda in Latvia continued to raise difficulties for the government. Late in December two alleged Hitlerite agents were expelled from the country. On November 22 the Diet revoked the parliamentary immunity of seven Communist deputies and six of them were immediately arrested on charges of conspiring to overthrow the republican régime. Notwithstanding these developments, the government ratified the non-aggression treaty with the Soviet Union early in December and on December 4 signed a new Soviet-Latvian trade agreement, which was ratified by the Diet on December 19. Latvia made "token" payments of \$6000 and \$8500 on war-debt installments of \$118,961 and \$180,705 due the United States government on June 15 and Dec. 15, 1933, respectively.

With the exception of a slight improvement in the cement, textile and paper industries, economic conditions in 1933 remained fundamentally unchanged, as compared with 1932. Satisfactory crop yields were offset by low prices. A budget deficit of about 10,000,000 lats was forecast for the fiscal year ended Mar. 31, 1934. Imports during 1933 increased 6.5 per cent in value, while exports declined in value by 15.5 per cent, with the result that the import surplus increased to nearly 10,000,000 lats.

LAUGHLIN, läf'lin, JAMES LAURENCE. An American political economist, died at Jaffrey, N. H., Nov. 28, 1933. Born at Deerfield, O., Apr. 2, 1850, he attended Harvard University where he took his A.B. degree in 1873 and his Ph.D. degree three years later. After teaching at the Hopkinson's Classical School in Boston he joined the political economy faculty of Harvard, serving as instructor from 1878 to 1883 and as assistant professor from 1883 to 1887. He then became president of the Manufacturers' Mutual Fire Insurance Co. of Philadelphia, but in 1890 accepted a call from Cornell University to serve as professor of political economy. In 1892 he became professor and head of the department of political economy at the University of Chicago, where he remained until his retirement as professor emeritus of the institution in 1916.

Dr. Laughlin acted as financial adviser to several State and government monetary commissions. In 1894-95 he prepared for the Dominican Republic a scheme of monetary reform which was afterwards adopted. The report which he prepared as a member of the Indianapolis Monetary Commission in 1897 was long considered one of the important documents in the history of American banking and monetary reform. In 1906 he delivered, by invitation, in Berlin a series of lectures entitled *Aus dem Amerikanischen Wirtschaftsleben* and in 1909 served as delegate to the Pan American Scientific Congress at Santiago, Chile. As chairman of the executive committee of the National Citizens' League for the Promo-

tion of Sound Banking from 1911 to 1913, he prepared the way for adoption of the Federal Reserve System. In 1919 he was a member of the European Commission of the National Industrial Conference Board.

Besides editing the *Journal of Political Economy* (after 1892), Dr. Laughlin prepared an abridgment of Mill's *Principles of Political Economy* (1884) and wrote *The Study of Political Economy* (1885); *History of Bimetallism in the United States* (1886); *Elements of Political Economy* (1887); *Facts about Money* (1895); *Principles of Money* (1903); *Reciprocity* (1903); *Industrial America* (1906); *Latter-Day Problems* (1909); *Banking Reform* (1912); *Credit of the Nations* (1918); *Money and Prices* (1919); *Banking Progress* (1920); and *Money, Credit, and Prices* (2 vols., 1931). In his last work, *The Federal Reserve Act: Its Origin and Problems* (1933), he was a bitter opponent of inflation as a remedy for increasing consuming power so as to fit reciprocal supply and demand.

LAUSANNE LOAN. See AUSTRIA under *History*.

LAVONGAI. See NEW GUINEA.

LAW IN 1933. ADMINISTRATION. In general. Unfortunately we are obliged to begin with "Lawlessness in 1933"; for that has been a conspicuous feature of the year, especially in its latter portion. President Martin, in his annual address before the American Bar Association at Grand Rapids, Mich., voiced a growing conviction when he said that "America is a crime breeding and criminal protecting nation." In confirmation we have only to recall the attempted assassination of the President-elect and fatal wounding of Mayor Cermak in Miami at the beginning (February) of the year and, at its close, the frightful murder of the Armenian primate, Archbishop Tourian, in his church on Christmas day—for which we must go back to the twelfth century and the assassination of Thomas à Becket for a parallel. The crime wave seems spreading and to include not only the more violent forms, such as murder, bombing, kidnapping, robbery in broad daylight, etc., but also the more subtle phases. Two cases of forgery on a huge scale were uncovered in the middle west, one of Kansas State bonds, aggregating \$1,000,000 and involving the state treasurer, auditor, and attorney general who were impeached by the State House of Representatives. The other case arose in Omaha, Neb., where municipal bonds, of large amounts, were found to have been forged. But if the crime wave continues, efforts to check it likewise appear to have increased. The American Bar Association at the session above mentioned, adopted, as the foremost objective in its coördinated programme for the legal profession of the country, "criminal law and its enforcement." The United States Flag Association offered prizes aggregating \$150 for the two best papers presenting practical methods for combating lawlessness and more than 20,000 such were submitted. Soon after taking office, the new United States Attorney General began making plans to meet the situation. Early in July he announced the appointment of Joseph B. Keenan of Cleveland as his Assistant in charge of criminal prosecutions and the latter has already obtained some notable verdicts of conviction.

ANARCHY IN THE RURAL REGIONS. From various rural communities of the United States, came reports of concerted efforts to frustrate the execution of judicial decrees. On the 27th of April

at Le Mars, Ia., District Judge Charles C. Bradley was seized and dragged from his court room by a mob of between 150 and 200 men, some of them shouting, "Get a rope—hang him." A rope was procured, fastened around the judge's neck and thrown over a telegraph pole; notwithstanding which he steadfastly refused to promise not to sign further foreclosure decrees. Such scenes were not, however, confined to the United States. In August, groups of farmers in southern England, estimated at 10,000, conspired to resist payments of tithes—of which there are still two classes—constituting a perpetual charge on the land and amounting in some parts to as much as \$1.70 per acre. Hundreds of distress warrants were issued to enforce payments of these tithes; but their execution was often frustrated by crowds of farmers threatening the officials with violence. In one case, where three bullocks were seized, 40 policemen were required to resist the mob. Among persons charged with "unlawful assembly" in this connection, was Lady Evelyn Balfour, daughter of the second Earl of Balfour. Her case and those of 36 others were continued until after the harvest season. See also LYNCHINGS.

CAUSES CÉLÈBRES. As foreshadowed in these columns (see INTERNATIONAL YEAR BOOK for 1932, p. 434) the indictments against four Orientals for criminally assaulting Mrs. Thomas Massie, were dismissed in the Territorial court at Honolulu on February 13. Meanwhile on February 4, Chang, the Chinese defendant, had pleaded guilty to a similar offense against a Hawaiian girl and on February 18 was sentenced to 9 years and 11 months of imprisonment for violating his parole from a sentence in still another assault case several years earlier. Mrs. Massie, in Philadelphia, stated that the commutation of her sentence to one hour was the result of a "deal" with the authorities by which she agreed to leave the islands in order to secure immunity for her mother and husband. A resolution was thereupon introduced into the Hawaiian Senate, calling for the removal of Attorney General Harry Hewitt, for his handling of the cases.

United States Senator James J. Davis, whose trial for using the mails to defraud, had been suspended (see INTERNATIONAL YEAR BOOK, for 1932, p. 434), was again placed on trial and, after a lengthy one, was acquitted in October. Charles E. Mitchell, former head of the National City Bank, who had been indicted for making false returns of his income, was likewise acquitted after a long trial. The notorious "Scottsboro Case," in which prior convictions and death sentences were reversed by the Supreme Court (see INTERNATIONAL YEAR BOOK for 1932, p. 435), was retried as to one of the accused (Patterson) at Decatur, Ala., in April and, despite a complete retraction by one of the two complainants, the jury returned a verdict of guilty, which, however, the trial judge (Horton) set aside in an exhaustive opinion, reviewing critically the testimony of the other complainant. The remaining defendants were tried later before another judge and convicted, as was also Crawford, the Virginia Negro who had been indicted for murder, who had fled to Boston and whose extradition (q.v.) was stayed for a time by the order of Judge Lowell. As recommended by the jury (all white) he was sentenced to life imprisonment.

In Germany the trial of the five persons, accused of setting fire to the Reichstag building in Berlin commenced on September 21. The Nether-

lander, Marinus Van der Lubbe, confessed his guilt; but his conduct at the trial was such that his sanity was questioned. The other four, all communists, denied guilt. One of them, Torgler, was defended by Dr. Alfons Sack, a German lawyer; for the remaining three, all Bulgarians, the court appointed Dr. Teichert, though one of them, Dimitroff, insisted that he preferred to defend himself. Foreign lawyers were not permitted to appear; but an international group of five, including one woman, assembled at London in advance of the trial, absolved the four communists and charged that the fire "was set by or on behalf of the National Socialist party." Arthur Garfield Hayes of New York who attended the trial as an observer, asserted, on his return pending the hearing, his belief in the innocence of the four communists but made no charge of unfairness in the proceedings. The trial resulted in a finding of guilt as to Van der Lubbe alone, judgment being rendered on December 23.

In England Lieut. Norman Baillie-Stewart of the British army was court-martialed early in the year for disclosing military information to a foreign power. The evidence against him was entirely circumstantial and some of it was secret, the names of certain witnesses being withheld; but on April 13 he was sentenced to dishonorable discharge from the army and to five years of penal servitude in a civil prison.

Another trial in April was that of the engineers, Russian and foreign, at Moscow, before the Supreme Court of the U.S.S.R. on a charge of wrecking machinery. Of the 18 defendants, six were British subjects, of whom two were convicted and sentenced to terms of imprisonment, three were banished for five years, and one was acquitted. The Russians were convicted but one, whose offense was considered trivial, was not sentenced.

General Owen O'Duffy, after his release from prison by *habeas corpus* (see below) was charged before a military tribunal of the Irish Free State, with sedition and inciting murder. Justice O'Byrne of the High Court later granted a conditional order prohibiting the military tribunal from proceeding, on the ground that the charge was outside its jurisdiction. The president of the tribunal continued the cause but announced that such action was taken only to avoid a conflict with the civil court and maintained that the former had jurisdiction. Various prosecutions for hoarding gold in violation of the emergency banking act were instituted in the United States during the year but none had been brought to a final determination before its close.

EXTRADITION (Interstate). Several cases under this head, arising previously (see INTERNATIONAL YEAR BOOK for 1932, p. 435), were still pending in 1933. The Lukes Lea, father and son, of Tennessee, convicted in North Carolina, applied to a remote county judge in the former State, after its governor had honored the North Carolina requisition, for a writ of *habeas corpus*, which was eventually denied. The Leas thereupon appealed to the State Supreme Court which, on December 9, affirmed the ruling of the lower court unanimously in the result although reached by different lines of reasoning as disclosed by the two opinions. The court, however, allowed them three months more to apply for a review by the Federal Supreme Court. Thus the defendants have been able to delay for over two years the execution of their sentences. United States District Judge Lowell, at Boston, attracted much atten-

tion by granting a writ of *habeas corpus* to George Crawford, a Negro fugitive from Virginia, who had been indicted there for a double murder and for whom Governor Ely of Massachusetts had granted the requisition of the Virginia governor. Judge Lowell based his action on an affidavit reciting that Negroes had not served on juries in London County, Virginia, where Crawford was to be tried. The Court of Appeals reversed Judge Lowell's ruling, held the affidavit inadmissible and the question not subject to determination in *habeas corpus* proceedings. On October 16 the Federal Supreme Court upheld the last mentioned ruling and Crawford was returned to Virginia for trial with the result stated above. In *South Carolina v. Bailey*, 289 U. S. 411, the Supreme Court reversed a judgment of the North Carolina courts discharging, on conflicting evidence, a prisoner held on a requisition from the governor of South Carolina. The ground of discharge was the prisoner's claim that he was not in the State of South Carolina when the crime charged was committed; but he failed to testify and the Federal Supreme Court declared that "the (trial) judge would have been well advised if he had demanded that the prisoner present himself for examination." The International Association of Police Chiefs, in session at Detroit, on October 7, adopted as the first of its resolutions, a demand that the "extradition of criminals from one State to another be removed from the power of state authorities."

JUDICIARY. Before the American Law Institute on May 4, Chief Justice Hughes reported for the Supreme Court that "we have thus far (i.e. during the term which began in October) disposed of 213 cases on the merits and 543 applications for *certiorari*. All the members of the court have been at work without interruption." As no opinions are written in the second class of cases which he mentioned, this would represent somewhat less than 24 opinions for each of the nine justices. On December 11, the court rendered one of the few decisions in which it expressly overruled itself. This was in *Funk v. U. S.* 290 U. S. — (noticed *infra* p. 429). The overruled decisions are *Hendrix v. U. S.*, 219 U. S. 79 (1911) and *Jim Fucy Moy v. U. S.*, 254 U. S. 189 (1920), both comparatively recent. Other leading decisions of the year are discussed elsewhere under the subjects to which they relate. No vacancies occurred in the court's personnel during the year. The wall and roofs of the Supreme Court's new building were nearly completed and above the western portico are carved the words "*Equal Justice Under the Law*." Much work remains to be done on the interior and doubt is expressed of its full completion before 1935.

The Federal Judicial Code (tit. 28, sec. 218) requires the Chief Justice of the Supreme Court "annually to summon to a conference . . . the senior circuit judge of each judicial circuit" to "make a comprehensive survey of the condition of business in the courts of the United States . . . and submit such suggestions to the various courts as may seem in the interest of uniformity and expedition." The 1933 conference met in Washington on September 28 with the senior circuit judge present from each of the 10 circuits except the first, which was represented by a junior. The attorney general's report showed the disposition by the district, courts of 205,609 cases during the year ending June 30. Various legislative measures and additional judgeships

were recommended and suggestions were offered the Supreme Court relative to the rules of practice after verdict in criminal cases which are now in course of preparation. The report of the Citizens' Budget Commission's Counsel shows an increase of about 30 per cent in five years in the cost of maintaining the New York City courts. The personnel alone, exclusive of judges, increased more than 25 per cent.

Impeachment. For the first time in 20 years the Senate of the United States met in 1933 as a court of impeachment to consider articles presented by the House Judiciary Committee against District Judge J. Harold Louderback of San Francisco, who had been appointed by President Coolidge. There were five articles of impeachment. After a lengthy hearing there was a majority vote (45 to 34), but not the required two-thirds, for conviction under article 5. On each of the other articles the majority was for acquittal.

Necrology. Among the distinguished judges who passed away during the year 1933 were W. S. Kenyon of the United States Circuit Court of Appeals for the 8th Circuit, a former Senator from Iowa; Webster Thayer of Massachusetts, who presided at the Sacco-Vanzetti trial, and whose house was bombed (see *INTERNATIONAL YEAR BOOK* for 1932, p. 433); Richard E. Sloan formerly of the Arizona Supreme Court, and who helped to lay the foundations of that State's jurisprudence; Peter W. Meldrim, presiding justice of the eastern judicial circuit of Georgia and a former president of the American Bar Association; Warren Coffin Philbrook, retired member of the Maine Supreme Court and former Attorney General of that State; Sir Francis Lemieux, Chief Justice of the Superior Court of Quebec Province, and counsel for Louis Riel in the latter's trial for high treason at Regina in 1885; Sir Henry Fielding Dickens, Common Serjeant, who died on December 21 at the age of 85; and Chief Justice Jesse C. Hart of Arkansas who was in his 70th year.

JURIES. A recent report of the Boston Bar Association recites:

The fact that, during the past few years, jurors in this county (Suffolk) have been accepting bribes, is established beyond peradventure. Many different jurors have admitted the receipt of money. The disclosures have outraged the community, and there is an insistent demand, in which we join, that immediate steps be taken to overhaul the process by which Suffolk County jurors are selected.

Of some 30 former jurors who testified before the special commissioner investigating the situation, all stated that they had been "approached."

With such a situation existing in staid old Boston, we are not surprised to learn that on November 25, a grand jury at Paterson, N. J., returned two indictments, involving 12 persons, of whom seven were lawyers, for conspiring to obstruct justice by keeping witnesses and suspects out of the jurisdiction and attempting to discredit officials who had instituted prosecutions for a "jury fixing." Five were convicted on December 20. How a jury may sometimes work was well illustrated in the recent opinion of Justice Cardozo in *Clark v. U. S.*, 289 U. S. 1. The petitioner, a married woman, had been called to serve as juror in a prosecution against a former employer for using the mails to defraud. She failed to disclose her employment by the accused, was accepted by the prosecution as a juror, and stood out against the 11 others during a week of "deliberation," following eight

weeks consumed by the trial, until the jury was discharged for inability to agree. Judge Cardozo upheld petitioner's conviction for contempt.

Another illustration, showing how the jury system, even when functioning honestly, operates to delay justice, is found in *De Haan v. Winter* which has been before the Michigan courts during the year. It was an action for malpractice in treating an injury which occurred on Nov. 30, 1928. The action itself was commenced on Nov. 15, 1929 and after a trial in the circuit court, judgment was rendered for the plaintiff. Defendant appealed and on Jan. 12, 1932 the case was submitted to the supreme court which on April 4 of that year, reversed the judgment because an expert witness had been allowed to state his opinion as to the proximate cause of the injury; for "this invaded the province of the jury" (258 Mich. 300). Returned to the circuit court another long trial followed, another verdict and judgment for plaintiff, another appeal; and, on Mar. 2, 1933, another reversal, because a medical expert who gave no written basis for his opinion, was interrogated as to whether it was not opposed to certain medical authorities. "Although objections (to these questions) were sustained," said Clark J,

The effect of cross-examination is an impression that the opinion of the witness is not in accord with eminent medical opinion or authority and the jury, we think, must have been so impressed. Indeed such was the aim of the cross-examination. This is reversible error. (262 Mich. 197)

It will be seen that both reversals were expressly based on consideration for the jury. Had the trial occurred before judges or other experts, no such consideration would have been necessary. But the unfortunate plaintiff, now suffering for eight years from the injury which no one disputes, appears likely to spend more in litigation than he can hope to recover, even should he obtain a verdict which the supreme court will sustain.

Another factor which often complicates the tangled jury system, is the race question. We have seen (*ante* *extradition*) how a Massachusetts judge made it the basis of an order preventing extradition to Virginia. When that order was reversed and the prisoner was returned, the prosecution felt obliged to explain the absence from the jury of members of defendant's race. The jury commissioner was called and testified that he knew of no Negroes in the county who were qualified for jury duty. But after the verdict, finding the accused (Crawford) guilty of one of the two murders in which he was charged, his counsel offered to have him plead guilty in the other if he were saved from the gallows. The inclusion of members of his own race in the jury, would, therefore, evidently have made probable a clear miscarriage of justice. In another Virginia county, however, at Fredericksburg, two Negroes were drawn for the grand jury in December.

The topics considered by the judicial section of the American Bar Association at Grand Rapids in August concerned the jury system, viz., (1) Waiver of juries in civil and criminal cases; (2) Oral or written instruction to the jury; (3) Less than unanimous verdicts. Provision for the last is already made in certain States and a movement, said to be supported by former President Hoover, is reported from California to adopt it there and also to authorize the trial judge to comment on the evidence in his charge. A recent substitute for the jury in Oklahoma is the selec-

tion by the trial judge, with the approval of the parties, of two members of the bar to sit with the judge and participate in the trial and decision. It is reported as working satisfactorily and may prove to be a step toward the ultimate abolition of the jury. A Kentucky statute of the year (ch. 60) provides for a 13th juror who is to take no part in the deliberations, though he attends the trial, until a member of the regular panel is withdrawn. The new English Procedure Rules provide for dispensing with a jury, at the judges' discretion, in all but a limited class of civil cases, viz., actions for defamation, false imprisonment, seduction, breach of promise, fraud, etc.

Hardly, if at all, less ancient than the trial, or "petit" jury, is its counterpart, the presenting or "grand" jury (so called from its number 24 instead of the former's 12) which, in England, dates as far back as the Constitutions of Clarendon (1165). In many States of this country, as well as in several Canadian provinces, the grand jury has been abolished, its place being taken by an examining magistrate or an "information" being filed by the prosecuting attorney, after investigation conducted by himself or some one designated by him. On June 1, the "Administration of Justice Bill," which abolishes the grand jury in England (except in London and Middlesex, where it continues for the indictment of crown officials, for offenses committed outside the jurisdiction) was read for the second time in the House of Lords and was said to be certain of passage. On July 15, pursuant to legislation previously enacted, the grand jury was abolished in the province of Quebec. Some are calculating how long it may be ere the petit jury follows the same path.

In the *Comparative Law Bureau Bulletin* for 1933, Mr. Lionel M. Summers explains the recent change in the French jury, which functions in criminal cases only. If the court finds that the act charged constitutes a crime, the judges and jurors deliberate on equal terms under the presiding judge, voting on the penalty, in case of conviction, until a majority agrees on a specific one; after which the court retires to prepare the written judgment. This plan resembles that of the *naemd* in Sweden and of the *schöffengericht* of Germany, which has been copied in Fascist Italy and Spain. In Mexico, on the other hand, the jury has been superseded, by the "Supreme Council of Social Defense," created by the new Penal Code. In fact, outside of English speaking countries, the jury has never been otherwise than exotic and its steady displacement is not surprising.

LEGAL EDUCATION. The second subject in the American Bar Association's coordinated professional programme is "Legal Education and Admission to the Bar."

Law schools are now operating in every American State except New Mexico and 86 of them have been approved by the American Bar Association, Hartford College of Law in September, being the first night school to meet the test. There are about 100 "unapproved" (part time or mixed) law schools, which have somewhat less than two-thirds of the country's 38,000 law students. This total represents about 8000 less than the attendance of even five years ago and Dean Clark of the Yale Law School finds as a silver lining to the depression, that fewer young lawyers now locate in the cities and more are starting in the small towns.

The New York Joint Conference on Legal Educa-

tion, on December 16, adopted a report relative to character examinations, which recommends the requirement of a "qualifying certificate" upon entering a law school and a five-year probationary period after admission to the bar.

Interesting as a landmark in the history of American legal education, was the 160th anniversary of the foundation, at King's College (now Columbia University) in 1773, of a professorship of "natural law," held by John Vardill, an alumnus of the college. It was not only the first law professorship in America but the second in the British Empire, Blackstone's Vinerian professorship at Oxford having preceded it by only 15 years. On June 9, the University of Cincinnati Law School observed its centenary, the address being given by Dean Pound of Harvard. The school was founded as part of "Cincinnati College," by Timothy Walker, a Harvard graduate and author of a well-known treatise on American law, and J. C. Wright, later Supreme Court Reporter. William H. Taft was an alumnus and later dean for a number of years. On February 19, the faculties of the Yale Law School and of the Harvard Graduate School of Business, announced a joint course in law and business. Students will be selected by representatives of both institutions, limited in number and required to spend the first, third, and fourth years at New Haven, only the second being passed at Cambridge. Yale will confer the LL.B. degree. The plan marks a departure in the coöperation of rival institutions and in requiring four years of undergraduate study. In August, intimations were given of a proposed merger of Chicago and Northwestern Universities which would include two leading law schools. Dean Green of the last named school has an article in the *American Law School Review* on "Integrating Law School and Community," in which he shows what such schools may accomplish outside their primary work of training for the bar; instancing the legal clinic, legal aid, and legal publications, most of which at the school mentioned, were intimated by former Dean Wigmore. The law schools of Washington State and Virginia State Universities, have been provided with spacious new homes during the year.

The work of the Bar Examiners normally begins where that of the law schools ends; and now that the former have a national organization and a national organ (the *Bar Examiner*) they are beginning to take a scientific view of their problems and to plan programmes accordingly. One of their most serious problems is that of the "repeater"—the applicant who fails and tries again until he passes. In more than three-fourths of the States these constituted nearly one-half of the applicants and they seriously impede efforts to make examinations a means of reducing bar congestion. A remedy proposed by some, including Dean Clark of the Yale Law School, is by limiting the number admitted to the examination. But A. Z. Reed in his annual review of legal education, suggests that "the remedy (for bar congestion) may be to make a law school education increasingly valuable for government service and for business." But if bar congestion is a serious problem in the United States it has become far more so in Germany. From 1914 to the end of 1932 the numbers of the German bar grew from 1250 to 18,791 while professional incomes correspondingly fell. With a ratio of one lawyer to every 3450 inhabitants, a third of them earning less than \$1400 per year and a sixth

less than \$600, the body which corresponds in Germany to the American Bar Association has formally demanded a three-year moratorium on admissions to the bar. "Proletarianization of the bar," says Dr. Rudolf Dix, president of the German organization, "must inevitably lead to its decay. . . . And if the bar decays, justice also decays. This means an end of the lawfully ordered existence of a nation."

LEGAL PROFESSION. *American Law Institute.* This organization, composed of about 700 members, carefully selected from bench and bar, to promote a restatement of American law, began its 10th annual session on May 4 in Washington. President Wickersham's brief address reviewed cursorily the work of the decade and indicated the source of its financial support.

The Director's report dealt with the present status of the Institute's work as a whole and announced its programme.

The balance of the week was devoted to consideration of the proposed final draft of the law of agency and the proposed tentative drafts of "property" and "torts."

The American Bar Association held its 56th annual meeting at Grand Rapids, Mich., during the last week of August. All of the sections held their respective sessions prior to the formal opening of the association's on August 30. The secretary's report showed a membership of 27,704, which is considerably less than 25 per cent of the country's lawyers. See under **BAR ASSOCIATION, AMERICAN.**

Bar Integration. A subject which commands increasing attention among members of the profession is the proposed reorganization of the American bar upon an official basis, with self government, including the power to admit and expel members. Statutes embodying the plan have been enacted in 13 States, three of which (Alabama, Mississippi, and North Carolina) are in the south. Attempts during the year to adopt it failed in Michigan, Montana, and Texas. In some quarters the objection is raised that admission to or exclusion from the bar is a judicial function which cannot be delegated. Moreover, it is doubted if these powers would be exercised as impartially by an association of lawyers as by a court. Still more ambitious is the project of Dean Wigmore to establish international bar relations. Through his efforts a committee, of which he was made chairman, on the project was appointed by the American Bar Association and has been at work during the year to ascertain the state of the legal profession in all countries.

Unauthorized Practice. This is another subject in the coördinated bar programme and refers particularly to the large and growing volume of legal business conducted by corporations, such as banks, trust companies, title and abstract companies, collection agencies, credit associations and "bureaus" for "negligence service," tax matters, etc. The real objection here is not, as some laymen have thought, competition with regular practitioners; but the fact that a corporation, which "has no soul," is not subject to professional regulation and control to the same extent as individuals and that practices considered unethical (e.g. the solicitation of business and assignment of claims for purposes of suit) are more easily concealed under the cloak of corporate organization. A special committee on the subject, of the American Bar Association, cites a number of de-

cisions during the year, condemning such practices and recommending legislation to prohibit them. Sometimes this "unauthorized practice" is carried on by notaries public, as in *People v. Alfani*, 227 N. Y. 334, where defendant, one of them, was convicted of having drawn certain legal papers for parties to whom he answered affirmatively the question whether they could return for legal advice.

Unprofessional Employment. But far more serious than "unauthorized" (i.e. unlicensed) practice is the willingness of a class of licensed lawyers to sell their services to those whom they know are engaged in criminal, or at least illegitimate, enterprises. Attorney General Cummings recently said:

One of the most important elements of predatory crime is the manner in which some members of the bar cooperate with the underworld. Wherever we can prove improper connection, we propose not only to punish such lawyers but to disbar them.

The law firm at Stamford, Conn., of which the Attorney General is the head, is said to have sponsored the bill introduced into the legislature of that State to exclude New York lawyers from practicing there unless they maintained offices in Connecticut.

Two members of the American Bar Association were expelled for unprofessional conduct and another was reprimanded during the year. On March 16, Governor Lehman of New York vetoed the bill authorizing a review by the court of appeals of disbarment cases and removals of magistrates.

NECROLOGY. William M. N. German, a member of the Ontario bar for over a half century, died at Welland, in that province, on March 31. He appeared before the Privy Council in behalf of the American vessel, *Kitty D*, seized by Dominion revenue officers; and defended one of the alleged dynamiters of the Welland Canal. Among the prominent American lawyers who passed away during the year Thomas J. Walsh, of Montana, for twenty years a Senator from that State and who had accepted the appointment as Attorney General in President Roosevelt's cabinet; Thomas W. Gregory of Texas, Attorney General for a time under President Wilson; and Morris Hillquit of New York, well known as an able lawyer as well as a moderate Socialist leader.

LEGISLATION. The normal organ of lawmaking in most civilized States to-day is an elective legislature and that body, as a rule, has been very active during the year. In the United States the final session of the 72nd Congress, which closed on March 4, passed the Philippine Bill over President Hoover's veto on January 17, submitted the 21st Amendment of January 23 and the Senate removed its long time Sergeant at Arms on February 8 on account of a newspaper article which he had written. The 73d Congress was called in special session on March 9 and sat for 72 days, adjourning June 16. It enacted 105 measures, at least 20 of which are of outstanding importance, and some of which are discussed in detail elsewhere in this article. Only one bill—an amendment to the Farm Loan Act—failed to receive executive approval, being subjected to a pocket veto. Including the territories, 47 American legislatures held regular sessions during the year and there were also 43 special sessions. See **LEGISLATION** under the different States.

The Philippine Legislature which met on July 17 and was adjourned by Acting Speaker Paredes

on November 9, at midnight, leaving some 600 measures undisposed of, devoted most of its energies to discussions, within and without, of the Hawes-Cutting bill providing for gradual independence in about a decade. The bill was finally rejected by a decisive vote of more than three to one and the controversy is now transferred from the legislature to the hustings, as all of the Representatives and half of the Senators are to be elected in June and the campaign seems likely to be fought out on the same issue. The limit for legislative action on the bill expired, however, on January 17 and even if its insular advocates prevail in the coming election a new act of Congress will be required in order to effect their purpose. Meanwhile, Senate President Quezon, who successfully opposed the bill, spent the month of December in the United States working for a different measure. Other bills were passed by the legislature, however, including one for female suffrage which Governor General Murphy had recommended and promptly signed. It becomes effective in 1935—after the coming election. The Governor General signed altogether 38 of the bills passed and vetoed an unusual number. He is reported as dissatisfied with the legislative methods in vogue, especially that of holding back legislation until the last night, and to be planning corrective measures. His administration, thus far, seems highly efficient.

On October 30 a commission was appointed to revise Germany's seventy-five-year-old maritime law and included prominent representatives of the nautical callings, ship owners, fisheries, over-sea merchants and the sea coast towns.

PENAL LAW. Germany. A memorial by the Prussian minister of justice, Hans Karl, announces that legal experts have in preparation a penal code which will conform to the ideas of the Hitler régime. It is said to be "inoculated with Nazi ideology" and marked by "formal recognition of civilian Jewry, application of the unwritten law principle at the judge's discretion and punishment of 'race poison' as implied in mixed marriages with racial aliens," who are said to include Jews and colored persons. "State, family, and church receive a maximum of protection in the Reich" and even dueling according to the "code of honor" is recognized, except as it affects public safety.

Louisiana. An article in the *Virginia Law Review* (xix, 351), by Charles S. Lobingier, on "The Franco-American Codes," discloses that "the State which led all others of the western hemisphere in codifying civil law, has never yet codified its law of crimes." Perhaps for that reason Louisiana has provided more recent penal legislation than most of the States.

Act No. 120, abolishes the distinction, imported there from the common law States, between principal and accessory, penalizing as a criminal any one concerned in the commission of a crime, directly or indirectly and whether present or absent. Act 80 penalizes the possession of machine guns except by the military, guards, etc. Delivery of explosives is penalized in Act No. 199.

Act No. 215 penalizes both the completed and the attempted abduction of inmates of orphan, insane, and feeble-minded asylums.

Mexico. The new Penal Code purports to be based on the premise "that crime is the fault of society as well as of the criminal and that the aim is reformation and not vengeance."

Philippines have also a new Penal Code, enacted

after nearly 30 years of effort and agitation, and constituting a revision and adaptation to present day conditions of the Spanish *Código Penal*, extended to the archipelago in 1887. The new code comprises 367 articles and the Spanish terminology is replaced by English.

PENOLGY. Capital Punishment. An expression from President Roosevelt in November, favorable to the abolition of the death penalty, revived a discussion of that subject. Among other comments was an "open letter" from Donald Wilkie of California, formerly of the United States Secret Service, who cited crime records begun by his grandfather, 60 years ago, and wrote:

Figures prove the average careful murderer has 6 chances to 1 that he will never be arrested, 12 chances to 1 that he will never be convicted, and 121 to 1 that he will never die for his crime. . . . There is little need for a hue and cry against capital punishment.

After experimenting for several years with electrocution, declared neither "cruel" or "unusual" (*In re Kemmer* 136 U. S. 436) as a means of inflicting capital punishment, several States have now adopted "euthanasia" through the application of lethal gas. A constitutional amendment providing therefor was ratified in Arizona on October 3 and an execution in that form was to take place in Colorado late in the year but was stayed.

Prisons. Although the Wickersham Commission reported (No. 1) that "the prison has failed as an educational institution," the new "State Medium Security Prison" at Wallkill, N. Y., is designed to be just that; and throughout the year it "has been admitting trustworthy convicts from other prisons in a new experiment in criminal rehabilitation." It is built without surrounding walls (hence the name?) and provides technical training with various courses (e.g. in automobile engineering) "to fit its inmates for gainful employment." In contrast, a four-story surrounding wall encloses the new model penitentiary of Puerto Rico, which was officially opened on May 14, replacing the Spanish *Carcel* which had been occupied continuously since 1837. Of the 1058 prisoners, including 16 women, incarcerated in the new structure at its opening, some 250 worked on the interior, which contains a central *patio* covering an acre, with concrete walks, drives, and lawns and a sign in large letters reading *Bienvenido* (welcome)! Two new modern canneries are being constructed by the inmates of the North Carolina State Prison at Raleigh, each with a capacity of 20,000 (No. 2), or 35,000 (No. 10), cans. The lumber will be cut and dressed at the prison farms. In an address before the Anti-Crime Conference of the United States Flag Association at Washington on October 12, Attorney General Cummings announced the acquisition of the military prison on Alcatraz (Pelican) Island in San Francisco Bay, for the purpose of incarcerating certain dangerous types of Federal prisoners.

Alcatraz now has "secure cells" for 600; but a writer in the *New York Times*, under date of October 14, who seems to know his subject, denies that the isle is as "inaccessible" as the Attorney General believes, and suggests either San Clemente or Santa Margarita, islands "off the coast of Southern California" as "much better suited to the purpose." Professional penologists, however, seem generally opposed to isolated prisons. A recent product of practical research in penology is a study of 114 "Jails of Virginia,"

by Messrs. Hoffer, Mann, and House, three professors at the University of that State, for the Institute of Research in the Social Sciences. A chapter on "Some Implications of the Data and Procedure," contains highly suggestive conclusions regarding the reform of jails as well as of criminals. The Georgia penal system, "including the 'chain gang,'" was defended in an address at Valley Forge, Pa., on January 22, by James H. Gates, a divinity student and native of that State, who claimed that it was beneficial to convicts, despite the criticisms which afforded Governor Moore of New Jersey a ground for refusing extradition of a Georgia prisoner (see *INTERNATIONAL YEAR BOOK* for 1932, p. 435).

Austin H. MacCormick, assistant director of the United States Bureau of Prisons, was chosen by Mayor-elect LaGuardia as Commissioner of Correction for New York City. Engaged in prison work since 1917 his appointment seems a fitting, though tardy, recognition of the expert in penology.

REMEDIES AND PROCEDURE. The year has been quite fruitful in procedural reforms. The new procedure rules of the English Supreme Court (adopted by the "Rules Committee," consisting of eight judges and four members of law societies) were the result of long agitation and effort, for which laymen were largely responsible. The rules are designed for civil cases; but, except actions for defamation, false imprisonment, breach of promise, seduction, and fraud. They give the trial judge almost unlimited discretion to dispense with juries and witnesses (substituting referees and affidavits) and to limit appeals. The purpose is to expedite litigation and render it less costly for litigants, whose complaints in England have been long and loud. Notable in the same field, and utilizing the experience of the mother country, was the enactment by the Illinois General Assembly of the "Civil Practice Act," to take effect Jan. 1, 1934. It superseded the separate systems known as "common law" and "equity" practice which are coexistent with the State's legal history.

"*Discovery Before Trial.*" Such is the title of a notable work in the field of sociological jurisprudence, by George Ragland, Jr. of the Chicago bar, appearing in 1933 under the auspices of the Michigan State University's Legal Research Institute, and reviewed in the *New York Times* of March 26. It describes a relatively new reform, now in vogue in England and several American States.

This is an adaptation of the ancient, chancery remedy of "discovery" which Justice Cardozo recently construed in *Sinclair Refining Co. v. Jenkins et al.*, 289 U. S. 689, holding it available for the ascertainment of damages in an action at law. The adapted remedy is incorporated into the Illinois Civil Practice Act, above discussed.

Adoption of this remedy by the several States has been rendered easier by the Supreme Court's decision in *Bevan v. Krieger*, 289 U. S. 459, upholding the power of a notary public to commit for contempt a witness who, in giving his deposition, refuses to answer a question. The Nebraska Supreme Court had so decided in *Dogge v. State*, 21 Neb. 272; but other State courts had held to the contrary.

Habeas Corpus. This ancient remedy of the English law was granted by Justice O'Byrne of the Irish Free State High Court to release Gen. Owen O'Duffy and his companion, Capt. John

Sullivan, from Arbour Hill military prison, where they had been detained following their arrest at a political meeting in Westport. However, instead of issuing an order and requiring its return, the Justice peremptorily ordered their release.

This was somewhat of a departure from the usual procedure and was doubtless designed to expedite the release; but it is evident from the proceeding as a whole, where English precedents were freely cited and followed, that, whatever may be the political relations between the two countries, the common law of England is still in force in Ireland. Even more interesting was the news earlier in the year that *habeas corpus* had been virtually adopted in France, except in cases involving expulsion and extradition; five days being the limit of detention without trial except of recidivists, vagabonds, and dangerous characters.

Injunction should not be granted against a permanent public nuisance, such as a sewer system, if the alleged injury can be compensated for in damages, the Supreme Court held in *Harrisonville v. W. S. Dickey Co.*, 289 U. S. 334.

Mandamus is a remedy whose allowance is, to some extent, discretionary and was held in *U. S. v. Dern*, 289 U. S. 352, to have been properly denied where the effect would have been to increase the government's cost of constructing a parkway.

Venue. In the new Illinois Civil Practice Act, all personal, civil actions may be instituted in the county of defendant's residence or in that where the transaction, or a part of it occurred, out of which the cause of action arose. Previously, defendant might be sued in any county where he might be found, even temporarily.

Parties. An unincorporated association is not entitled as such to bring a suit against the United States, was the ruling in *Moffat Tunnel Leaguc v. U. S.*, 289 U. S. 113. "The right to appear (before the Interstate Commerce Commission) or to intervene in a suit brought by another, is to be distinguished from the authorization to bring suit," said Justice Butler in the unanimous opinion.

In *George Moore Ice Cream Co. v. Rose*, 289 U. S. 373, it was held that the collector of internal revenue, being merely a formal party to a claim for income tax refund ("an anomalous relic of bygone modes of thought," wrote Justice Cardozo in the opinion) would "not be heard to object that there has been a denial of due process in enlarging the liability to be borne by some one else"—i.e. the Government.

Pleading. "Any one interested in procedural simplicity will hail with delight the opinion of Mr. Justice Cardozo in *U. S. v. Memphis Cotton Co.*" 288 U. S. 62, writes Professor Arnold of Yale Law School in the *American Bar Association Journal* (xix, 215).

There "the Supreme Court takes a practical and pragmatic attitude" on the question whether a claim for income tax refund, amended, after the filing limit had expired, so as to supply omitted statements of grounds, was barred. It was decided in the negative and the rule was reiterated in *Bemis Bros. Bag Co. v. U. S.*, 289 U. S. 28; *U. S. Factors etc. Co. v. Rose*, 288 U. S. 89; and *George Moore Ice Cream Co. v. Rose*, 289 U. S. 373. Under the new Illinois Civil Practice Act, as under the American codes of procedure generally, there is but one form of civil action which is commenced by filing a "complaint" (in place of the former "declaration" or "bill"),

to which defendant may "answer"; and to the latter, if defendant files a counterclaim, plaintiff may "reply." The "demurrer" is abolished (in Illinois, following England) and defects, both of substance and form, must be raised by motion, specifying the grounds relied upon.

Process. In *Washington v. Super. Ct.*, 289 U. S. 381, the Supreme Court upheld service of process on a foreign corporation by "handing a copy to an assistant secretary" of State, even after the corporation had been dissolved in the State of its origin. The new Illinois Civil Practice Act makes general the simpler method of serving process, long followed in equity cases, by leaving a copy of the writ, either with the defendant, personally, or at his usual place of residence, with some person of discretion.

Removal of Causes. In *Puerto Rico v. Russell and Co.*, 288 U. S. 476, which was an action to recover insular taxes, it was held that the respondent, a *sociedad in comandita* (the equivalent in Spanish law of a corporation) was not entitled to have the cause removed from the insular to the Federal Court on account of the non-residence of its members nor on the theory that it was one arising under the laws of the United States; being rather an action by the territory under its own laws.

Criminal Procedure. On February 24, President Hoover approved Public Law 371, giving the Federal Supreme Court "the power to prescribe, from time to time, rules of practice and procedure with respect to any or all proceedings after verdict in criminal cases in district courts of the United States, including . . . the United States Court for China" and those of the Territories, etc. Chief Justice Hughes announced before the American Law Institute on May 4, that "in responding to this grant of authority, the court will welcome the assistance of the bench and bar." While covering but a limited phase of Federal criminal procedure, the grant is a step in the right direction and should lead eventually to the formulation of rules by the same tribunal, not only for all criminal proceedings but for all civil ones as well.

Act No. 153 of Louisiana permits joinder in one indictment of several crimes arising from the same continuous act. Chapter 1954 of the Rhode Island acts, specifies formal defects which will not vitiate an indictment; e.g. it is no longer necessary to allege malice nor the means, time, or place of committing the crime, unless they are essential elements thereof.

Evidence. Under date of June 24, Robert E. Whalen in the *New York Times* asked

Is it not time for Congress . . . to do away with an abominable rule, for which not even its three centuries of age can command respect . . . which bars a man or his wife as a witness for or against the other?

But it proved unnecessary for Congress to do for the Federal courts what the State legislatures had already done for the State courts; for on December 11, the Supreme Court in *Funk v. U. S.*, 290 U. S.—abrogated the rule in criminal cases.

But for Amendment V of the Federal Constitution, which provides that "no person . . . shall be compelled, in any criminal case, to be a witness against himself," the doctrine above announced would seem to justify the court in discarding also even this "hoary rule." The constitutional clause just quoted binds only the Federal courts; but many State constitutions

likewise contain it and in California, a movement said to be "supported by former President Hoover and a number of educational organizations" has been launched to eliminate the clause from the constitution of that State. Certainly "adaptation to the successful development of the truth" can hardly be claimed for a rule which forbids the State to ascertain the facts concerning the commission of a crime from the one who usually knows most about them. In *Quercia v. U. S.*, 289 U. S. 460, the court again discussed evidence and procedure in criminal cases, reviewing a sentence of the late Judge Lowell, in a prosecution under the narcotics act, where he told the jury:

What I think of the defendant's testimony. You may have noticed . . . that he wiped his hands during his testimony. It is rather a curious thing; but that is almost always an indication of lying. Why it should be so we don't know; but that is the fact. I think that every single word that man said, except when he agreed with the government's testimony, was a lie.

Reversing the sentence, in an unanimous opinion by the chief justice, the Supreme Court, while reiterating that

In a trial by jury in a Federal court, the judge is not a mere moderator, but is (its) governor for the purpose of assuring its proper conduct and of determining question of law,

declared:

The trial judge did not analyze the evidence; he added to it and based his instruction upon his own addition. . . . This was error and we cannot doubt that it was highly prejudicial.

Under Louisiana Act No. 136, insanity is a condition to be ascertained by the judge upon evidence, expert and non-expert, instead of being left to a non-judicial board, applying its own knowledge. Just at the turn of the year two conflicting decisions were rendered as to the admissibility of blood tests of paternity. On December 29, in *State v. Damm*, the South Dakota Supreme Court rejected them; while three days later in the affiliation case of *Beuschel v. Manowitz*, Supreme Court Justice Steinbrink of Brooklyn, in an exhaustive opinion, citing scientific works and a judgment of the Italian Court of Cassation, held that blood tests were admissible in evidence in such cases, though not conclusive.

United States Department of Justice. On February 23, the cornerstone of this department's new building, on the south side of Pennsylvania Avenue, between 9th and 10th Streets, was laid by President Hoover, who, in his address, expressed the layman's view by saying that "a chief glory of our nation is our system of laws." There are experts who think it needs considerable improvement in order to become "our chief glory." Attorney General Mitchell declared that "this building will be a model of economy."

The Attorney General announced that "the Department had 1026 employees at the seat of government with a monthly payroll approximating \$200,000." This, however, was but a small part of the \$52,000,000 which Congress appropriated for the Department for 1932—the largest expenditure ever made for it. The new Attorney General, Homer S. Cummings of Connecticut, announced on April 25, that of the \$41,550,000 appropriated for next year, \$8,500,000 would be saved. The Attorney General's most intensive effort thus far has been made to meet the crime situation and he delivered a notable address before the American Bar Association on the evening

of August 31 at Grand Rapids, Mich., on "Modern Tendencies and the Law."

CONSTITUTIONAL AND PUBLIC LAW. AMERICA, UNITED STATES OF. Amendments of the Federal Constitution. *The Twentieth Amendment* (1932 YEAR BOOK, 442) was ratified early in the year, the 36th State (Missouri) acting on January 23, about ten and a half months after submission. Later all the remaining States joined in ratifying, making this the first unanimously adopted amendment. Moreover, only two previous amendments (12th and 13th) were pending for a shorter period. The 20th Amendment, by its terms, came into force on October 15 and, for the first time since the government was organized, there was no session of Congress in December.

Twenty-first Amendment. (See also REFERENCE.) The amendment to repeal the 18th Amendment was submitted on February 23, when the Senate approved it, the House having done so in the previous month. Besides the repeal section, it provides for protecting the States which remain "dry." The first State to ratify was Wisconsin, voting in April. Between that date and November 7, no less than 31 other States voted and all favored ratification. On the last named date, which was the regular election day, seven more voted and five ratified, while two—the Carolinas—rejected the proposal. But as more than the required 36 had approved the amendment it was proclaimed in force on December 5, the date when the conventions of the last ratifying States took action.

Probable Twenty-second Amendment. What is known as the "child labor" amendment had a curious recrudescence during the year. Submitted by action of the Senate on June 3, 1924, it contained only the following provisions.

- Sec. 1: The Congress shall have power to limit, regulate and prohibit the labor of persons under 18 years of age.
- Sec. 2: The power of the several States is unimpaired by this article, except that the operation of State laws shall be suspended to the extent necessary to give effect to legislation enacted by the Congress.

It will be seen that no limit is imposed, as in most of the later submitting resolutions, as well as in that submitting the 18th Amendment, within which the State legislatures must act thereon. The result was that it remained pending for more than eight years, during which only six legislatures approved it while 24 voted in the negative. This appeared to insure its defeat and in fact it was virtually given up by its friends. But as the depression deepened and youth sought employment to help in family support, taking the places of adults, the latter began to view the proposal in a new light and to advocate it for their own protection instead of the child's as was originally intended. Thus, while the National Recovery Act limited the scope of child labor, the idea of self-preservation seems to produce a reversal of popular opinion and a conviction that no opportunity must be lost to suppress this new form of competition. Hence during 1933 no less than 14 State legislatures ratified the proposed amendment, 12 of which had previously rejected it. With nine State legislatures to meet in 1934 adoption of the amendment early in 1935 now seems probable. See CHILD LABOR.

Other Proposed Amendments. A monograph by Charles S. Lobingier entitled *Obsolete Features of Our Federal Constitution* was recently issued as Senate Document No. 100, 73d Cong., 2d

Sess. It discusses the proposal of Senator Norris and Representative Lea to abolish the electoral college; the proposal of Senator Pope of Idaho to provide the popular ratification of future constitutional amendments; and the proposal of Senator McCarran of Nevada to authorize the President to veto separate items of fiscal measures. The first has already received the approval of a House committee and of a Senate sub-committee and the supporters of all three promise active campaigns in their behalf during the present session.

Immigration (q.v.) and Naturalization. On April 15 Secretary Perkins revoked, without explanation, Secretary Doak's order for finger printing all newly arrived aliens. The original order had resulted from numerous recommendations, as a safeguard against fraudulent entry. But the courts appear not less inclined to construe it so as to effect the purpose for which it was designed. Thus in *U. S. v. Smith*, 289 U. S. 422, it was held that the reentry of an alien who had pleaded guilty to the crime of counterfeiting in this country, was an "entry" within the prohibition of the 1917 Immigration Act and justified the alien's deportation as an undesirable. Perhaps even more drastic was the decision of the 9th circuit Court of Appeals in *Taguchi v. Carr*, 62 Fed. Rep. (2d), 307, that a Japanese who had entered this country illegally and remained some 13 years, after which, while employed on an American fishing boat, which was shipwrecked, he was obliged to land on a foreign shore, could not reenter the United States. The National League for American Citizenship reports an increase in the requests for aid in effecting naturalization. Out of a group of 26 aliens recently receiving certificates of citizenship in Washington, almost one-third were natives of Italy. A new act passed by the Mexican Congress provides that any child born in that country is a Mexican, regardless of the parents' nationality but that a child born abroad of Mexican parents is also Mexican.

Interstate Commerce. The "National Industrial Recovery Act" (Public Law No. 67) approved June 16, has been called the "keystone statute in 'the new deal.'" Its objectives, as recited in its first section, are comprehensive and far-reaching, viz. to remove obstructions to the free flow of interstate and foreign commerce, to promote the organization of industry for cooperative action among trade groups, to secure united action of labor and management under adequate governmental sanctions and supervision, to eliminate unfair competition, to promote full utilization of industry's productive capacity, to avoid, except temporarily, undue restriction of production, to stimulate consumption by increased purchasing power, to reduce and relieve unemployment, to improve labor standards, to rehabilitate industry and to conserve natural resources. It will be seen that the promotion of commerce is placed at the head of this long list of objectives; it is in fact the only one which justifies legislation of that character by Congress; all the others are accessory thereto. Whether all of its provisions square with the commerce clause of the constitution is a question which was raised soon after its passage. Attorney General Broderick of Michigan declared that "no court will mutiny or attempt to scuttle the NRA ship by injunction." But Judge Samuel H. Sibley, of the United States District Court at New Orleans, asserted that "if

the NRA offends against the cherished constitution, there are judges everywhere who, with the courage of sworn duty, will so declare." The act requires Federal district attorneys to apply for injunctions against violations of it and several such applications have already been made. One of them was in *U. S. v. Bazemore*, Fed. Rep. (2d) wherein, on December 2, Judge Akerman of the United States District Court for the Florida district, denied an injunction to prevent a cleaning and dyeing operator from reducing his prices below the code limit. The grounds of the ruling were that the business was "purely intrastate" and "that no emergency exists which would justify Congress in attempting to regulate" it. Doubtless this ruling will eventually be reviewed by the Supreme Court and speculation as to the outcome has already begun.

Candor demands (from a writer in the *A. B. A. Journal*, XVIII, 483) the admission that for the statute and the codes to be sustained in their entirety, requires a change of attitude on the part of the Supreme Court, no less revolutionary than the legislation itself.

But another (*Temple Law Quar.*, viii, 14) found "from an examination of the cases, that the . . . act may be sustained as a valid attempt to foster and safeguard interstate commerce."

Radio Law. The power of Congress to regulate radio communication was assumed as part of its power over interstate commerce in *Federal Radio Commission v. Nelson etc. Co.*, 289 U. S. 266, which upholds the amended radio law and declares the court acting judicially, and not merely administratively, in reviewing the commission's findings; which, in the case before it, were left undisturbed as resting on substantial evidence. Courses in radio law are now offered in five law schools, viz., those of the National, Catholic, Columbus, Marquette, and South Carolina Universities.

Interstate Controversies. (See also *Extradition*.) In the case of *Vermont v. New Hampshire* (1931 YEAR BOOK 457), Special Master Trabue filed his report in January with the Supreme Court, recommending that the boundary between the two States be fixed at low water mark of the Connecticut River on the Vermont side. That State had contended for the centre of the stream as the boundary (which is the usual one in such cases); New Hampshire claimed it as the top of the west bank and its Attorney General filed a new brief, arguing that low water mark is too indefinite, since it may mean either the bank or the bed of the stream. On May 29 the Supreme Court rendered its decision (289 U. S. 593), adopting the Special Master's report, including his definition of low water mark, which Justice Stone fortified in an exhaustive opinion, reviewing the provincial grants and subsequent legislation. This disposed of a case which had been pending since 1915 and a controversy which arose long before.

On October 9, Special Master Rawle of Baltimore filed his report in the case of *New Jersey v. Delaware*, involving the boundary between those two States. The report recommended the recognition of the latter's title to the Delaware River and all lands therein within a 12 mile circle around Newcastle, and of New Jersey's claim that below the circle, the boundary should be the centre of the ship channel and not that of the river and bay. According to the latter's Attorney General, the report "preserves to New Jersey some 60,000 acres of (the ship John Light)

oyster grounds." The recommendation is based partly on a conveyance in 1682 by the Duke of York to William Penn; but the decree in *Gibbons v. Ogden*, 9 Wheat. (U. S.) is also claimed to sustain it.

The States of Wisconsin, Minnesota, Ohio, and Michigan having applied to the Supreme Court to compel the performance of its decree of Apr. 21, 1930 (*Wisconsin v. Illinois*, 281 U. S. 179), requiring the construction of works and facilities to prevent the lowering of Lake Michigan's water level, the cause was referred to Edward F. McClenen as Special Master who found "a total and inexcusable failure (on the part) of the defendants." The court then entered a new decree requiring the State of Illinois

to take all necessary steps . . . to preclude any ground of objection on the part of the State or of any of its municipalities to the reduction of the diversion of the waters of the Great Lakes-St. Lawrence system or watershed.

A tri-State controversy involving Colorado, Wyoming, and Nebraska, relative to the head waters of the North Platte River, has occasioned a boycott of Colorado products in Wyoming. Meanwhile, riparian owners in Nebraska are establishing priority rights to the waters by actual appropriation thereof. The situation somewhat resembles that of the States dependent upon the Colorado River, whose difficulties, according to Professor McBride of the University of California, are largely

due to the fact that, when State lines were drawn, geographical factors were completely ignored. Territory directly dependent upon the river was divided into seven different political units which have never been able to get together on the utilization of the river's water power. They are paying the penalty for disregard of natural geographical boundaries.

Local Government. The District of Columbia, when originally organized, consisted of two counties; but all subdivisions have long been discarded and the district authorities are looking to Congress to relieve it of many obsolete statutes, inherited from colonial Maryland, by repealing them. Following Virginia's example (1932 YEAR BOOK, 443) the Ohio voters adopted a plan to reform county government. Several other States, including Georgia and Tennessee, now provide for the consolidation of counties and it is beginning to be realized that the present county system not only imposes an enormous burden of needless taxation, through its duplication of functions and multiplicity of offices, but is extremely artificial. As was recently pointed out by Justice Roberts in *Jaggett v. Lee*, 288 U. S. 534:

There is no more reason for adopting the county line as the measure of the tax, than there would be for taking ward lines in cities, or arbitrary lines drawn through the State regardless of county boundaries

And now comes a candidate for governor in Arizona who has announced as part of his programme the abolition of counties. So the extension of Federal activities, especially at the recent special session of the 73d Congress has called attention to the artificiality of State, as well as of county, boundaries. For the promotion of such activities, the unit is no longer the county, nor even the State, but a "region large enough to have a valid and diversified economic basis." (Wallace, *Our Obsolete Constitution*, 185.)

A proposed law has been initiated in Nebraska reducing the legislature to a unicameral body of 25 in accordance with the views of Senator Norris.

Police Power. This is "the least limitable" of all the powers of government, wrote Chief Judge Pound in *People v. Nebbia*, 282 N. Y. 259, upholding the milk control law (1933 c. 158), enacted by the New York legislature, fixing minimum prices and otherwise regulating what had theretofore considered a strictly private business.

There was a dissenting opinion by Justice O'Brien and the case is to be reviewed by the Federal Supreme Court. That tribunal decided in *Public Service Co. v. Utilities Co.*, 289 U. S. 130, that a State may prohibit a service corporation from reducing its rates below cost, in order to eliminate competition; and in *Stephenson v. Binford*, 298 U. S. 251, it upheld the Texas act regulating the use of motor trucks on public highways and subjecting them to control by the State railway commission.

Public Officers. The case of William E. Humphrey of Washington State, who was reappointed Federal Trade Commissioner by President Hoover in 1932 for a term of seven years, raised in a new form the question of the President's power of removal. On July 25 President Roosevelt wrote Commissioner Humphrey asking for his resignation but congratulating him on his "long and active service." The commissioner in reply merely asked "a reasonable time in which to consult my friends in regard to future actions" and the President gave him until August 15. The commissioner then, for the first time, denied the President's right to remove him and, after further exchange of letters, removal was formally announced on October 7. Later the Comptroller General sustained the President in denying salary to Humphrey after his removal had been declared; but the courts have yet to pass on the precise question involved. The President's advisers rely on the Taft opinion (much of which was *dicta*) in *Myers v. U. S.*, 272 U. S. 52, and from which three of the justices (including Holmes and Brandeis dissented); but Humphrey, in one of his letters, pointed out that the statute there construed involved postmasters only, while that creating the Federal Trade Commission, authorized removal "for inefficiency, neglect of duty, or malfeasance" and that none of these was suggested. Humphrey sued for salary on December 28, thus raising the whole question of the validity of his removal. On July 12 President Roosevelt signed an executive order requiring all applicants for postmasterships to take civil service examinations, unless they are already in that service or hold commissions. The order affected over 15,000 first, second, and third class postmasters, those of the fourth class being already under civil service regulations. Announcement of the order was accompanied by a statement that legislation would be asked to make it permanent.

The proposal that personnel records now kept by the Civil Service Commission, and indispensable to its proper functioning, be kept hereafter by the various departments and independent offices, is opposed by the Commission itself and by the National Civil Service Reform League.

Reorganization of government bureaus and agencies was attempted, after slight efforts by his predecessor, by President Hoover near the close of his term, pursuant to an act of the 72d Congress. That act required the approval of Congress itself before such an executive order could become effective; and the approval was never

given. A new act was passed by the 73d Congress (special session) authorizing the President "to group, coordinate, and consolidate executive and administrative agencies" and to reduce, transfer, or abolish them, reporting to Congress but not needing its approval. Under this authority, President Roosevelt, on June 10, reported certain changes which became effective on August 9, including the transfer of the Prohibition Bureau's functions to the Bureau of Investigation and Internal Revenue, respectively; absorption of the Shipping Board by the Department of Commerce and of six building commissions by the Interior Department and merger of the Bureau of Immigration and Naturalization. The savings thus effected were claimed not to exceed \$5,000,000, annually; but the act remains in force until Mar. 1, 1935 and further changes thereunder are promised.

Taxation. (q.v.) A sales tax was adopted in certain States (notably Illinois and Michigan) and there is much complaint of double and conflicting taxation. An "interstate legislative assembly," called by the American Legislators' Association, met in Washington February 3 and 4, listened to a number of papers dealing with tax problems and provided for a continuing committee to study them and report a solution. A special committee of the American Bar Association presented a report at the Grand Rapids meeting containing a number of recommendations which were adopted by the association. Especially have gasoline and motor vehicles become favorite objects of taxation in which "the trend . . . has been towards increasing amounts on the truck, still larger increases on the commercial, contract, and common carrier, with comparatively little increase in levies upon the private pleasure car." In *Nashville etc. R. Co. v. Wallace*, 288 U. S., 249, the court upheld a Tennessee statute imposing a tax on gasoline stored in the State though eventually intended for interstate commerce; and the question was held properly raised on an appeal from a decree denying relief to a taxpayer in the form of a declaratory judgment.

Another favorite subject is the chain store. A Florida statute, imposing a license fee on retail stores, but exempting those exclusively handling petroleum products, exacting more for each store over one, but not over 15, and much more if located in different counties, was upheld by the State supreme court (104 Fla. 609) whose judgment, however, was reversed by the Federal Supreme Court (which treated the license fee as a tax), in *Liggett Co. v. Lee*, 288 U. S. 517 (distinguishing *State Board v. Jackson*, 1931 YEAR BOOK, 457) on the ground that there was no reasonable basis of the classification. Justice Brandeis dissented in an elaborate opinion in which Justice Stone concurred. In *Williams v. Baltimore*, 289 U. S. 236, the court declined to interfere with a legislative exemption from taxation of a railway in receivership, no constitutional inhibition having been found. For said Justice Cardozo, "it is not the function of a court to determine whether the public policy that finds expression in legislation of this order is ill or well conceived."

ANDORRA. In 1933 for the first time in history the bishop's feudal dues of cheeses, chickens, and hams, were withheld, and a provisional Council General named by the *viguers* (French appointed magistrates) refused to serve. A visit of the bishop in November, seemingly recognizing the

new constitutional status, appears to have had a conciliatory effect. Steps have since been taken to provide a militia which every able bodied male must join. The Spanish government has not attempted to interfere in the situation. See **ANDORRA**.

BRAZIL. This republic has heretofore functioned under its original constitution of Nov. 15, 1889. On Nov. 16, 1933, a convention assembled at Rio de Janeiro, one of whose avowed purposes was to adopt a new constitution. See **BRAZIL under History**.

BRITISH COMMONWEALTH AND EMPIRE. *Australia.* The state of Western Australia voted, in April to secede from the Australian Commonwealth, but no further steps appear to have been taken.

India. Outlines of a new constitution for all India, culminating a formative period of nearly six years were published during the year. See **INDIA under History**.

Ireland. Bills before the Dail, sponsored by the De Valera government, to amend the Free State constitution by abolishing appeals to the Privy Council, and terminating the office of governor general, led to a statement in Parliament by Colonial Minister Thomas on November 14, that such legislation conflicted in important respects with the Anglo-Irish treaty of 1921. See **IRISH FREE STATE under History**.

Newfoundland. That dominion status is not necessarily permanent was demonstrated by the passage in December of a parliamentary act enabling the British government to take charge of Newfoundland's finances in a manner similar to that of handling a crown colony. See **NEWFOUNDLAND under History**.

CUBA. A presidential decree, published in the *Gaceta Oficial* of September 20, declared that a national constituent assembly, elected by direct popular vote in April, 1934, for the organization of the republic, will convene at the capitol on May 20. See **CUBA under History**.

GERMANY. On March 23, the newly elected Reichstag, by a vote of 441 to 94, passed the "enabling act" which confers on the Hitler cabinet, the power to "decree" laws even when they "deviate from the (Weimar) constitution." See **GERMANY under History**.

MEXICO. On March 20, the Congress voted unanimously to submit a proposed constitutional amendment prohibiting the reelection of a president of the republic or the governor of a state. See **MEXICO under History**.

URUGUAY. Elections for a constituent assembly of 284 members were held on June 25 and that body met at Montevideo on the national holiday, two months later. See **URUGUAY under History**.

POLAND. Outlines of a new constitution, the result of several years of work, were announced at a meeting of the government party on December 15. See **POLAND under History**.

SPAIN. On May 17, the Cortes, by a vote of 278 to 50, enacted into final form the "congregations law" (1932 YEAR BOOK, 440). It nationalized church property in an estimated amount of \$500,000,000, and while it does not suppress the religious orders, it subjects them to state control. Monks and nuns were required to cease teaching after the year's end. See **SPAIN under History**.

PRIVATE LAW. CONTRACTS. What is characterized by a none too friendly critic as an "important event in our law, deserving of the most careful and intelligent appraisal," and by Chief Justice Hughes as rendering "the past year . . .

the most notable in the annals of the (American Law) Institute," was the publication by that body of the "Restatement of the Law of Contracts." Prepared under the supervision of Prof. Samuel Williston of Harvard Law School, a recognized authority on the subject, and with eight associates, all law school professors, and representing a decade of labor, discussion, and criticism, it is unique among legal treatises and has rightly been termed "a new kind of law book." Published in two volumes, the "Restatement" comprises eighteen chapters, each divided into "topics" and these into sections, of which there are 609, each containing, in black letter, a statement of the legal rule, in the style of a code, and usually followed by comment or illustrations; but "unmarred by the citation of a single authority." The work is too comprehensive to permit of detailed treatment here; but it should be mentioned that already the critics are at variance regarding its merits. Dean Clark of the Yale Law School, declares in the March number of that institution's *Journal*,

Actually the resulting statement is the law nowhere and in its unreality only deludes and misleads. It is either a generality so obvious as immediately to be accepted, or so vague as not to offend, or of such antiquity as to be unchallenged as a statement of past history.

He also stresses the cost which, he says, "together with its State annotations, will be, it seems, in excess of \$400,000 or \$650 per section." He proposes,

(1) Such modification of the Institute's formula of expression of its restatements as will release the work of the experts and (2) such encouragement and preservation of the writings of individuals concerning the Institute's work, as may, through careful planning, be found feasible.

President Wickersham of the Institute published in the *A. B. Journal* (xix, 660) what was virtually a rejoinder.

One form of contract has become so familiar to us that many fail to realize how widely the law governing it has been reduced to written form. This is the "negotiable instrument," now subject to a uniform statute in every jurisdiction under the American flag, Puerto Rico having been the latest to adopt it. The same statute has been reenacted in the Republic of Colombia. On Sept. 15, 1932 (too late to obtain the necessary data for insertion in the 1932 YEAR BOOK) a new law governing "Negotiable Instruments and Credit Operations," came into force in Mexico. Its provisions are summarized in the *A. B. A. Journal* (xix, 250) by Phanor J. Eder.

The Anglo-American law of sales has practically always embodied the maxim, *caveat emptor*—let the purchaser beware;—but the Securities Act (Public Law No. 22) of the 73d Congress, substitutes therefor, to some extent the Civil Law maxim—*caveat venditor*. The act requires a full disclosure of the security's nature and of the persons offering or sponsoring it and gives the purchaser a right of action against them for "an untrue statement (or omission) of a material fact." Fine and imprisonment are likewise imposed for such acts and the law is to be administered by the Federal Trade Commission. Overruling on November 25, the motion of Brown and McCarthy to dismiss the indictment against them for fraudulently using the mails, Judge Woolsey of the United States District Court sitting in New York City, likewise applied the maxim, *caveat venditor* and condemned "stock 'touting'

by operators of pools through 'wash' sales, hiring customers' men, publicity agents, etc."

Acts providing a moratorium in some form for mortgages, were passed in Arizona (ch. 29), Arkansas (act 57), Iowa, Kansas, Minnesota, Montana (S. No. 72), Nebraska (H. R. 600), Oklahoma (S. B. 76), and Wisconsin (ch. 11). In New Jersey (ch. 82), the amount of the deficiency may be contested by the mortgagor, while in South Dakota (S. B. 21) deficiency judgments are permanently prohibited. In Minnesota the act was upheld by the State supreme court (one judge dissenting). The Federal Supreme Court granted a writ of *certiorari*, but later affirmed the judgment. (*Blaisdell v. Minnesota*, 290 U. S.—) The President's order of April 5, prohibiting the retention by any individual, or corporation, of gold or gold certificates, is discussed with reference to its effect on obligations payable in gold (which the debtor is unable to procure) by Professor Hanna of the Columbia Law School in the *A. B. A. Journal* (xix, 349). The order itself is based on the act of Congress of March 19, whose constitutionality is assailed.

Attorney General Mitchell, addressing a group of New York (mostly corporation) lawyers, utilized the opportunity to offer what was virtually an apology for attempting to enforce the Sherman anti-trust law, forbidding agreements in restraint of trade. A few more decisions like that in *Appalachian Coals Inc. v. U. S.*, 288 U. S. 344, would have relieved him of his embarrassment. In the opinion therein by Chief Justice Hughes, McReynolds J. dissenting, the court reversed a decree enjoining, as in restraint of interstate commerce, a combination of numerous coal producers, creating an exclusive selling agency by which competition among themselves was eliminated. The Chief Justice holds that the Sherman Act does not apply, although its purpose is to prevent undue restraint of interstate commerce.

The American Bar Association's committee on commerce commented:

Since the decision in the Trenton Potteries case, lawyers have been prone to say that price fixing agreements . . . are in and of themselves unlawful. The Appalachian Coals case seems to deny the correctness of this interpretation.

And as if this were not enough, the N. I. R. A. appears in some of its provisions to repeal parts of the Sherman act.

CORPORATIONS. In an address before the Illinois State Bar Association, on June 21, Professor Johnson of the university of that State discussed "Recent Judicial and Legislative Trends in Corporation Law," which he found to include a stricter view of corporate directors' liability, looking beyond the corporate form to the reality, protection of minority stockholders, greater liberality as regards intercorporate relations and efforts toward restatement or codification of corporation law. The latter is well illustrated in California, where a revision of the statutes relating to corporations, largely accomplished under the leadership of the State Bar Association (*A. B. A. Journal*, xix, 679) was finally completed during the year and became effective August 21.

DOMESTIC RELATIONS. The Scandinavian countries appear to be about the only ones disclosing an increase of marriages; and they have the simplest and most advanced marriage law (1932 YEAR BOOK, 444). Elsewhere a declining mar-

riage rate and a rapidly rising divorce rate, have resulted in a diminishing birth rate and created problems which the various nations have attempted to solve in different ways. Thus, in the Irish Free State, after a temporary rise from 1894 to 1920, there has been a steady decline since in the number of marriages which the government has sought to check by making substantial increases in the salaries of its clerks of both sexes, upon their marriage, with an additional sum for each child. Similar provisions have been enacted in France and Italy and in the latter there is a tax on bachelors, from which a small dowry is provided for each bride. In the Arab state of Hedjaz, it is proposed to require marriage of every person over 15. Czechoslovakia has raised the minimum marriage age to 16 while even India has recently fixed it at 14. Turkey has prohibited the old style, religious wedding and substituted a brief civil ceremony. In South Carolina, where marriage licenses were not required until 1911, couples married prior to that date may appear before the judge of probate with two witnesses of their marriage who will make affidavit thereto, and thus obtain a certificate, bearing the wedding date and affording *prima facie* evidence of the marriage, which is often important, e.g. in property matters, inheritance, etc. The certificate heretofore required of applicants for a marriage license in North Carolina, has been eliminated and an affidavit by the male applicant that he has been free from tuberculosis and social diseases for two years, is now sufficient. A bill to legalize "common law" (unsolemnized) marriages and to treat as bigamous a party thereto who remarries, was introduced into the Puerto Rican Senate on March 31. In June, the court of appeals at Milan, Italy, affirmed a decision of the court of first instance denying the claim of Maddelina Michel for services as a matchmaker in promoting the marriage of Leone Calleoni, former assistant manager of a hotel in Rome, with Miss Ann Murdock, an American actress.

This harmonizes with Anglo-American law which treats acts of the latter class as opposed to public policy. A bill introduced into the New York State Senate, would abolish the action for breach of promise to marry and forbid the courts to entertain such an action. This likewise harmonizes with the views of the eminent American commentator, James Schouler. (See Lobingier, "Lex Christiana," *Georgetown Law Journal*, xx, 171 n.

Sterilization. This method of preventing the perpetuation of the criminal and diseased classes has long been advocated by social reformers and is actually in vogue in certain American States. A law providing for it in Germany was enacted during the year and became effective Jan. 1, 1934. Under it some 1700 "hereditary health courts" will function throughout the country subject to an appeal to the "supreme hereditary health court." Besides the sterilization of "dangerous sex criminals" the law provides for it in case of any one of nine hereditary diseases, ranging from "feeble-mindedness" to "chronic alcoholism" and including blindness and deafness. Every physician is required to report all such cases within his knowledge and the patient may escape sterilization only by entering an institution for life at his own expense. Some estimate that about 400,000 will be affected. Both the Pope and the German Cardinal, Bertram, have protested against the application of the law; but a sentence there-

under, by consent, was imposed as early as December 6. A similar law was promulgated by the Senate of the free city of Danzig as early as December 1.

Birth Control advocates were active toward the year's close in support of a bill pending before the lower house of Congress, to amend the Federal penal code by permitting the dissemination by licensed physicians and institutions, of information regarding their favorite project. Such advocates would find little to do in Greensburgh, N. Y., where, with a population of 3600, there were no births (although 20 deaths and 41 marriages took place) during the month of June.

Divorce. In contrast with the birth rate, the divorce rate shows an alarming increase. From a ratio of less than one divorce for every 20 marriages, in 1888, the American rate has risen to about one for every five. Moreover, only a small portion of these (about 11 per cent) are contested. A similar situation appears in England; for at the opening of a London court early in the year no less than 618 undefended divorce actions were pending. During the first year of Spain's divorce law (1931 YEAR BOOK, 455), as many as 4500 divorces were granted, of which 1300 were in Barcelona and 800 in Madrid. Meanwhile the trend toward freer divorce likewise continues. In North Carolina where a separation for five years was a sufficient ground for divorce (1931 YEAR BOOK, 455), the period has now been reduced to two years, and relief may be obtained by either party even where there are children. In Delaware, a law was enacted authorizing divorce after 60 days' residence in the State. The Nevada law (1931 YEAR BOOK, 455) was construed in a decision rendered on July 13 at Reno, by District Judge Walsh, to require of plaintiffs in divorce proceedings a *bona fide* intention to reside indefinitely in the State, following the rendition of the decree. "Merc proof of physical presence here for six weeks," he said, "does not establish this intention." In Colorado, the practice of granting divorce decrees automatically, six months after an interlocutory decree, has been substituted for that of waiting for plaintiff's application, which is often never made, leaving the case still pending.

In Chile, the radical party of the Congress presented a divorce bill at the 1933 session and was counting on the Democrats and other left wing groups to secure its passage. The Austrian constitutional court recently decided that marriages between divorced Catholics were voidable, though entered into with the provincial governor's approval as provided by law. The California legislature in April, passed two bills prohibiting marriages between Filipinos and whites. A private member's bill, based on the majority report of the royal commission on divorce, was introduced in the British House of Commons in November, providing as new grounds for divorce and annulment, insanity, incurable inebriety, and imprisonment under a commuted death sentence. On December 6, a Paris civil tribunal announced that a decree granted in Monaco (whose decrees require confirmation by a French court) divorcing Princess Charlotte, only daughter of the reigning Prince Louis, from Prince Pierre, infringed no rule of French law.

In Mexico the very liberal divorce provisions of the Federal and state codes (1932 YEAR BOOK, 444), have occasioned serious and perplexing problems in other countries, particularly the

United States, through their utilization on the part of the latter's citizens. Chihuahua, in northern Mexico, seems to have outstripped even Yucatan in its provisions for easy divorce, designed, according to a Mexican lawyer (Urias of Juarez) to attract Americans. The law of Jan. 16, 1932, which purported to make possible the procurement of a divorce by mail, at a minimum cost of \$60 has been amended by reducing the time required from 30 to 15 days and increasing the number of grounds from 10 to 20, the new ones including abandonment, for three months, bigamy, criminal accusation, "dishonorable conduct," and separation for one year. In November, the Supreme Court of the Republic rendered a decision annulling the divorce granted in 1927 to General Berlanga, chief of military in the state of Campeche, where the decree was obtained, and who had meanwhile remarried. The ground of the Supreme Court's decision was the failure to provide an opportunity for the defendant to be heard. The *Colegio de Abogados* (bar association) of Chihuahua, took prompt occasion to deny that the decision affected adversely divorce decrees in that state. According to Lindell T. Bates in his monograph on "The Divorce of Americans in Mexico" (1929), "the risk of conviction for bigamy is very slight"; but Justin M. Edgerton, the New York credit executive, who obtained two Mexican divorces and then eloped with Grace, daughter of James A. Adams of New Bedford, Mass., found it otherwise. Prosecuted for bigamy at the instance of the girl's father, Edgerton was found guilty, on October 7, by a jury in Maryland (where jurors are judges of the law in criminal cases) after 20 minutes of deliberation and was given a "suspended sentence" of imprisonment for 18 months. The Mexican decrees were excluded from evidence; the first on the ground that when it was rendered, defendant was not a resident of Mexico. Alleged Mexican divorce "agencies," operating fraudulently in Washington City, are under investigation by the District of Columbia Bar Association. A wife living with her children but apart from her husband, and never having sought divorce, was notified by the Mexican court at Juarez (Chihuahua) that the charges of desertion in her application for divorce had been "confessed" and that satisfactory proof had been offered that there were no children by the marriage and no community property. It appeared later that the husband had instituted the proceeding in her name but without her knowledge.

PROPERTY. A committee of the National Conference of Commissioners on Uniform Laws has drafted a uniform mechanics' lien act of 39 sections for adoption by all the States. The mechanics' lien, though an adaptation of the civil law "privilege," is an American device, originating in Pennsylvania and spreading to all the States and Canada; but each has a different statute and the purpose of the new draft is to produce uniformity; this has been accomplished with negotiable instruments, bills of lading, warehouse receipts, etc. An article in the *Yale Law Journal* (xlii, 702) reviews the legislation and litigation of the past two years relative to the production and conservation of petroleum.

U. S. v. Dubilier Condenser Corp., 289 U. S. 178, was a suit by the Federal government to compel the assignment to it of certain patents for radio apparatus invented by Messrs. Francis W. Dunmore and Percival D. Lowell, employed in the

Bureau of Standards Laboratories at Washington. The suit was dismissed on the ground that they were not employed to invent. Justice Stone (and with him Chief Justice Hughes and Justice Cardozo) dissented, holding that

they were employed to conduct scientific investigations in a laboratory devoted principally to applied rather than pure, science, with full knowledge and expectation of all concerned that their investigations might normally lead, as they did, to invention;

and that it was contrary to public policy to permit them to profit personally from work done for the government.

The new German inheritance law (applicable for the present to Prussia alone) not only restores the feudal principle of primogeniture, giving the oldest child all of the land, but provides (Art. 1): "Only a German citizen of German blood may inherit land as a farmer."

For each family there is to be but one farm, no larger than its needs, and "huge estate owners' right of transmitting inheritance will be revoked," according to Prof. Ernst Wagemann, chief "Nazi" economist.

TORTS. This branch of the law, known among civilians as "delicts," is that which relates to private wrongs independent of contract. It is one of the subjects on which the American Law Institute has been working and a tentative draft of its restatement of the law relating thereto was considered at the annual meeting on May 6. The final drafts, in two volumes, are promised for the next annual meeting in 1934. Among the more noteworthy decisions rendered during the year in this field, was *Young v. Masci*, 289 U. S. 253, upholding that provision of the New York automobile law (typical of many State laws) which imposes upon the owner of such a vehicle, liability for injuries resulting from negligence in its operation by any one using it with the owner's permission, express, or implied. In this case the owner was a resident of New Jersey; while the injury caused by the car when driven by another, occurred in New York.

Following *Castle v. St. Augustine Links*, an English case, Municipal Court Justice Pette, of New York, in *Gleason v. Knorr*, held liable a golf player, and the club whose course he played on, for injuries caused the occupant of a passing automobile, from his golf ball which, carried by the wind, struck the latter's windshield.

Failure to provide medical care for seamen constitutes a "personal injury," under the Merchant Marine Act of 1920, according to the Supreme Court's decision in *Cortez v. Baltimore*, 287 U. S. 367. Another peculiar application of the law of negligence was in *Olson v. North*, tried in the circuit court at Rockford, Ill., where the plaintiff obtained a verdict of \$29,250 against his former attorney who had defended him in a prosecution for murder which the attorney knew, but failed to disclose, had been committed by others. Plaintiff had been convicted but never served his sentence.

LAWN BOWLING. See BOWLING.

LAWN TENNIS. See TENNIS.

LAWRENCE COLLEGE. A coeducational institution, comprising a college of liberal arts and a conservatory of music in Appleton, Wis., founded in 1846. For the 1933 autumn term 706 students were enrolled in the college and 272 in the conservatory. There were 23 students enrolled in the Institute of Paper Chemistry, a graduate school affiliated with Lawrence College. There

were 57 members on the faculty of the college and 20 on the faculty of the conservatory. The endowment, exclusive of buildings and equipment, amounted to \$1,772,381.13; the income from endowment for 1933 was \$70,549.78. There were 60,995 volumes in the library, exclusive of government documents. President, Henry Merritt Wriston, Ph.D., LL.D.

LEAD. Refined lead produced in the United States from domestic ores in 1933 totaled 252,500 tons, a decrease of 1 per cent from the output in 1932 and a new low record production since 1899, according to a preliminary summary of the U. S. Bureau of Mines. Refined primary lead produced from foreign sources amounted to considerably less than one-half of that recovered in the preceding year and was less than in any year since 1886. The recovery of secondary lead at primary plants increased during the year, however, and the total output of refined lead at primary plants was only 3 per cent less than in 1932. The calculated new supply of lead made available for consumption was 9 per cent lower in 1933 than in 1932.

The output of primary domestic desilverized lead in 1933 was about 146,900 tons; of soft lead about 81,900 tons, and of desilverized soft lead about 23,700 tons, making a total output from domestic ores of about 252,500 tons of refined lead. Corresponding figures in 1932 were 156,683 tons of desilverized lead, 63,130 tons of soft lead, and 35,524 tons of desilverized soft lead, making a total of 255,337 tons. The output of lead smelted and refined from foreign ore and bullion was about 13,900 tons, as compared with 33,024 tons in 1932. The total primary lead smelted or refined in the United States in 1933 was thus about 266,400 tons, a decrease of about 8 per cent as compared with the total of 288,361 tons in 1932. Plants that treat primary materials mainly produced 46,300 tons of secondary lead in 1933 compared with 33,611 tons in 1932. Therefore, the total output of primary and secondary refined lead at primary refineries was 312,700 tons, as compared with 321,972 tons in 1932, a decrease of 3 per cent. Antimonial lead produced at primary refineries in 1933 amounted to about 18,000 tons, as compared with 21,024 tons in 1932.

The imports of lead as "pigs, bars and old" for eleven months amounted to 109 tons. The base bullion imported during the same period contained 322 tons of lead. The exports of domestic lead in pigs, bars, etc., during the first eleven months amounted to 22,309 tons and exports of lead sheets during that period were 170 tons. Exports of foreign pig lead for 10 months amounted to 4 tons. Total exports of pig lead for the entire year 1932 were 23,516 tons.

By excluding the stocks of lead at smelters and refineries and by estimating the amount of lead exported with benefit of drawback (for which figures for only 9 months are available), the new supply of lead made available for consumption in 1933 is calculated at about 235,000 tons, a decrease of 9 per cent from 257,669 tons in 1932.

The lowest average quoted monthly price for lead at New York (outside market) for the year was 3 cents a pound in January and February, 1933. From that level it rose to 4.5 cents a pound, the highest monthly average, in August and September. The price declined in each of the last three months and closed the year at 4.15 cents a pound. The highest and lowest daily prices of the year were the same as the highest and lowest

monthly prices. The daily price of 4.50 cents a pound held from July 10 until October 16 and that of 3 cents a pound began Nov. 18, 1932 and continued until Mar. 8, 1933.

LEAGUE OF NATIONS. The withdrawal of Japan and Germany from the League of Nations brought forward the question of its future and of its present usefulness. In the opinion of Frank H. Simonds in his *Atlantic Monthly* article the machinery of peace of the post-war era has collapsed. He observes—"Germany never did want anything out of the League but revision and return to military primacy, and the French and Poles are immovable in their boundaries. Europe has returned to its traditional methods, and the United States has now to retire to its similarly traditional isolation or to take sides in a new Continental war to preserve the balance of power. In a word, Europe is back in 1914, and America is facing the problems which confronted it two decades ago." It has been asked, however, "but is it?"—it being either Europe or America. Foreign to Mr. Simonds' premises is the new factor that did not exist in 1914, and did not exist at the time of the Congress of Vienna from which he draws so many lessons—the stabilizing factor of the social State, the new concept of national policy—whether internal or external—the League of Nations, which is practically always in session. The record of its activities for 1933 shows what it is doing, practically day by day, to settle irritating disputes between nations, just such disputes as have frequently led to war, and yet in the opinion of Henri Barbusse, a noted French writer and pacifist, "The League of Nations has prevented nothing and allowed everything done. It has allowed twenty-seven conflicts. It is a fomentor of war and each country which is a member of it is protecting its own imperialistic interests." He declared that the Disarmament Conference "can count as many failures as ceremonious performances and to-day it is on its way toward a new failure."

When the Thirteenth Assembly concluded its sessions it was generally considered as the most barren of the series. It met in the midst of gloomy auspices. "Fears and rumors of wars in Europe made dismal the atmosphere," according to the *Philadelphia Ledger*. "There was no suggestion that the League could do anything about the situation of tension and strain. No attempt was made to do anything. It is clear that the League of Nations has fallen upon evil days. Its prestige is at a low ebb. It is obviously failing to fulfill the hopes and expectations toward which it has moved. It still provides a world stage for the expression of opinion which otherwise might be a light hidden under a bushel. But this last session of the Assembly has demonstrated that League activities and influence have become extremely limited."

Raymond B. Fosdick, the new president of the League of Nations Association, took a far more cheerful view. He believed that the sentiment in the United States for the League of Nations, and the collective principle on which it is based was never stronger than in 1933. "A new generation is growing up," he points out, "unhampered by the political prejudices of a dozen years ago. In every college and high school in the country the question is asked why, in an interwoven world like this, we should refuse to associate in a coöperative attempt to handle the problems that are fast overflowing national boundary lines. That question will be asked with increasing insistence as the years go by; and to that question the answer

of the objectors will seem increasingly unintelligent. Time is on the side of the friends of the League of Nations. The growing complexity of international relationships and the driving need of a rational method of control is taking us day by day nearer to Geneva."

Charles H. Strong, an official of the same Association contends that America's non-membership in the League of Nations has been responsible for the fact that the League has not been "highly effective" in dealing with the Far Eastern problem. He said that Matsuoka, chief Japanese delegate to the League, had declared in "open conference at Geneva that Japan joined the League in the belief that the United States would join, and when the United States did not join the League, Japan should perhaps have then resigned. . . . Japan, therefore, 'cannot be judged under the Covenant of the League, as it might have been had the United States and Russia become members and as if the League were to-day complete.'"

The activities of the League during January, 1933, included the seventieth session of the Council and meetings of the Committee of Nineteen, the Bureau of the Conference for the Reduction and Limitation of Armaments. The Committee of Nineteen of the Special Assembly, upon the failure of its attempts at conciliation in the Sino-Japanese dispute, decided, while continuing its negotiations with the parties, to begin the preparation of the draft report contemplated in Article 15, paragraph 4, of the Covenant. The Council, which met on January 25, heard the views of the governments of the United Kingdom and Persia on the cancellation of the concession of the Anglo-Persian Oil Company. A special Council Committee met to examine difficulties which had arisen in connection with the plan of assistance to Liberia, more particularly by the declaration of a moratorium by the Liberian Parliament.

During March the attention of the League was principally engaged by the new British disarmament proposals, as well as by the conflict in the Far East and the disputes in Latin America between Bolivia and Paraguay on the one hand, and Colombia and Peru on the other.

The Japanese government, finding itself in complete disagreement with the League in the matter of the policy to be pursued in the Far East, gave the preliminary two years' notice, provided for in the Covenant, of its intention to withdraw from the League. The government of the Union of Soviet Socialist Republics, while acknowledging that the decisions taken by the League on the Sino-Japanese dispute coincided in part with its own views, declined to participate for the moment in the work of the Advisory Committee. On the other hand, the government of the United States accepted the invitation to cooperate with this Committee. The Advisory Committee set up two Sub-Committees—one to study the question of the export of arms in relation to the situation in the Far East; the other, to consider the practical application of the undertakings assumed by the Members of the League, more particularly in regard to the non-recognition of Manchoukuo.

Following upon the rejection by the Peruvian government of the Council's proposals for the settlement of the dispute with Colombia, under paragraph 3 of Article 15 of the Covenant, it adopted a report in accordance with paragraph 4 of Article 15, recommending the complete evacuation by the Peruvian forces of the Leticia trapezium. It also appointed an Advisory Committee to watch

the situation. The governments of the United States and Brazil cooperated in the work of this Committee. The Council further heard the representatives of the governments of Bolivia and Paraguay over the Chaco controversy, and decided to ask for official information on the arbitration proposals submitted by the governments of the Argentine and Chile.

In May the activities of the League included the seventy-third session of the Council and the meetings of the Disarmament Conference.

An agreement providing for the settlement, in accordance with the Council's recommendations of March 18, of the dispute between Colombia and Peru was signed by the representatives of the two parties and the President of the Council on May 25. The agreement stipulated for the dispatch to Leticia of a Commission to take charge in the name of the Colombian government of the territory which was to be evacuated by the Peruvian troops. See PERU under *History*.

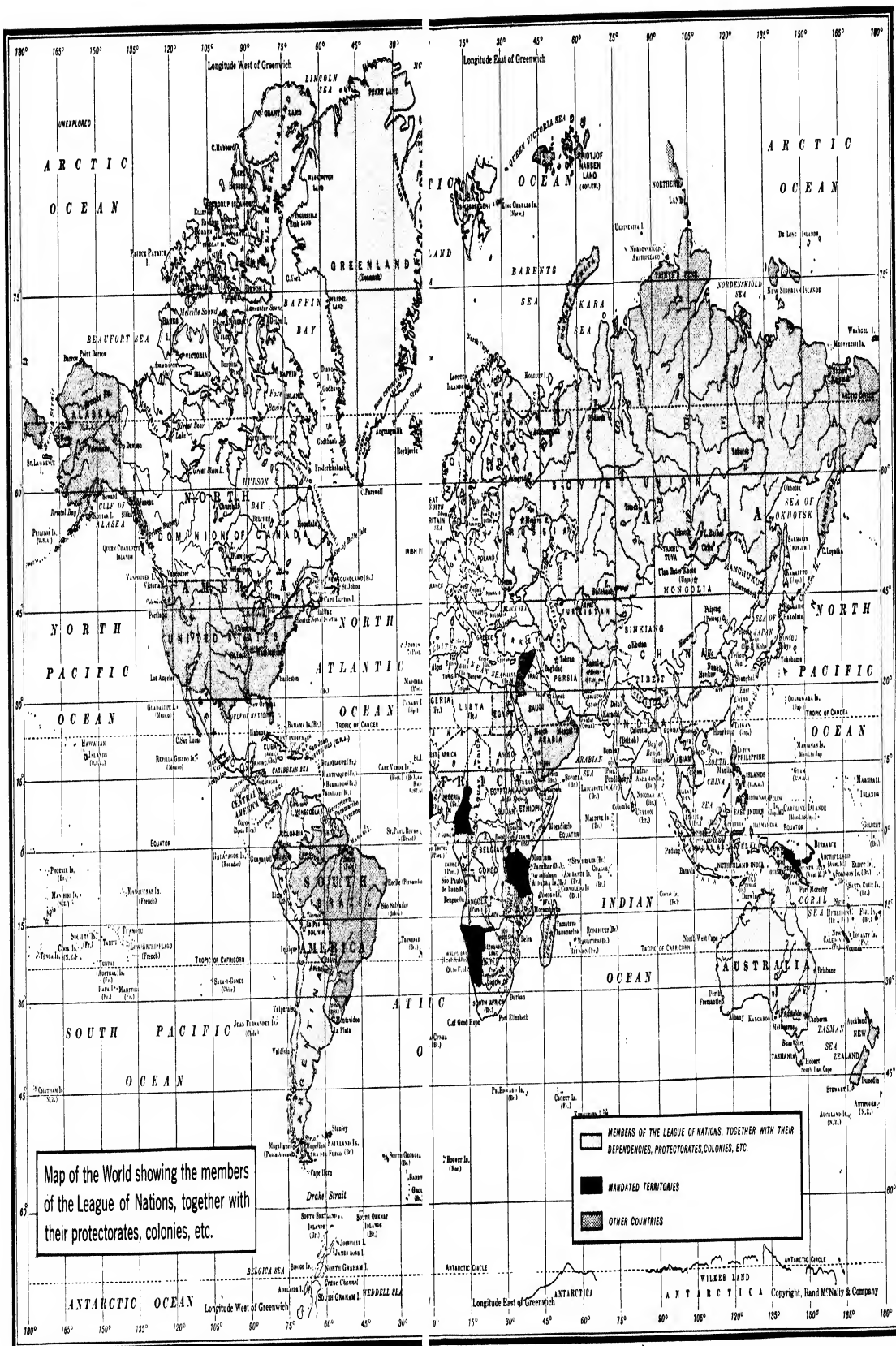
Following the declaration of war by Paraguay on Bolivia, the Council heard the representatives of the two governments concerned, and instructed its special committee to propose a solution for the dispute. The Committee presented a draft report providing for the cessation of hostilities, withdrawal of the declaration of war, and an agreement to submit the dispute to arbitration. The representative of Bolivia having reserved the decision of his government on the report which was accepted by the representative of Paraguay, the Council asked its Committee to continue to follow the situation.

The Council noted that the dispute between the United Kingdom and Persia was virtually settled as the result of an agreement reached on April 29 providing for a new concession to the Anglo-Persian Oil Company.

The outstanding feature of the League's activities during June was the meeting in London of the Monetary and Economic Conference (see ECONOMIC CONFERENCE, WORLD). This was the third great conference on economic and financial problems summoned under the League's auspices. The first was held in Brussels in 1920 and dealt mainly with financial questions; the second, devoted to economic problems, met in Geneva in 1927. The London Conference, organized at the request of the Lausanne Reparations Conference, dealt with both the monetary and economic aspects of the present world crisis. It constituted an international effort for the economic and financial reconstruction of the world. Unlike its predecessors—the Brussels and Geneva Conferences—it was composed not of experts but of government representatives.

During July the Monetary and Economic Conference and an extraordinary session of the Council were held. At the London Conference efforts to reach an understanding on currency stabilization failed. As some measure of currency stabilization was generally considered an essential condition for the examination of other important items on the agenda, especially that of tariff policy, it was deemed advisable to adjourn the Conference until the conditions permitting of an agreement had been created.

The Council heard the representatives of Bolivia and Paraguay over the Chaco dispute, and approved the report of its Committee, already accepted by the parties. Just as the Commission was about to set out the Bolivian and Paraguayan governments proposed that the Council should



invite the four neighboring states—Argentina, Brazil, Chile, and Peru—to act on its behalf for the settlement of the dispute. The Committee instructed to deal with the question decided, therefore, to summon a meeting of the Council. See **BOLIVIA** under *History*.

With the opening of the fourteenth ordinary session of the Assembly and the meeting of the Council the League displayed, as usual, a more intense activity during September. The return of the Argentine to League membership was the outstanding event of the Assembly's session. (See **ARGENTINA** under *History*.)

It noted the report of the Mandates Commission and the conclusion, between Danzig and Poland, of agreements on the utilization of the port of Danzig by Poland, and the treatment of Polish nationals in the territory of the Free City. It dealt with a number of petitions arising out of the application of the German-Polish Convention relating to Upper Silesia, and with a petition concerning the dissolution of a German Association in Yugoslavia. At the request of the Iraq government, it postponed, until the close of the Assembly session, its consideration of the situation of the Assyrian minority in Iraq. The Financial Committee, which also met in September, surveyed the financial situation of Austria, Greece, and Hungary, and examined the question of technical collaboration with the Rumanian government.

October was also marked by great activity. The Assembly continued its fourteenth ordinary session; the Council held a number of meetings; and the Disarmament Conference resumed its work. President Henderson, of the Disarmament Conference, reported to the Bureau on his negotiations with the heads of various delegations with a view to preparing a text for the second reading of the British draft convention (MacDonald Plan). On October 14 the Bureau heard a statement from Sir John Simon on further conversations between the principal delegations. As a result of these exchanges of views, Sir John Simon considered that the British draft would have to be modified in certain respects. On the same day, M. von Neurath communicated to the President the decision of the German government to leave the Disarmament Conference. He stated that it was clear that the Conference would not fulfill its sole object—namely, general disarmament, because of the unwillingness of the highly armed states to carry out their contractual obligations, and that this rendered impossible the satisfaction of Germany's recognized claim to equality of rights. On October 16 the General Commission noted Sir John Simon's statement and approved the terms of the reply of the President of the Conference. The President declared in his reply that he could not accept as valid the reasons given by the German government. He regretted that its decision had been taken at the moment when the Bureau had just decided to submit to the General Commission a definite programme, which provided for the progressive realization of reduction of armaments and equality of status. On October 21 the German Consul at Geneva forwarded to the Secretary-General a communication intimating that Germany was withdrawing from the League, in conformity with Article 1, paragraph 3, of the Covenant. See **DISARMAMENT; MILITARY PROGRESS; GERMANY** under *History*.

The governments of the Argentine, Brazil, Chile, and Peru declined (October 1) the invitation ad-

dressed to them by the Council to submit a formula for the settlement of the dispute between Bolivia and Paraguay. Consequently, in accordance with the Council's decision of September 28, a League Commission was dispatched to the spot.

The Assembly, acting in conjunction with the Council, increased provisionally, for the period 1933-36, the number of non-permanent seats on the Council from nine to ten. It elected Denmark, the Argentine, and Australia to succeed Norway, Guatemala, and the Irish Free State as non-permanent Members of the Council, and called upon Portugal to occupy the newly created additional seat.

The Assembly recommended the appointment of a High Commissioner to deal with the German nationals, Jewish and other, who had taken refuge in several countries. Mr. James G. McDonald of New York accepted the Council's invitation to assume the duties of High Commissioner. He was to be assisted in his work by a Governing Body composed of representatives of a number of governments, including the United States.

Early in July representatives of all nations and all parties joined hands at the Queen's Hall, London, to honor Sir Eric Drummond upon the completion of 14 years' service as Secretary General of the League of Nations. The meeting had moments of intense enthusiasm when it was announced that Sir Eric had been appointed British Ambassador to Rome. It was a tribute to a man more responsible than any other for the smooth functioning of the League since its inception.

Sir Eric was succeeded as Secretary General of the League by M. Joseph A. C. Avenol, of France, in whose opinion the problem before the world does not involve a choice between the League of Nations and some better system, but between the League and almost complete anarchy. Before the assembled members of the British Parliament M. Avenol laid the world crisis at the door of disarmament. He expressed no opinion on the desirability of revising the League Covenant, but said he doubted whether objections made to its operation could be met only by a change in procedure. The Secretary General said despite the injunction of Article 8 of the League Covenant arms discussions had simmered down to one of equality of rights, a purely European matter, with the reduction of armaments relegated to the background. He maintained confidence in the League was fully justified and added that it was to be regretted that a combination of circumstances had rendered any understanding between the Great Powers impossible. What is "still more to be regretted," he went on, "is that the responsibility for the failure of the Great Powers to reach an understanding should be laid at the door of the League."

As the successor of the late M. Albert Thomas (France) Director of the International Labor Office, Mr. Harold Beresford Butler, of Great Britain, was chosen. He had been the Assistant Director.

M. Pierre Comert, for 13 years Director of the Information Section of the League of Nations, tendered his resignation, which became effective Jan. 1, 1934. He was succeeded by Arthur Sweetser of Boston, Mass., who had been a member of the secretariat of the League of Nations since its foundation. He was assigned to special duty of handling questions calculated to interest the United States. Mr. Sweetser was one of President Wilson's associates at the Paris Peace Conference.

His appointment attracted attention because of President Roosevelt's announcement of steady American cooperation with the League.

Leadership of the League of Nations movement in the United States was assumed by Raymond B. Fosdick, New York attorney, and former under Secretary-General of the League of Nations, when, on May 1, he became President of the League of Nations Association, succeeding former Attorney-General George W. Wickersham.

Philip Curtis Nash, who had been Executive Director of the League of Nations Association, resigned to become president of the University of Toledo (Ohio). Hilton Howell Railey was chosen as Mr. Nash's successor.

The League of Nations, which has kept practically all its money reserves, totaling \$5,000,000, in dollars, has sustained through the fall of the dollar a paper loss of nearly \$1,000,000, and has had to exchange a part of this reserve at the loss of from 15 to 20 per cent. In making out the new budget, already difficult to balance, the supervisory committee has authorized cuts, including a 50 per cent reduction in the information section of the League.

With due form the ceremony of hoisting the traditional bouquet took place over the new League building at Geneva on November 6. The bouquet consisted of a large and much be-ribboned Christmas tree and all over the building there were strings of the flags of all the 57 member States of the League of Nations. See CHINA, COLOMBIA, PERU, BOLIVIA, PARAGUAY, ARGENTINA, JAPAN, GERMANY, DENMARK, under *History*.

LEATHER. Along with the shoe industry the production of leather during the year 1933 experienced a gratifying upturn, according to data furnished by the Tanners' Council of America. The greatest increase occurred in the production of sheep and lamb skins with a rise from 27,560,000 in 1932 to 35,093,000, an increase of 27 per cent, and almost three million skins above the output of 1931. Goat and kid leathers rose 20 per cent over 1932, with 44,312,000 skins as against 37,010,000, but not equaling the figure of 48,638,000 skins in 1931. The production of cattle hide leathers also topped the figures for 1932 and 1931: 17,057,000 in 1933; 14,583,000 in 1932, and 16,235,000 in 1931. Calf and kip leathers showed a similar curve: 13,030,000 in 1933; 11,579,000 in 1932, and 12,439,000 in 1931.

The importation of raw hides and skins, other than furs, exceeded by 79 per cent the imports of 1932, 339,979,720 pounds as compared with 190,229,272 pounds, and exceeded the figure for 1931 by about 68,900,000 pounds. The value of the 1933 imports was \$45,675,185, slightly more than double the value of 1932 imports. Finished leather imported into the United States in 1933 was valued at \$9,786,192 (\$6,846,578 in 1932); and imports of leather manufactures were valued at \$8,425,350.

Exports of hides and skins, other than furs, from the United States in 1933 declined markedly in quantity, though higher value almost offset the reduction in quantity. In 1932, 42,405,505 pounds of hides and skins were shipped out of the United States, the value being \$2,240,161; in 1933, the quantity dropped to 27,497,365 pounds, the value being \$2,048,363. Unfinished leather exports were valued at \$13,778,804, and leather manufactures were valued at \$2,955,456. See also **SHOE INDUSTRY**.

LEBANON REPUBLIC. See SYRIA.

LEE, ELISHA. An American railway official, died in New York City, Aug. 6, 1933. He was born in Chicago, Ill., Sept. 24, 1870. On his graduation from the Massachusetts Institute of Technology in 1892 he began his railway service on the Pennsylvania Railroad as a rodman in the engineering division at Tyrone, Pa. From 1899 to 1901 he was assistant supervisor, and from 1901 to 1903 supervisor of various divisions of the Pennsylvania Railroad. He was appointed assistant engineer of the maintenance of way department in 1903 and four years later was made principal assistant engineer on the Philadelphia, Baltimore, and Washington Railroad, a subsidiary of the Pennsylvania system. In 1909 he was advanced to superintendent of the New York, Philadelphia, and Norfolk Railroad, another subsidiary. He became assistant to the general manager of the Pennsylvania lines east of Pittsburgh in 1911 and was appointed general superintendent of the Philadelphia, Baltimore, and Washington Railroad in 1914. In 1917 he became the general manager of the Pennsylvania lines east of Pittsburgh and, when the United States government took over the control of all railroads as a war-time measure, served as Federal manager of the Pennsylvania's eastern lines, under the jurisdiction of the Director of the Allegheny Region.

On the reorganization of the Pennsylvania Railroad System in 1920, Mr. Lee became vice-president in charge of the eastern region with headquarters in Philadelphia. In 1923 he was transferred to Pittsburgh as vice-president in charge of the central region and the following year was appointed vice-president in charge of operation of the entire system. In 1926 he was elected vice-president of the Pennsylvania Railroad Co., holding that office until his death.

LEEWARD ISLANDS, BRITISH. A British colony consisting of a group of islands in the Greater and Lesser Antilles, lying north of the Windward Islands and the southeast of Puerto Rico. Total area, 716 square miles; total population (Jan. 1, 1933 estimate), 131,066. The islands are divided into five presidencies (1) Antigua (with Barbuda and Redonda), (2) St. Christopher-Nevis (with Anguilla), (3) Dominica, (4) Montserrat, (5) British Virgin Islands, which are near the American Virgin Islands. The chief towns are Basseterre (St. Christopher), with approximately 9000 inhabitants on Jan. 1, 1933; Roseau (Dominica), 7500; St. John (Antigua), 7000. In 1930-31, there were 108 primary schools with a total average attendance of 17,699; 11 secondary schools with average attendance of 300; and 1 industrial school.

The principal products in 1932 were sugar (39,137 tons valued at £379,582), cotton (414,717 lbs. valued at £18,125), limes and lime products (were valued at £33,382), tomatoes (524,580 lbs. valued at £4481), bay oil (20,915 lbs. valued £3683), rum (11,520 gals. valued at £1587); other products are cotton seed, coconuts, oranges, mangoes, onions, salt. Imports in 1932 were valued at £551,488; exports, £483,263 (sugar represented 82 per cent of the total exports by value). During 1932 there were 2126 steamships totaling 5,403,768 tons that entered and cleared the ports of the colony. The government revenues for 1932 totaled £230,730; expenditures, £263,476; public debt, £287,767; sinking fund, £249,958. A governor, who is also the commander-in-chief, is at the head of the cen-

tral government which consists of a Federal executive council and a Federal legislative council. The governor is represented in each of the presidencies of St. Christopher-Nevis and Dominica by an administrator and in those of Montserrat and the Virgin Islands by a commissioner. The four larger presidencies each have separate executive and legislative councils, and the Virgin Islands has only an executive council. Governor in 1933, Sir R. St. Johnston.

LEEWARD ISLANDS, FRENCH. See OCEANIA, FRENCH ESTABLISHMENTS IN.

LEGAL EDUCATION. See LAW.

LEGGE, ALEXANDER. An American industrialist, died at Hinsdale, Ill., Dec. 3, 1933. Born in Dane Co., Wis., Jan. 13, 1866, he received a common school education and in 1891 entered the employ of the McCormick Harvester Co. as a collector in its Omaha office. Following his promotion to collection manager at Council Bluffs, Iowa, three years later, he was made branch manager there in 1898 and the following year manager of the collection department at headquarters in Chicago. On the merger of the McCormick Harvester Co. with the International Harvester Co. in 1902 he was made manager of domestic sales. He later became assistant general manager in 1906, general manager in 1913, vice-president and general manager in 1919, and president in 1922, succeeding Harold McCormick in the latter office.

During the World War Mr. Legge was manager of the Allied Purchasing Commission, which expended approximately \$10,000,000,000 in the purchase of industrial war supplies for the allied governments. As vice-chairman of the War Industries Board after May, 1918, he headed the requirements division, organized for the purpose of estimating and correlating the requirements of the various war agencies. In 1919 he attended the Paris Peace Conference as economic adviser and also surveyed the devastated regions of France with an eye to their industrial rehabilitation. In 1929 President Hoover appointed him chairman of the Federal Farm Board, in which post, during his two year tenure, he introduced many reforms in the marketing of agricultural commodities so as to place agriculture on a basis of economic equality with other industries.

LEGISLATION. See AUTOMOBILES; CHILD LABOR; LAW; UNITED STATES, and the articles on the separate States.

LEHIGH UNIVERSITY. A nonsectarian institution for the higher education of men in Bethlehem, Pa., founded in 1866. The enrollment for the autumn of 1933 was 1426, distributed as follows: arts and science, 226; business administration, 307; engineering, 781; graduate studies, 112. The enrollment for the summer session of 1933 was 435. The faculty numbered 162, including 15 persons on the administration staff. The endowment amounted to \$5,308,921, while the total income for the year was \$1,138,782. There were 202,082 volumes in the library. President, Charles Russ Richards, Eng. D., LL.D.

LETICIA DISPUTE. See PERU, COLOMBIA, and BRAZIL under *History*; LEAGUE OF NATIONS.

LEVY, RAPHAËL-GEORGES. A French economist, died Dec. 9, 1933, in Paris, where he was born Feb. 24, 1853. Educated in law at the University of Paris, he later held a chair at the School of Political Sciences and was president of the Superior School of Financial Teaching. He was also a sub-director of the Banque de Paris et des Pays-Bas, vice-president of the Crédit Mobilier Fran-

çais, and a member of numerous extra-parliamentary commissions on finance. In the Senate he was leader for some time of the Republican-Democratic Union, whose chief support was among leaders of industry and finance. Besides being president of the Society of Political Economy, he was a member after 1913 of the Academy of Moral and Political Sciences of the Institute of France. His decorations included officer of the Legion of Honor, grand officer of the Orders of the Crown of Belgium, Rumania, and Italy, and Commander of the Order of Christ of Portugal.

Outstanding among M. Lévy's works were: *Les Conversions des rentes* (1886); *Le Pétit financier* (1888); *La Spéculation et la banque* (1893); *Les Chemins de fer français* (1894); *Le Métal argent à la fin du XIX^e siècle* (1894); *L'Union monétaire au moyen d'une banque centrale universelle* (1895); *La Fortune mobilière de la France à l'étranger* (1897); *Les Finances aux États-Unis* (1898); *La Dette anglaise* (1898); *Le Mouvement industriel* (1899); *Les Finances égyptiennes* (1899); *Les Tendances de la législation fiscale en Europe au cours de XIX^e siècle* (1900); *Le Triomphe de l'unité monétaire* (1901); *L'Allemagne industrielle* (1901); *Finances de la guerre: Russie et Japon* (1904); *Principes de monnaie et de banque* (1907); *La juste Paix* (1922).

LEYGUES, GEORGES JEAN CLAUDE. A French statesman, died at St. Cloud, near Paris, Sept. 2, 1933. Born at Villeneuve-sur-Lot, Nov. 28, 1858, he was educated at the college there and at the Universities of Toulouse and Bordeaux. Successively a journalist and lawyer, he was for many years an advocate at the Court of Appeal in Paris. He made his entry into politics on his election in 1885 as Left-Republican deputy for Lot-et-Garonne and continued to represent that department in each succeeding chamber. His first ministerial post was that of Public Instruction and Fine Arts in the Dupuy cabinet of 1894. In 1895 he served as Minister of the Interior in Ribot's cabinet, and in 1898 as vice-president of the Chamber of Deputies. He again held the portfolio of Public Instruction in Depuy's third cabinet (1898) and in Rousseau's cabinet (1899-1902). In 1905 he founded with Barthou the Republican Union, forming part of the opposition to the Radicals and Socialists, and in 1906 served under Sarrien as Minister of the Colonies.

After a semi-retirement M. Leygues emerged in 1917 as Minister of Marine in Clémenceau's cabinet and during the remainder of the War played a prominent part in coördinating the activities of the Allied fleets. In 1921 he was Premier and Minister of Foreign Affairs, but his government fell after a four-month tenure on account of the offense which the Nationalists had taken at its leniency in the matter of German reparations and its moderate tendency in dealing with such internal dangers as Bolshevik propaganda. Under Briand in 1925-26 he successively held the portfolios of Marine and War and continued his notable work of developing the French Navy as Minister of Marine in the succeeding cabinets of Poincaré and Tardieu. He was Minister of the Interior in the short-lived Steeg cabinet of 1931 and closed his career as Minister of Marine in Herriot's cabinet of 1932 and Daladier's cabinet of 1933. Previous to his death he expressed satisfaction with the progress made in building up the French Navy, keeping, however, within the restrictions of the London Naval Treaty of 1930.

In his youth, M. Leygues belonged to the Parnassian group of poets, publishing *Le Coffret brisé* (1882) and *La Lyne d'airain* (1883). He wrote also *Discours politiques* (1902); *L'Ecole et la vie* (1904); and *Colbert* (1920).

LIAPTCHIEFF, ANDREAS. A Bulgarian statesman, died in Sofia, Nov. 6, 1933. Born at Ressen, Macedonia, Nov. 30, 1866, he attended the Universities of Zurich, Berlin, and Paris. In 1885 he played a prominent part in the revolution by which Eastern Rumelia was united to Bulgaria and after 1895 edited *Les Réformes*, originally founded as an advocate of freedom for Macedonia. In politics he was a member of the Democratic party, serving as editor of its organ *Préparetz* after 1895 and as its vice-president from 1903 to 1923. After 1908 he was a member of the Sobranje, the Bulgarian Parliament.

Liaptcheff held under Malinoff the portfolio of Commerce and Agriculture during 1908-10 and that of Finance in 1911. He participated also (1908-09) in the negotiations at Constantinople which led to the recognition of Bulgaria's independence, but 10 years later witnessed his country's humiliation in the Armistice negotiations concluded at Saloniki after the capitulation of Bulgaria on Sept. 30, 1918. In the Radoslavoff cabinet of 1918-19 he was successively Minister of Finance and of War.

In 1923 Liaptcheff helped to found the Democratic Entente, a bloc of conservative middle-class element which advocated strengthening of the state authority. He served as president of the Entente until 1932 when the party split into two groups, the more radical of which under Zankoff favored active interference of the state in economic affairs and a vigorous stand against communism. He took also a prominent part in the Bulgarian coöperative movement, founding various coöperative societies and banks and serving as president of the Economic Society.

Appointed Premier and Minister of the Interior in January, 1926, Liaptcheff became known during the five years that his government was in power for his conciliatory policy, especially in avoiding war with Yugoslavia. In the national election of June, 1931, however, widespread economic discontent brought about the overwhelming defeat of the Democratic Entente and resulted in the formation of a new ministry under Alexander Malinoff, leader of the Opposition bloc of Agrarians, Democrats, National Liberals, and Radicals.

LIBERIA. A Negro republic on the west coast of Africa. Area, about 43,000 square miles; population, estimated at 2,000,000 to 2,500,000, of whom about 60,000 coast Negroes may be considered civilized. Capital, Monrovia (population, about 10,000, including Krutown). The interior population is divided into some 40 tribes, speaking as many languages. In 1930 there were 7588 pupils in 169 schools (51 government and 118 mission schools).

PRODUCTION AND TRADE. Native coffee is the staple product and some cacao and cotton are produced. The exploitation of the agricultural, mining, industrial, and forest resources of the country has scarcely begun. Small quantities of piassava fibre, palm oil, kola nuts, beni seed, and rice are produced. The Firestone Company had more than 30,000 acres of its 1,000,000-acre concession planted to rubber trees. Foreign trade, in U. S. dollars, was in 1931: Imports, \$858,742 (\$1,228,102 in 1930); exports, \$679,885 (\$838,739

in 1930). The value of Liberia's trade with the United States in 1933 was: Exports, 10,494; imports, \$96,714.

FINANCE. Revenue and expenditure for the fiscal year 1930-31 were \$482,029 and \$1,000,065, respectively. In 1929-30 revenues were \$980,156 and expenditures \$985,554. A \$5,000,000 loan was arranged for in the United States in 1926, of which \$2,027,700 was issued up to 1933. Service charges on the loan and the salaries of American loan officials amounted to \$269,284 annually, or 54.9 per cent of the revenues in 1931. In November of that year the government defaulted on the Firestone loan payments. The external debt (1931) totaled \$2,255,000, of which \$2,192,000 represented the bonded debt.

COMMUNICATIONS. Liberia has no railways and only about 150 miles of motor highways. The rivers are the main arteries of traffic. In the interior native porters carry most of the goods transported. There is no telegraph or telephone service in the country, but Monrovia has cable and wireless connections with Europe and America.

GOVERNMENT. The Constitution, modeled on that of the United States, vests executive power in a president, assisted by a cabinet of eight members, and legislative power in a legislature of two houses. Suffrage is restricted to Negroes owning land. English is the official language. President in 1933, Edwin Barclay, whose term expires in 1936.

HISTORY. Nearly three years after the Liberian government had requested the League of Nations' assistance in meeting its acute financial problems, the League Council in the autumn of 1933 approved a plan for the rehabilitation of the country worked out by the League's Committee on Liberia, headed by Viscount Cecil of Chelwood. The plan provided for the appointment by the League Council of a chief foreign adviser to the Liberian President and of three foreign commissioners to supervise the administration of the three Liberian provinces. The appointment of one or two health experts was provided for as well as the continuation of the financial adviser contracted for under the American loan of 1926, with increased authority to control Liberian revenues and expenditures. The cost of the plan to the Liberian government was estimated at \$150,000 annually.

The United States government sent Maj. Gen. Blanton Winship, Judge Advocate General of the U. S. Army, to Liberia in March, 1933, to aid in restoring satisfactory diplomatic relations and in formulating the League's rehabilitation plan. Objections to the plan were raised by Louis Grimes, Liberian Secretary of State, before the League's special committee at Geneva in October. He objected in particular to the post of adviser being filled by a citizen of any country having special financial relations with Liberia or territory contiguous to Liberia. General Winship met this objection in part by stating that the United States would not insist on the appointment of an American as adviser. Other objections raised were that the plan was unconstitutional, that it would impose a dictatorship on the country, and that it favored the Firestone rubber interests. While ratification of the League's plan was being considered by the Liberian legislature the United States State Department on Nov. 18, 1933, published the notes and other documents pertaining to the Liberian situation together with

an introductory statement which included the following paragraph:

The American government expects Liberia to accept the (League) plan of assistance and will be pleased in this case to cooperate in its successful execution. Should the present administration at Monrovia reject this opportunity, such action could only be construed as opposition to reforms, the urgent desirability of which has been apparent for over three years, and as indifference to the welfare of a million and a half native peoples of Liberia.

The Liberian legislature, however, had not acted upon the plan up to the end of the year. See LEAGUE OF NATIONS.

LIBIA, lh'i-á. An Italian colonial possession in North Africa between Egypt on the east and Algeria and Tunisia on the west. It is divided into the administrative districts of Tripolitania (q.v.) and Cyrenaica (q.v.).

LIBRARY ASSOCIATION, AMERICAN. The official organization of librarians in the United States and Canada, founded for the purpose of promoting library service and librarianship. In 1876 its membership was 103; in 1933 it was more than 11,000. The activities of the association are carried on by its officers; by more than 60 voluntary committees and boards, engaged in studying such problems as book buying, book selection, cataloguing, and library work with the blind and with the foreign born; by hundreds of voluntary workers; and by the members of the headquarters staff, which numbered more than 50 in 1933.

The association issues various books and pamphlets for libraries and in the interest of library progress. During 1933 it confined its publishing activities chiefly to books which would have some bearing on current library problems and on current national and international issues. In a series called *Exploring the Times*, designed to point the way to good reading and intelligent thinking, five booklets were issued: *World Depression—World Recovery*, by Harry D. Gideonse; *Collapse or Cycle?*, Paul H. Douglas; *Living with Machines*, William F. Ogburn; *Meeting the Farm Crisis*, J. H. Kolb; and *Less Government or More?*, Louis Brownlow and Charles S. Ascher. *NRA the New Deal for Business and Industry*, a bibliography compiled by Jerome K. Wilcox, was a timely index to codes, rulings, interpretations, and the like, issued from official sources or appearing in magazines and newspapers.

To help libraries solve their own difficulties *Current Problems in Public Library Finance* was outstanding. There was also a *Replacement List of Fiction*, designed as a guide in selecting for replacement books worn out by hard usage. Two important new editions were *Simple Library Cataloging* and *The Library in the School*. A book which linked the newer concepts of higher education to effective book service was *Circulation Work in College and University Libraries*. In the more general field *Popular Libraries of the World* was significant. *Library Literature, 1921-1932* was a monumental index to all library literature in English appearing after 1920; it served as a supplement to Cannons' *Bibliography of Library Economy* which, in turn, goes back to 1876.

The association issues three periodicals: *Bulletin of the American Library Association*, a monthly which includes the annual reports, the conference proceedings, and the yearly handbook, and which in 1933 included also a number devoted to library salary statistics; *The Book-*

list, published monthly as a guide to the selection and purchase of current books; and *Subscription Books Bulletin*, a quarterly which presents critical estimates of subscription books and sets sold currently by canvassing agents.

The fifty-fifth annual conference was held in Chicago Oct. 16-21, 1933, with more than 3000 librarians present. On this occasion, the John Newbery Medal, given annually by the section for library work with children for the most distinguished children's book of the year, was awarded to Mrs. Elizabeth Foreman Lewis for her book, *Young Fu of the Upper Yangtze*.

The council approved passage as written of Senate Bill 1928 and H. R. 5853 of the Seventy-third Congress, first session (on copyright); reaffirmed its belief in the importance of strong State library agencies; indorsed the plan of setting up work relief projects for unemployed librarians in connection with State and community adult education and leisure time programmes for the unemployed; adopted new requirements for library schools; and urged the elimination of politics from the organization and control of public libraries, national, State, and municipal.

In accordance with its plan of adding \$1,000,000 to the permanent fund of the American Library Association, the Carnegie Corporation of New York in November, 1933, turned over to the association \$200,000. An appropriation bill passed by Congress in February provided for the continuance of the work of placing Decimal Classification numbers on Library of Congress cards in the card division of the national library. This work originated in a voluntary committee of the American Library Association.

Officers for 1933-34 elected at the fifty-fifth annual conference, were: Gratia A. Countryman, librarian, Public Library, Minneapolis, president; Louis Round Wilson, dean, Graduate Library School, University of Chicago, first vice-president; Ralph Munn, director, Carnegie Library, Pittsburgh, Pa., second vice-president; Matthew S. Dudgeon, librarian, Public Library, Milwaukee, Wis., treasurer. The headquarters of the association are at 520 North Michigan Avenue, Chicago.

LIBRARY ASSOCIATION, THE. An organization of libraries and librarians throughout the British commonwealth of nations, founded in 1877 and incorporated by Royal charter in 1898. Its primary objects are: to unite all persons engaged or interested in library work by holding conferences and meetings for the discussion of bibliographical questions and matters affecting libraries; to promote the better administration of libraries; to promote whatever may tend to the improvement of the position and qualifications of librarians; and to hold examinations in librarianship, and to issue certificates of efficiency. It maintains a professional register of more than 800 qualified persons, classified as Fellows (F.L.A.) and Associates (A.L.A.); candidates for senior positions in libraries are selected from amongst those who have been elected to fellowship or associateship. The school of librarianship at the University of London is conducted under the joint auspices of the university and of the association. Among the association's publications are: *The Library Association Record*; *The Library Assistant*; *The Library Association Year Book*; *The Year's Work in Librarianship*; and *The Subject Index to Period-*

icals. The president elected for 1934 was S. A. Pitt, F.L.A. The secretary was P. S. J. Welsford, F.I.S.A. Headquarters are at Chaucer House, Malet Place, W. C. 1, London.

LIBRARY PROGRESS. Depleted book stocks, in the face of increasingly heavy demands for library service, created major library problems in 1933. Since 1929 the number of library users has increased about four or five millions, according to estimates of the American Library Association, making the total registration now about twenty-four or twenty-five millions. During the early months of 1933, 61 sample libraries reported the number of books borrowed increased 41 per cent over 1929. On the basis of American Library Association figures, it is estimated that the total circulation for 1932-33 was approximately 400,000,000.

The inevitable wearing out of books, because of the increased circulation, together with the reduction in the number of new books purchased, has seriously reduced the number of books in the libraries. This is particularly true of the larger cities, notably Detroit and Chicago. In Chicago the public library reported that 40 per cent of its reference questions could not be answered because of the depleted book stock.

In October, 1933, the Council of the American Library Association adopted minimum standards covering registrations and circulation per inhabitant in various sized cities, the type of staff, book collection, and financial support. (See the *Bulletin* of the Association, November, 1933.)

LIBRARY EXTENSION. Financial difficulties during the last four years have curtailed the extension of library facilities to new districts. The number of county libraries has remained practically the same, but the increase in library service has not kept pace with the increase in population. A survey sponsored by the League of Library Commissions showed that, while in the last seven years the percentage of people without such service had dropped from 43 to 38 per cent of the population in 42 States, the actual number of people not reached by libraries had increased by 1,208,502. The number unserved by local public libraries in these States is approximately 43,000,000.

To reach the population which now has no adequate library service, library leaders are advocating larger units of service such as county or regional libraries. An example of the trend is the project for library service to the people adjacent to Knoxville, Tenn., under the Tennessee Valley Authority. In Michigan a plan for regional library service has been set up by the Michigan State Library, while in Louisiana the Library Commission submitted to the Tax Board a proposal for a complete State-wide service. Pennsylvania has renewed its appropriation for State aid for newly established county libraries.

A programme for the establishment of libraries in national parks was approved on Apr. 18, 1933, by Secretary of the Interior Ickes, as the culmination of a three-year study of the project by the Committee on Libraries in National Parks of the American Library Association. At the Conference of Southern Leaders, called by President Graham of the University of North Carolina, a long-time programme for library extension in the South was drawn up and approved.

In Canada the publication of *Libraries in Canada*, the result of a survey of library conditions made under a grant from the Carnegie Corporation of New York, has stimulated dominion in-

terest in libraries. In Prince Edward Island, with the aid of grants from the same source, a demonstration of a province-wide library service has recently been initiated. In the Fraser Valley, British Columbia, an experiment begun under a Carnegie grant in 1930 is to be continued with tax support, according to a recent announcement.

ADULT EDUCATION. Shorter work weeks for the employed and existing unemployment have been in a large measure responsible for the great increase in library use. Much of the increase has been of a serious nature and has emphasized the need of strengthening the library's educational services for adults.

The inclusion of educational activities in the programme of the Federal relief administration has made it possible for many libraries to further their adult education activities with the aid of temporary emergency workers. In some States, Pennsylvania for example, libraries have participated in State-wide planning for adult education.

Typical of possible rural library services is the long distance readers' advisory service, initiated by the Oregon State Library, which in six months reached 441 students, scattered in all the rural counties, who enrolled in courses in 116 different subjects. "Rural and State-wide Adult Education and the Library" was the subject of a panel discussion at the October conference of the American Library Association under the leadership of Benson Y. Landis, secretary of the American Country Life Association. The American Association for Adult Education has issued a report on *Rural Adult Education* which emphasizes the need for library services.

STATUS OF LIBRARIANS. Efforts to reduce the number of students in library schools, because of the large number of librarians already unemployed, were responsible for part of the drop of 300 in the registration in 31 library schools for 1932-33. Directors of library schools see a tendency toward higher entrance requirements with greater emphasis on scholarship and personal qualifications. Minimum requirements for library schools, presented by the Board of Education for Librarianship, were adopted by the Council of the American Library Association in October, 1933, replacing standards adopted in 1925.

Enrollment of unemployed librarians under the Civil Works Administration and other Federal administrations for special educational and library projects was being carried on in December.

International Relations. In October the International Committee of the International Federation of Library Associations held a meeting in Chicago, attended by delegates from 16 countries. Efforts of the American Library Association and of the Medical Library Association to secure a reduction in the price of certain German scientific periodicals were, with the aid of the librarians of certain foreign countries, successful during the year.

PUBLICATIONS. Outstanding items of the year 1932-33 include: *An Introduction to Library Science*, by Pierce Butler; *Our Starving Libraries*, by R. L. Duffus; *The Right Book for the Right Child*; *The College Library Building, Its Planning and Equipment*, by James T. Gerould; *Library Service in Great Britain*, by J. M. Mitchell; *A History of the Public Library Movement in Great Britain and Ireland*, by John Minto; *The Periodicals Directory*, edited by Carolyn F. Ulrich; *A Fifteen-Year Program of Building De-*

velopment: the Extension Program of the Public Library of the District of Columbia; The University Libraries, by M. Llewellyn Raney; *Elementary School Libraries*, the twelfth yearbook of the department of elementary school principals of the National Education Association; *The Secondary School Library*, published as Bulletin, 1932, no. 17, of the United States Office of Education; and *Who's Who in Library Service*.

GIFTS AND NEW BUILDINGS. The Carnegie Corporation of New York made grants during the year to the American Library Association, college libraries of the United States and Canada, Rosenwald county libraries in the South, two Canadian library experiments, the University of Denver School of Librarianship, Emory University Library School, Hampton Institute Library School, and for eleven fellowships for advanced study.

There were dedicated during the year the Enoch Pratt Free Library in Baltimore, Md., the Edward L. Doheny, Jr. Memorial Library at the University of Southern California, the Deering Memorial Library at Northwestern University, and the Myrtle Reed library at the University of Denver. Construction on the Rundel Memorial library and fine arts building in Rochester was begun in December, 1933, with a grant of \$263,000 from the Federal government for labor and materials. The Rundel Fund amounts to more than a million dollars.

LIBYA. See **LIBIA**.

LIECHTENSTEIN, lĭk'ten-shtĭn. A small independent European principality lying between the eastern extremity of Austria, and Switzerland. Area 65 square miles; population (1930 census), 10,213. Vaduz, the capital, had 1715 inhabitants. Agriculture is the chief occupation of the people. Cattle rearing is highly developed. Cotton weaving, leather goods, and pottery, are other industries. The chief products are wheat, wine, marble, and lumber. Revenue for 1933 was estimated at 1,854,500 Swiss francs; expenditure, 1,434,176 francs (Swiss franc equals \$0.194 at par). The public debt on Jan. 1, 1933 amounted to 4,803,691 francs. The constitution provides for a Diet of 15 members elected by universal suffrage for four years. Reigning Prince in 1933, Francis I.

LIGHT, VELOCITY OF. See **PHYSICS**.

LIGHTHOUSES. The annual report of the U. S. Commissioner of Lighthouses stated that at the end of the fiscal year on June 30, 1933, there were 22,495 marine aids to navigation maintained by the service, a net increase over the previous year of 921; mostly in the smaller and less expensive aids marking improved waterways. During the year various improvements were made in the aids; 103 lights were changed from fixed to flashing or occulting and the illuminant of lights was changed as follows: 153 to electric and 69 to acetylene. Four radiobeacons were established, increasing the total number to 104; radio and sound signals were synchronized for distance finding at 4 stations. The number of aids discontinued was 1718. The airways division, which had been conducted as a division of the Lighthouse Service, but under the administrative supervision of the Assistant Secretary for Aeronautics, was separated from this Service at the close of June 30, 1933.

The use of electricity, especially in connection with automatic lights, was extended. A 36-inch flashing unit, using a 1000-watt electric lamp,

has been developed for unwatched lights requiring high candlepower. A photo-electric-controlled alarm system was developed for checking the operation of an unwatched electric light. A new type of flashing light, using 18-inch and 10-inch pressed glass doublets and spherical mirror, and mounted in pairs on 2 drums and oriented for any desired group combination of flashes, was developed. Electric lamps better adapted for use with the various types of lighthouse lenses than are the commercial type of electric lamps, were developed. Reliable and efficient electric minor lights using duplex lanterns, lamp changers, primary cells, and single-unit photronic cells for control were developed. Battery relays for switching to standby battery, when the service battery becomes exhausted, have been introduced. Range lanterns using compound lenses and 4-volt miniature lamps developing 11,000 candlepower and operated on primary cells with photronic cell control have been placed in service.

A plan was developed for distinctive flashing light characteristics to distinguish between buoys at night, according to their purpose, and a service test of this system was commenced; by this means, for the first time, a buoy will show by its flash whether it marks the side of a channel, a danger or middle ground, a fairway, a wreck, and the use of color of lights will be reserved to show the side on which to pass. A new flash characteristic, the interrupted quick flash, was made use of in this system.

The improvement of lighted buoys by the conversion of the Pintsch gas type to acetylene has been continued. Spar buoys continue to be replaced by steel nun and can buoys.

The improvement of fog signals was extended by the installation of Diesel and electric-driven compressors and air diaphones, typhons, and other types of modern signals. The conversion of steam fog-signal plants to modern air and electric fog signals was extended. Electric-control apparatus for fog signals was further perfected. Improved types of fog-signal apparatus operating air horns consisting of self-contained units with electric motors direct connected to rotary-type compressors operating the signal on low pressure and with a minimum of air consumption and having semiautomatic control, were introduced. With this type of apparatus the necessity for providing air receivers, extensive air-line systems, numerous valves, etc., for controlling the characteristic of the signal is eliminated, and it provides an efficient signal unit at a lower cost for installation and for annual maintenance and operation.

An extended test and demonstration was made on Lake Michigan of mobile radiobeacons for the avoidance of collisions, with favorable results. A new radiotelephone transmitter was constructed and installed at the Detroit Lighthouse Depot for direct communication with Detroit River light station, or with vessels equipped for service.

Appropriations for the maintenance of the Lighthouse Service totaled \$9,799,280 for the fiscal year 1933, and for special works, \$3,860,000; the larger part of this latter amount was, however, later withdrawn; there were also allotted from Department appropriations for printing and binding, \$23,000, and for contingent expenses, \$5825. There was received and deposited in the Treasury the following: From sale of government property, \$16,344, rent of buildings, etc., \$4391; forfeitures by contractors, \$8; reimbursement for property destroyed or damaged, \$3062; work done

for private interests, \$1198; commissions received on telephones, \$22; total, \$25,025.

At the close of the year lightships were maintained on 37 stations, and 47 lightships were in commission, of which 10 were regular relief ships. In addition there were 3 lightships, No. 86, No. 87, and No. 78, laid up awaiting extensive reconditioning, and 2 lightships, No. 41 and No. 13, awaiting survey with a view to their being sold. Seven lightship stations were permanently discontinued during the year as follows: Great Round Shoal, Mass.; Hedge Fence, Mass.; Bartlett Reef, Conn.; Northeast End, N. J.; Fenwick Island, Del.; Charleston, S. C., and Milwaukee, Wis.

LIGHTING. See ELECTRICAL ILLUMINATION.

LIME. The sales of lime in 1933 by producers in the United States amounted to 2,224,000 short tons, valued at \$14,006,000, according to figures furnished by lime manufacturers to the U. S. Bureau of Mines, from whose preliminary report this article is taken. This is an increase of 13.5 per cent in quantity and 13.8 per cent in value compared with sales of 1,959,990 tons valued at \$12,302,231 in 1932, and follows a decrease of 28 per cent in quantity and 34 per cent in value in 1932 compared with 1931. The average unit value per ton in 1933 was \$6.29; in 1932 it was \$6.28. The total sales of lime in 1933 include 822,000 tons of hydrated lime valued at \$5,512,000, a decrease of 3.6 per cent in quantity with increase of 2.6 per cent in value as compared with 1932 (852,251 tons valued at \$5,370,273). The average value per ton of hydrated lime in 1933 was \$6.71; in 1932 it was \$6.30.

Sales of lime in 1933 for construction are estimated at 507,000 tons compared with 596,825 tons in 1932, a decrease of 15 per cent. This followed a decrease of 37 per cent in 1932 from the 1931 production. Sales of lime for chemical uses are estimated at 1,486,000 tons, an increase of 33 per cent over 1932 (1,118,591 tons). These figures include 252,000 tons of dead-burned dolomite, an increase in this commodity of 86 per cent over the output (135,733 tons) for 1932. Exclusive of dead-burned dolomite the estimated sales of chemical lime in 1933 was 1,234,000 tons, an increase of 26 per cent over the corresponding sales (982,858 tons) in 1932. The sales of lime for agricultural use are estimated at 231,000 tons, a decrease of 6 per cent in 1933 from 1932 (244,574 tons).

Of the 38 States reporting a production of lime

LIME SOLD BY THE PRODUCERS IN THE UNITED STATES IN 1932 AND 1933

State	1932 Total lime		1933 (estimated) Total lime	
	Short tons	Value	Short tons	Value
Ohio ...	475,485	\$2,511,368	524,000	\$3,213,000
Pa.	374,244	2,327,181	430,000	2,790,000
Mo.	174,427	1,034,850	225,000	1,117,000
W. Va. ..	82,757	427,241	121,000	628,000
Tenn. ...	106,706	496,200	119,000	575,000
Ala.	92,359	492,248	112,000	557,000
Ill.	62,436	450,033	83,000	527,000
Va.	78,771	435,085	82,000	451,000
Ind.	58,440	351,240	63,000	338,000
Mass. ...	68,959	527,305	55,000	465,000
Mich. ...	38,610	267,520	44,000	277,000
Calif. ...	29,925	284,467	37,000	353,000
Texas ...	35,903	340,859	35,400	340,000
Vt.	29,187	207,032	29,500	209,000
Wis.	27,283	209,868	27,100	178,000
Md.	26,536	171,312	26,000	160,000
Other ..	197,962	1,766,472	211,000	1,828,000
Total .	1,959,990	\$12,302,231	2,224,000	\$14,006,000

in 1933, 22 showed increased and 16 decreased output, but for 12 of these States the gains or the losses shown by the preliminary figures were practically negligible and may easily change with the completion of final figures.

The table, shown in the first column, compares the estimated sales of lime in 1933, by States, with the sales in 1932.

Figures of exports and imports of lime for 1933 as compiled by the Bureau of Foreign and Domestic Commerce, and subject to revision, are available for 11 months only and are as follows: Exports, 3292 short tons, value \$50,629; general imports (exclusive of dead-burned dolomite) 8449 short tons, value \$96,035; imports of dead-burned dolomite 1067 short tons, value \$10,400.

LINDBERGH SURVEY. See AERONAUTICS.

LIONS CLUBS, INTERNATIONAL ASSOCIATION OF. An organization of business and professional men's clubs, formed in Chicago, Ill., in 1917 for the purpose of promoting good government and good citizenship, encouraging efficiency, and promoting high ethical standards in business and the professions. In 1933 it was composed of 2680 clubs, with a membership of approximately 80,000. At the international convention held in St. Louis, Mo., in July, 1933, the following officers were elected: President, Roderick Beddow, Birmingham, Ala.; vice-presidents, Vincent C. Hascall, Omaha, Neb., Richard J. Osenbaugh, Denver, Colo., and Edwin R. Kingsley, Parkersburg, W. Va. Melvin Jones, the founder of the association, has been secretary-treasurer from the first. The official magazine is *The Lion*. Headquarters are at 332 South Michigan Avenue, Chicago, Ill.

LIQUOR REGULATIONS. See PROHIBITION, and the various States.

LITERATURE. See FRENCH LITERATURE; GERMAN LITERATURE; ITALIAN LITERATURE; PHILOLOGY, MODERN; ETC.

LITERATURE, ENGLISH AND AMERICAN. For the American publishers, 1933 was a year of turmoil. The year began with a succession of bankruptcies, mergers, reorganizations, all the symptoms of the kind of financial distress which only the strongest houses could withstand. With the announcement of plans for regulating competition under the NRA, however, these troubles almost ceased, and the publishers could give consideration to the codes intended to govern their own and allied industries. In these, as in many other codes, the troublesome questions concerned price-fixing. Some, but not all, of these codes were effective by the end of the year. It was apparent, however, that publishers felt more cheerful than for some time. They were even attacking, of their own motion, such problems as remainders, with their bad effect on the markets. Book-sellers, too, were hopeful that the NRA might relieve their distresses, such as department store competition and their troubles with the book clubs.

But all this business activity did not make for more or better books. If the quality of 1933 books was not lower than in other years, and it probably was not, there was a notable absence of adventurous experiment either with form or content. And in quantity there seemed to have been a falling-off, except perhaps in sociology and economics. But then publishers were not to be blamed if, by and large, they made timely appeal their first demand on a manuscript during 1933.

In England, publishing was quieter, but the complaint was made there that the business was

falling into fewer and fewer hands, just as in America.

FICTION. The leading novel of the year, *Anthony Adverse*, by Hervey Allen, was semi-historical and huge. Escape into the imagined past was the vogue, shown in such popular works as, Kenneth Roberts' *Rabble in Arms*, the early years of the American Revolution; Herbert Gorman's *Jonathan Bishop*, Paris in 1870; David Garnett's *Pocahontas*; Roark Bradford's *Kingdom Coming*, negroes affected by the Civil War; Liam O'Flaherty's *The Martyr*, the Irish civil war; Mary Borden's *Mary of Nazareth*, the mother of Christ; G. B. Lancaster's *Pageant*, history of Tasmania; Walter D. Edmunds' *Erie Water*, about the building of the Erie Canal.

Regional stories maintained their popularity in America, exemplified in *The Farm*, by Louis Bromfield, about rural Ohio; *Bonfire*, by Dorothy Canfield, rural Vermont, sympathetically treated; *This Bright Summer*, anonymous, rural Vermont, not sympathetically treated; *South Moon Under*, by Marjorie Kinnan Rawlings, the Florida scrub; *Union Square*, by Albert Halpern, New York City; *Let the Hurricane Roar*, by Rose Wilder Lane, the western plains; *As the Earth Turns*, by Gladys Hasty Carroll, a Maine farm; *God's Little Acre*, by Erskine Caldwell, about brutal Southern poor whites; *The Woods Colt*, by Thames Williamson, Ozarks hill-billies; *Within This Present*, by Margaret Ayer Barnes, a Chicago family since 1914.

John Galsworthy's last novel concluded the story of the Cherrils, *One More River*. Virginia Woolf published *Flush: a Biography*, about the Brownings' dog. John Masefield's *Bird of Dawn* evoked the delights of the sea. H. M. Tomlinson's *Snows of Helicon* described a dreamer in this harsh world. A. J. Cronin's *Grand Canary* was set on a steamship. Hugh Walpole's *Vanessa* was the fourth and last about the Herries family. In Richard Aldington's *All Men Are Enemies* was shown a man bruised by the war. Alice Tisdale Hobart's *Oil for the Lamps of China* was about cruel American business there. Conrad Aiken's *Great Circle* was modernistic writing about a betrayed husband. Kay Boyle's *Gentlemen, I Address You Privately* gave a queer set of perverted people.

Booth Tarkington, in *Presenting Lily Mars*, dealt with theatre life. Jack Conroy's *The Disinherited* was proletarian stuff, dear to the communist critics. Robert Nathan, in *One More Spring*, fancifully portrayed people in the depression. *Eva Gay*, by Evelyn Scott, was set in many parts of the world, a triangle story. *The Master of Jalna*, by Mazo de la Roche, was the fourth of the Whiteoaks books. Jews in old and new worlds were shown in *Hear, Ye Sons*, by Irving Fineman. A. S. M. Hutchinson gave a yielder to temptation in *The Soft Spot*.

A number of novels tried to foretell the future, such as, *Public Faces*, by Harold Nicolson, about diplomacy and politics; *Man's Mortality*, by Michael Arlen, the future internationalism; *Full Circle*, by John Collier; and *Sometime*, by Robert Herrick. There was also a considerable group of satirical novels, including H. G. Wells' *The Bulpington of Blup*, on a life-evader; Stella Gibbons' *Cold Comfort Farm*, on the English rustic novel; *Mandoo, Mandoo!* by Winifred Holthy, on civilization; *Lose with a Smile*, by Ring Lardner, on baseball and popular songs; *England, Their England*, by A. G. McDonell;

The Fault of the Angels, by Paul Horgan, on culture in American small cities; *Wonder Hero*, by J. B. Priestley, on the English press; *Gay Life*, by E. M. Delafield, on the search for pleasure.

Among first novels that attracted attention were: Janet Beith's prizewinner, *No Second Spring*, about the troubles of a Scotch minister; *Not to Eat, Not for Love*, by George A. Weller, life at Harvard University; *Original Design*, by Eardley Beswick, about modern machine industry; Ainsworth Morgan's *Man of Two Worlds*, an Eskimo in civilized life; *Desirable Young Man*, by Patrick Carleton, college life in England; *Livingstones*, by Derrick Leon, an interior decorating firm; *Hostages to Fortune*, by Elizabeth Cambridge, family life in Oxfordshire. But the youngsters showed little that was new.

Perhaps the best of the romantic novels was Alexander Laing's *The Sea Witch*, about a clipper ship. There were few others, but William McFee's *No Castle in Spain*, and Lord Dunsany's *The Curse of the Wise Woman* must be mentioned; the first was set in Latin America, the second in Ireland.

Humorous novels included P. G. Wodehouse's *Heavy Weather*; Anne Green's *A Marriage of Convenience*; Evelyn Waugh's *Black Mischief*. Fantasies made, naturally enough, a queer group: *Gabriel over the White House*, anonymous, showed angels leading the world out of depression; *Lost Horizon*, by James Hilton, made some aviators disappear over Tibet; Edith Olivier's *Mr. Chilvestor's Daughters* concerned a man mad about houses; and Francis Stuart's *Glory* and *Try the Sky* were symbolist and philosophical about the conflict between the spirit and the earthly.

The anonymous *The Gold Falcon* was poetic about separation of wife and husband. Wilson Follett's *No More Sea* showed Maine coast dwellers in revolt against the sea. Charles G. Norris' *Zest* was a warning against women. Isabel Paterson, in *Never Ask the End*, gave the triangle story up-to-date trimmings. The struggle between the generations was the subject of Zona Gale's *Papa La Fleur*. A semi-historical adventure and sea story was found in *Long Pennant*, by Oliver La Farge. W. R. Burnet, in *Dark Hazard*, wrote about a gambler and his wife. Graham Greene collected odd people on the *Orient Express*. Helen Hull's *Hardy Perennial* was a woman of forty in New York. Martin Hare's *The Enchanted Winter* showed rural life in Ireland. Wilson Wright's *Man Wants but Little* was about the interior of Cuba. It was not an exciting year in fiction.

SHORT STORIES. Volumes of short stories were both popular and distinguished this year. They included: *Winner Take Nothing*, by Ernest Hemingway; *After Such Pleasures*, by Dorothy Parker; *They Brought Their Women*, by Edna Ferber; *Ah King*, by William Somerset Maugham; *We Are the Living*, by Erskine Caldwell; *The First Lover*, by Kay Boyle; *The First Wife and Other Stories*, by Pearl S. Buck; *Legends of Angria*, now first published, by Charlotte Brontë; *The Lovely Lady*, by D. H. Lawrence; *Human Nature*, by Edith Wharton; *Death in the Woods*, by Sherwood Anderson; *Other Women*, by Katharine Brush; *The Woman on the Beast*, by Helen Simpson, also prophetic of the future; sporting stories by Gordon Grand, *Colonel Weatherford and His Friends*; *The Two*

Thieves, by T. F. Powys; *Don Juan and the Wheelbarrow*, by L. A. G. Strong; *The Delicate Fire*, stories of classical times, by Naomi Mitchison, with essays and poetry; *Mrs. Egg and Other Barbarians*, by Thomas Beer; *Haven's End*, by John P. Marquand.

POETRY. Depression or not, 1933 was a good year for poetry. W. B. Yeats' *Collected Poems* won him plaudits as "the greatest living poet," but he laid traps for his bibliographer by publishing also *The Winding Stair*, a title used in 1930, but not for the same poems, and *Words for Music Perhaps and Other Poems*, which appeared to be the 1930 volume retitled. Horace Gregory's *No Retreat* caused him to be regarded as one of the coming American poets. Edwin Arlington Robinson's *Talifer* was again long narrative. Robinson Jeffers' *Give Your Heart to the Hawks* showed him doing the same things as before. *The Collected Poems of Hart Crane* made his admirers mourn his death. Stephen Spender's *Poems* added him to the list of promising young Englishmen. Archibald MacLeish, Pulitzer prize winner, published *Poems 1924-1933*.

New poets won recognition by such works as: William Faulkner's *A Green Bough*; *The Boar and Shibiloth*, by Edward Doro; Leonard Barnes' *Youth at Arms*, war poetry; Leila Jones' *Assent to Autumn*; Anne Persov's *Whatever You Reap*; Berenice C. Dewey's *Poems*; Lawrence Lee's *Summer Goes On*. Established poets gave us: Walter de la Mare's *The Fleeting and Other Poems*; Ezra Pound's *A Draft of XXX Cantos*; Lizette Woodworth Reese's *Pastures*; Frances Frost's *Pool in the Meadow*; Edgar Lee Masters' *The Serpent in the Wilderness*; William Rose Benét's *Starry Harness*; Sara Teasdale's *Strange Victory*; Winifred Welles' *Blossoming Antlers*; Richard Aldington's *The Eaten Heart*; G. K. Chesterton's *The Queen of Seven Swords*; Willa Cather's *April Twilight and Other Poems*; Sacheverel Sitwell's *Canons of Giant Art*; John Peale Bishop's *Now with His Love*; Berenice Kenyon's *Meridian*; Harold Lewis Cook's *Spell against Death*; *Selected Poems of George Edward Woodberry*; Cale Young Rice's *High Perils*; Thomas C. Chubb's *Ships and Lovers*; Robert P. Tristram Coffin's *Ballads of Square-Toed Americans*.

Good light verse included: Ogden Nash's *Happy Days*; Newman Levy's *Theatre Gayed*; Margaret Fishback's *Out of My Head. A Book of Americans*, by Rosemary and Stephen Vincent Benét, and *Heroes and Heroines*, by Eleanor and Herbert Farjeon, were rhymed histories.

An exceptionally interesting anthology was *Texts and Pretexts*, by Aldous Huxley. Other anthologies were: *Poet's Gold*, by David Ross, chosen by radio presentation; and *Fifty Poets*, by William Rose Benét, each selection chosen by the poet.

DRAMA. With *Ah, Wilderness*, Eugene O'Neill returned to simplicity after much tortured psychologizing. Sean O'Casey, silent many years, appeared again with a strange poetic play, *Within the Gates*. Historical plays of importance were all British: John Masefield's *End and Beginning*, in poetry, about Mary Queen of Scots; Gordon Daviot's *Richard of Bordeaux* (Richard II); and Noel Coward's *Cavalcade*, England since the Boer War. Coward also published *Design for Living*, an amusing and empty comedy. Rapid-fire farces were: *Twentieth Century*, by Ben Hecht and Charles MacArthur, set on a train;

Sailor, Beware! by Kenyon Nicholson and Charles Robinson, set in Panama; and *Clear All Wires!* by Bella and Samuel Spewack, set in Russia. W. Somerset Maugham published *For Services Rendered*, a bitter piece about the war's effects, and *Sheppey. Both Your Houses*, by Maxwell Anderson, was political satire, and the Pulitzer Prize play. Sidney Howard's *Alien Corn* concerned an artist soul trapped in the Middle West, and his *The Late Christopher Bean* was adapted from the French. Two plays dealing with young women with advanced ideas were Rachel Crothers' *When Ladies Meet* and S. N. Behrman's *Biography*. Elmer Rice wrote strong propaganda in *We, the People*. C. L. Anthony's *Autumn Crocus* was sentimental comedy. Lennox Robinson spoofed Scandinavian and Russian drama in *Is Life Worth Living?* An anthology was volume vi of *Contemporary Drama*, by E. Bradlee Watson and Benfield Pressey.

ESSAYS. These were rather scanty. Semi-philosophical were: Osbert Burdett's *The Art of Living*; A. C. Ward's *What is This Life?*; A. E.'s *The Avatars*; G. K. Chesterton's *All I Survey*. Edith Sitwell's *The English Eccentrics* was biographical. Frank Sullivan's *In One Ear* was funny. Branch Cabell's *Special Delivery* was answers to correspondents. Oliver Baldwin's *Unborn Son* was topical. Henry Williamson's *As the Sun Shines* had to do with nature in Devon. These were literary: *Collected Essays of Robert Bridges*; *Later Critiques*, by Augustus Ralli; *Selected Essays*, by Anne C. E. Allison. There was also *Candelabra*, by John Galsworthy.

CRITICISM AND THE HISTORY OF LITERATURE. For no discoverable reason, 1933 brought to light a number of important books about poetry and poets. A. E. Housman's *The Name and Nature of Poetry* explained his own methods of composition and took an anti-intellectual position in criticism. At the opposite pole in criticism, T. S. Eliot tried to show *The Use of Poetry and the Use of Criticism*. Other noteworthy books about poetry in general were: Humbert Wolfe's *Romantic and Unromantic Poetry*; Lascelles Abercrombie's *Poetry: Its Music and Meaning*; John Sparrow's *Scene and Poetry*, attacking modernism; Elizabeth Drew's *Discovering Poetry*; Theodore Maynard's *Preface to Poetry*. Histories of poetry included: *The English Muse*, by Oliver Elton, and *Modern English Poetry, 1882-1932*, by R. L. Megroz. Studies of individual poets were: *William Blake*, by J. Middleton Murry; *The Lost Leader*, about Wordsworth, by Hugh I'Anson Fausset; *Edmund Spenser*, by B. E. C. Davis.

Shakespeare, the inexhaustible subject, was studied in: *On Reading Shakespeare*, by Logan Pearsall Smith; *Art and Artifice in Shakespeare*, by E. E. Stoll; *Aspects of Shakespeare*, by Lascelles Abercrombie and others; *Shakespeare under Elizabeth*, by G. B. Harrison.

About the drama, the theatre, and dramatists were: Gilbert Murray's *Aristophanes: a Study*; *The Theatre in My Time*, by St. John Ervine; *Since Ibsen*, by George Jean Nathan; *The Drama of the Medieval Church*, by Karl Young; *Watching a Play*, by C. K. Munro; *Three French Dramatists* (Racine, Marivaux, de Musset), by Arthur Tilley.

The novel was comparatively neglected, but Norman Collins' *The Facts of Fiction*; Pelham Edgar's *The Art of the Novel*; and Frederick Watson's *Robert Smith Surtees* did appear.

Among general works: R. D. Charques' *Contemporary Literature and Social Revolution* found that literature now was written too exclusively for the "classes"; Myron F. Brightfield proposed a pragmatist's method of judging literature in *The Issue in Literary Criticism*; Henry Hazlitt offered *The Anatomy of Criticism*; Granville Hicks' *The Great Tradition* was history of American literature from the standpoint of a radical in politics; George D. Berkhoff explained the principles of *Aesthetic Measure*; J. W. Cunliffe described *English Literature in the Twentieth Century*. Dealing with miscellaneous figures and forms were: Lytton Strachey's *Characters and Commentaries*; and Burton Rascoe's *Prometheans: Ancient and Modern*. An important work of reference was *The Oxford Companion to English Literature*, by Sir Paul Harvey.

BIOGRAPHY. Best sellers in this field in America were concerned, most often, with politics. Alice Roosevelt Longworth's autobiography, *Crowded Years*, found a large public. Critical esteem went to Marquis James' *Andrew Jackson: the Border Captain*, the first volume of a complete life; and to *John Hay*, by Tyler Dennett. Other American political figures were portrayed in *President Lincoln*, by William E. Barton; *William Penn*, by C. E. Vulliamy; *Beauregard, the Great Oricle*, by Hamilton Basso; *The Francis Preston Blair Family in Politics*, by William F. Smith; and self-glorification by Huey P. Long, *Every Man a King*.

American literary persons were given by James Truslow Adams in *Henry Adams*; by Gertrude Stein in *The Autobiography of Alice B. Toklas*, really her own autobiography; by Albert Mordell in *Quaker Militant. John Greenleaf Whittier*; in *The Journal of Gamaliel Bradford*; by Fairfax Downey in *Richard Harding Davis: His Day*; by Floyd Dell in *Homecoming*, an autobiography; by A. G. Keller in *Reminiscences of William Graham Sumner*.

Biographies justified because their subjects made money were: Harvey O'Connor's *Mellon's Millions*; H. J. Eckenrode and P. W. Edmunds' *H. H. Harriman*; and Thomas W. Lamont's *Henry P. Davison*. There was much American autobiography, such as *Julia Newberry's Diary*, of a young girl long dead; *Intimate Memories*, by Mabel Dodge Luhan; *Watching the World Go By*, by Willis J. Abbot; *He Went Away for a While*, by Max Miller; *The Long Road Home*, by John Moody; *With My Own Eyes*, by Frederick Palmer, and *Slanting Lines of Steel*, by E. Alexander Powell, the last two by war correspondents. Other Americans: *Wild Bill and His Era* (Wild Bill Hickok), by William Elsey Connelley; *Old Gimlet Eye*, about Smedley D. Butler, by Lowell Thomas. Also appeared volumes x, xi, and xii of *The Dictionary of American Biography*, edited by Dumas Malone.

British literary figures, always popular with biographers, were presented in: *Poor Splendid Wings*, about the Pre-Raphaelites, by Frances Winwar; *Shakespeare at Work, 1592-1603*, by G. B. Harrison; *Harlequin Sheridan*, by R. Crompton Rhodes; *Charles Lamb and His Contemporaries*, by Edmund Blunden; *The Life and Friendships of Dean Swift*, by Stephen Gwynn; *Macaulay*, by Arthur Bryant; *The Life of Katherine Mansfield*, by Ruth E. Mantz and J. Middleton Murry; *The Brontës*, by Irene Cooper Willis; *George Eliot*, by Anne Fremantle; *John Henry Newman*, by J. Elliot Ross; *Unpublished Letters*

of Samuel Taylor Coleridge, edited by Earl Leslie Griggs; *Lawrence and Brett*, by Dorothy Brett, the latest about D. H. Lawrence. And again there was much autobiography by writers: volume iii of *The Journals of Arnold Bennett*, 1921-1928; Storm Jameson's *No Time Like the Present*, and Vera Brittain's *Testament of Youth*, these two showing the effects of the World War on the artist; *Looking Back*, by Norman Douglas; *Under the Fifth Rib*, by C. E. M. Joad; *Celebrities and Simple Souls*, by Alfred Sutro; *It Was the Nightingale*, by Ford Madox Ford.

About British persons important politically: the first two volumes of Winston S. Churchill's *Marlborough*; the second volume of J. L. Garvin's *The Life of Joseph Chamberlain*, covering the years 1885 to 1895; two like-titled *Cecil Rhodes*, by William Plomer and Sarah Gertrude Millin, the second friendly, the first not; *Charles the First*, by Hilaire Belloc; *King Edward VII*, by E. F. Benson; *England's Elizabeth*, by Milton Waldman; *The Crimson Queen*, Mary I, by Daniel Henderson; *The Queen and Mr. Gladstone*, letters edited by Philip Guedalla; *John Hampden*, by Hugh Ross Williamson; *John Hampden's England*, by John Drinkwater; *Chinese Gordon*, by H. E. Wortham; *De Valera*, by Denis Gwynn; *More Memories*, by Margot, Lady Oxford; *Lord Jeffrey Amherst*, by J. C. Long; *British Agent*, by R. H. Bruce Lockhart, about an unusual diplomat.

Two interesting books about humble Britishers were: *Twenty Years A-growing*, by Maurice O'Sullivan, about life in the Basket Islands; and *The Autobiography of a Liverpool Irish Slummy*, by Pat O'Mara. Miscellaneous Britishers: *One Arm Sutton*, autobiography by F. A. Sutton, an adventurer; *Forty Years for Labrador*, by Sir Wilfred Grenfell; *Alfred Mond, First Lord Melchett*, by Hector Bolitho; *The Strange Life of Lady Blessington*, by Michael Sadleir; *Studies in Sublime Failure*, by Shane Leslie, about Newman, Parnell, and others; *Memories of a Misspent Youth*, by Grant Richards; *The Book of Talbot*, by Violet Clifton, his wife.

Continental and others interesting politically: *What Me Befell*, by J. J. Jusserand; *Metternich*, by Algernon Cecil; *Mazzini*, by Gwilym O. Griffith; *Ivan the Terrible and Boris Gudunof*, by Stephen Graham; *Always a Grand Duke*, by Alexander, Grand Duke of Russia; *Grey Wolf*, by H. C. Armstrong, about Mustafa Kemal; *Napoleon III*, by Robert Sencourt.

The Man of the Renaissance, by Ralph Roeder, was scholarly and sweeping biography of Savonarola, Castiglione, Machiavelli, and Aretino. Rebecca West did *St. Augustine*; G. K. Chesterton *St. Thomas Aquinas*; and Enid Starkie *Baudelaire*.

Important biographical books in addition: John Maynard Keynes' *Essays in Biography*, about the peacemakers of 1919, Malthus, and some economists; Glenway Wescott's *A Calendar of Saints for Unbelievers*; Stella Benson's *Pull Devil, Pull Baker*, about a down-and-out adventurer; R. B. Cunninghame-Graham's *Portrait of a Dictator*, about Lopez of Paraguay; volume i, 1813-1848, of *The Life of Richard Wagner*, by Ernest Newman; *The Unconquerable Tristan*, by B. M. Steigman, also Wagner; Morris Bishop's *The Odyssey of Cabeza de Vaca*; Robert Haven Schaufler's *The Unknown Brahms*; Edgcomb Pinchon's *Viva Villa!*

THE FINE ARTS. Herbert Read's *Art Now* dis-

cussed critically modern theories of painting and sculpture. *A Grammar of the Arts*, by Sir Charles Holmes, taught the beginnings of judgment. Roger Fry's *Characteristics of French Art*; Eric Underwood's *A Short History of English Painting*; and Masaharu Anesaki's *Art, Life, and Nature in Japan* studied national art histories, as did volume iv of Chandler Ruthfon Post's *A History of Spanish Painting*. Studies of techniques were: Gardner Hale's *Fresco Painting*; Herbert Maryon's *Modern Sculpture*; and Stanley Casson's *The Technique of Early Greek Sculpture*. Lloyd Goodrich's *Thomas Eakins* was both biographical and critical. W. E. Gladstone Solomon's *Essays on Mogul Art* was partly controversial. Big illustrated art gift books almost disappeared, but *Great Georgian Houses of America* was a pleasant survival.

RELIGION. The centenary of the Oxford Movement in England was celebrated by many books, such as a series of lives of the Tractarians, and a history by E. A. Knox, *The Tractarian Movement, 1833-1845*. The recent Oxford Group Movement, or Buchmanism, caused debate, for instance, *The Oxford Group Movement*, by H. H. Henson, and *The Buchman Groups*, by Ivor Thomas, both anti-Buchman; and *He That Cometh*, by Geoffrey Allen, pro-Buchman. Barthianism was explained again in John McConachie's *The Barthian Theology and the Man of Today*. W. R. Inge's *God and the Astronomers* reconciled science and religion by way of neo-Platonism, while Ernest W. Barnes' *Scientific Theory and Religion* offered a different reconciliation. Winfred Ernest Garrison's *The March of Faith* was a history of American churches since 1865, and Stuart Means' *Faith: an Historical Study* was of all Christendom. Two able books of apologetics were: *The Christian Belief in God*, by Alfred F. Garvie; and *What It Means to be a Christian*, by Arthur C. Headlam. Works advocating the "social gospel" were: Edmund B. Chaffee's *The Protestant Churches and the Industrial Crisis*; Francis Neilson's *The Eleventh Commandment*. Analyses of contemporary religious conditions were found in: *Religion Today*, by Arthur L. Swift and others; *Contemporary Religious Thinking*, edited by R. W. Searle and F. A. Bowers; *Problems of Protestantism*, by Lewis Gaston Leary. The difficulty of adapting the historic Jesus to the present world was faced in *The Ordeal of Western Religion*, by Paul Hutchinson; but P. W. Wilson asked *Is Christ Possible?* and answered yes. W. E. Orchard explained how he moved *From Faith to Faith*, that is, to Rome.

SOCIOLOGY. The most imposing and perhaps the most useful work in this field was the report of President Hoover's commission, *Recent Social Trends*. Of similar import were: Mauritz A. Hallgren's *Seeds of Revolt*, asking about the possibilities of revolution as a result of the depression, and finding them few; *What is American?* by Frank Ernest Hill; Horace M. Kallen's *Individualism, an American Way of Life*; William Ayloott Orton's *America in Search of Culture*, which was hopeful.

Concerned with the law and penology were: *Law and the Social Order*, by M. R. Cohen; *A Judge Takes the Stand*, by Joseph N. Ulman; *Trial by Prejudice*, by Arthur Garfield Hays; *The Untried Case*, by H. B. Ehrenmann, about Sacco-Vanzetti; *Prison Days and Nights*, by Victor Nelson.

The peering into the future, practiced in so many fields this year, appeared here with H. G. Wells' *The Shape of Things to Come*, and an odd shape it was, too. Other descriptions of or prescriptions for the future were: Herbert A. Miller's *The Beginning of Tomorrow*, a study of the possible international great society; Edward T. Devine's *Progressive Social Action*, how to ward off depressions and their consequences.

Local and anthropological studies included: Robert Marshall's *Arctic Village*; Hortense Powdermaker's *Life in Lesau*; Malcolm Ross's *Machine Age in the Hills*; Stanley Walker's *The Night-Club Era*, New York under prohibition; William Atherton DuPuy's *Hawaii and Its Race Problem*; Robert Gesner's *Broken Arrow*, about the American Indian now; Gene Fowler's *Timber Line*, journalism in Denver.

About women: a historical survey: *Women in Subjection*, by I. B. O'Malley; *Angels and Amazons*, about women and "causes," by Inez Hayes Irwin; *America Through Women's Eyes*, edited by Mary R. Beard. *100,000,000 Guinea Pigs*, by Arthur Kellett and Fred J. Schlink, was about the adulteration of foods and medicines. The problems following prohibition were discussed in *Toward Liquor Control*, by Raymond B. Fosdick and Albert L. Scott. Other sociological works: James M. Williams' *The Human Aspects of Unemployment and Relief*; Sidney Hook's *Toward the Understanding of Karl Marx*; Frederick E. Lumley's *The Propaganda Menace*; C. C. Regier's *The Era of the Muckrakers*; Edgar Sydenstricker's *Health and Environment*.

EDUCATION. Among the important books in this field during 1933 were: *Academic Illusions*, by M. Schutze, attacking the present methods of teaching literature in our schools and colleges; *Molders of the American Mind*, by Norman Woelfel, offering a new programme in place of following the Christian and capitalistic tradition; *Our Movie-Made Children*, by Henry James Forman, which showed the movie more effective and more dangerous than other forms of education; *The Illiteracy of the Literate*, by H. R. Huse, attacking the effectiveness of schools; *Native Education*, by H. A. Wyndham, how to educate in a dependency; and *The Nation at School*, by F. S. Marvin, proposals for reform of English schools.

POLITICS AND INTERNATIONAL. Two topics in this field elicited many books. First, Germany, in such works as Edgar Ansel Mowrer's *Germany Puts the Clock Back*, about her failure to govern herself since 1918; Calvin B. Hoover's *Germany Enters the Third Reich*, a dispassionate description of what happened and why; *The Brown Book of the Hitler Terror*, anonymously attacking; Oswald Garrison Villard's *The German Phoenix*, a defense of the Socialist régime. And of course Germany was discussed in many other books. Second, the programme of the new administration in America, in, for example, Franklin D. Roosevelt's own *Looking Forward*, made up of campaign speeches and his plans; Ernest K. Lindley's *The Roosevelt Revolution*; Alva Lee's *America Swings to the Left*; Cleveland Rogers' *The Roosevelt Program*.

General books, cross-sectioning contemporary governments, were: Sir Norman Angell's *From Chaos to Control*, asking whether a rational political world could be made; G. D. H. Cole and Margaret Cole's *The Intelligent Man's Review of Europe Today*; John Strachey's *The*

Coming Struggle for Power and The Menace of Fascism, prophesying the end of capitalism and universal communism; *The Modern State*, edited by Mary Adams, a collection of essays; Sir Stafford Scripps and others' *Problems of a Socialist Government*; Harold J. Laski's *Democracy in Crisis*, a lonely voice defending democracy; and *Recovery through Revolution*, a symposium edited by Samuel D. Schmalhausen, analyzing the present revolutionary states.

How to attain peace was sought in *Peacemaking*, by Harold Nicolson, a history of the 1919 Peace conference and a warning for the future; in *Cry Havoc!* a pacifist manifesto by Beverley Nichols. And *What Would Be the Character of the Next War?* by eighteen experts in frightfulness, seemed related to the problem of peace.

The latest information about Russia came in *The Great Offensive*, by Maurice Hindus; and *In Place of Profit: Social Incentives in the Soviet Union*, by Harry F. Ward. Concerning China were: Edwin D. Harvey's *The Mind of China*, and Agnes Smedley's *Chinese Destinies*. P. T. Ether-ton and H. Hessel Tiltman raised the question *Japan: Mistress of the Pacific?* Carleton Beals discussed with vehemence *The Crime of Cuba*. R. C. K. Ensor considered *Courts and Judges in France, Germany, and England*. John W. Wheeler-Bennett's *The Wreck of Reparations* was about the Lausanne agreement.

Three books concerned with the government of the United States were: *Tattered Banners*, by Talcott Powell, attacking Treasury raids by the veterans; *The United States in World Affairs*, volume ii, by Walter Lippmann and William O. Scroggs; and *Government of the People*, by D. W. Brogan, British comment on American political institutions.

ECONOMICS. Attracting most attention in this field were the books by members of the Roosevelt "brain trust," such as: *Prices*, by George E. Warren and Frank A. Pearson, which advocated the compensated dollar, and may have persuaded the President to his gold-buying policy; *The Industrial Discipline and the Governmental Arts*, by Rexford G. Tugwell, insistence on government planning; and *The Modern Corporation and Private Property*, by Adolf A. Berle, Jr., and Gardiner C. Means, which was obscurely published in 1932 but re-issued this year, and showed how an economic state was arising within the political one. Two books favoring controlled inflation were: *Inflation: What Everybody Wants to Know about It*, by Donald B. Woodward and Marc A. Rose; and *The Primer of Inflation*, by Earl Sparling.

At the beginning of the year Technocracy was on everybody's tongue, and a number of books about it appeared, among which Allen Raymond's rather unsympathetic *What is Technocracy?* was outstanding. The most impressive publication by a technocrat was Bassett Jones' *Debt and Production*, which explained the new economics based on statistics. Other writings about the problem of debt were: *The Internal Debts of the United States*, edited by Evans Clark, showing how to keep the debts serviced; *The A B C of War Debts*, by Frank H. Simonds; and *Money versus Man*, by Frederick Soddy, which offered a programme for getting along without debt.

Interesting economic history was found in: J. Laurence Laughlin's *The Federal Reserve Act*, about its origin and practice; Frederick L. Nuss-

baum's *A History of the Economic Institutions of Modern Europe*; and *The Investor Pays*, by Max Lowenthal, about the bankruptcy of a great railroad. Insurance against unemployment was considered in: *Job Insurance*, by John B. Ewing; and *Standards of Unemployment Insurance*, by Paul H. Douglas.

John Maynard Keynes' *The Means to Prosperity* advocated international action; *Stamp Scrip*, by Irving Fisher and others, offered a device for solving the money shortage; H. V. Hodson's *Economics of a Changing World* meant to bring the science up to date. Other noteworthy books: Ramsay Muir's *The Interdependent World and Its Problems*; Harold Rugg's *The Great Technology: Social Chaos and the Public Mind*; Edward S. Mead and Bernhard Ostrolenk's *Voluntary Allotment: Planned Production in American Agriculture*; George R. Geiger's *The Philosophy of Henry George*.

HISTORY. Readers of history during 1933 apparently preferred it recent, say, since the War. So we had the very lively and important *War Memoirs of David Lloyd George*, volumes i and ii; volume v, *Over Here, 1914-1918*, of Mark Sullivan's *Our Times*; Gilbert Seldes' *The Years of the Locust*, which was about the United States since 1929; J. Hampden Jackson's *Europe Since the War*; George Seldes' *World Panorama, 1918-1933*; and the photographic history, *The First World War*, edited by Laurence Stallings. Another photographic history, from the Civil War to the World War, was *The American Procession*, edited by Agnes Rogers and Frederick Lewis Allen; and covering the same period was volume ii of James Truslow Adams' *The March of Democracy*. Other histories of fairly late times were: *Fifty Years of Europe*, by J. A. Spender; *Beginning the Twentieth Century*, about the generation that made the War, by Joseph Ward Swain; *The Victorian Aftermath, 1901-1914*, by Esmé Wingfield-Stratford; *The White Armies of Russia*, by George Stewart; *Modern Italy*, by George B. McClellan, from the Congress of Vienna; *Toward the New Spain*, by Joseph A. Brandt, from 1833; *The River War*, by Winston S. Churchill, about the British conquest of the Sudan; a number of books occasioned by the Century of Progress, such as, Henry Justin Smith's *Chicago's Great Century*, and Milo M. Quaife's *Checacou*; and Sir J. A. R. Marriott's *Queen Victoria and Her Ministers*.

The last named author also published an outline history, *The Evolution of Modern Europe, 1453-1932*. F. J. C. Hearnshaw's *Conservatism in England*, history of a party; T. G. P. Spear's *The Nabobs*, about the English in India; *The Oxinden Letters, 1607-1642*, edited by Dorothy Gardiner; and volume ii, *Australia and New Zealand, of The Cambridge History of the British Empire*, edited by J. H. Rose and others, were noteworthy contributions to British history.

Other works of American history were: volume x of *A History of American Life, The Rise of the City*, by A. M. Schlesinger; *Revolution 1776*, by John Hyde Preston, attempted debunking; *War out of Niagara*, by Howard Swiggett, the Revolution in western New York; *The Explorers of North America*, by John Bartlett Brebner; *Mexico before Cortez*, by J. E. Thompson; *The Lost Empires of the Iltzas and Mayas*, by Theodore A. Willard; *Republicanism Religion*, by G. Adolf Koch, a history of American political thought.

Other histories deserving mention were B. J.

Kidd's *The Counter-Reformation*, and M. C. Burkitt's *The Old Stone Age*.

SCIENCE. That some scientists wished to pause to take stock was apparent in such books as *The New Background of Science*, by Sir James Jeans; *Time, Matter, and Values*, by Robert Andrews Millikan; *Philosophical Aspects of Contemporary Science*, by C. E. M. Joad; and *The Limitations of Science*, by J. W. N. Sullivan. Sir Arthur Eddington's *The Expanding Universe* was astrophysical, but philosophical also, as was H. Levy's *The Universe of Science*. The biologists, however, were confident and vocal, in such books as: J. B. S. Haldane's *Science and Human Life*; H. M. Parshley's *The Science of Human Reproduction*; H. S. Jennings' *The Universe and Life*; Alan Frank Guttman's *Life in the Making*. Specialized biological works included Carroll Lane Fenton's *The World of Fossils*, and L. O. Howard's *Fighting the Insects*. Sir William Bragg's *The Universe of Light* was a notable work in physics; P. W. Bryan's *Man's Adaptation of Nature* in geology; Walter Goodacre's *The Moon* in astronomy; and Sir Napier Shaw's *The Drama of Weather* in meteorology. A general work was H. Gordon Garbedian's *Major Mysteries of Science*. Logan Clendening's *Behind the Doctor* was medical history.

TRAVEL AND SPORT. *The House of Exile*, by Nora Waln, about aristocratic life in China, won plaudits. But the largest single group in this field was books about life at sea, such as: *Grain Race*, by Alan Villiers, sailing from Australia to England; *Yachts under Sail*, edited by Alfred F. Loomis, a collection of lovely photographs; *Log of the Sea*, by Felix Riesenbergl; *A Million Miles in Sail*, the life of a sea captain by J. H. McCulloh; *Rolling Round the Horn*, by Claude Muncaster; *Bowsprit Ashore*, by Alexander H. Bone. *The Log of the "Betsy Ann"*, by Frederick Way, Jr., was about a river steamboat.

The jungles of the Amazon were described in *Pindorama*, by Desmond Holdridge, and *Jungle Memories*, by Henry H. Russell. E. E. Cummings' *Eimi* was curiously written about a journey to Russia, where Irina Skariatina was *First to Go Back*, that is, first aristocrat. Hendrik Willem Van Loon made *An Indiscreet Itinerary* of Holland. Walter Starkie went off with the *Raggle Taggle* (Hungarian gypsies). Elliott Merrick traveled *True North* to Labrador. The good old South Seas were described in *Islands Under the Wind*, by Hassoldt Davis; *Africa in Congo Solo*, by Emily Hahn; Haiti in *Black Bagdad*, by John H. Craigie, a United States marine.

R. G. Burton published *The Book of the Tiger*; and Clyde Beatty and Edward Anthony showed how tigers and lions were tamed in *The Big Cage*. Roy Chapman Andrews described *The New Conquest of Central Asia*. Elizabeth Knowlton wrote about climbing the Himalayas in *The Naked Mountain*. Courtney Borden's *Adventures in a Man's World* was about hunting and fishing.

LITHUANIA, lith'ü-a'n'i-ä. A Baltic republic, established Feb. 16, 1918, from former Russian territory. Capital, Kaunas (Kovno), although Vilna, which was transferred to Poland by the Council of Ambassadors in 1923, was still claimed by the Lithuanians in 1933 as their capital. The Lithuanian Telegraph Agency ("Elta") furnished much of the statistical information in this article.

AREA AND POPULATION. The area under Lithuanian sovereignty, including Memel (q.v.), is

21,489 square miles and the population Jan. 1, 1933, was 2,422,000. In addition, Lithuania claims an area of 10,422 square miles, with about 1,000,000 inhabitants, which was incorporated in Poland. The chief towns are Kaunas (Kovno), 113,000; Klaipeda (Memel), 37,400; Siauliai (Shavli), 23,249. The population is about 80 per cent Roman Catholic, the remainder being Protestants (9.5 per cent), Jews (7.3 per cent), and Greek Orthodox (2.5 per cent).

EDUCATION. At the 1923 census, 35.9 per cent of all males and 38.8 per cent of all females over five years of age were illiterate. In 1931-32, there were 2541 primary schools, with 245,685 pupils; 48 secondary schools, with 4862 pupils; and 53 high schools, with 15,249 students. The University of Kovno had 4475 students in 1932.

PRODUCTION. Nearly 77 per cent of the population is engaged in agriculture, and 10 per cent in commerce, industry, and communications. Of the total area, 49.6 per cent is arable land, 25.3 per cent meadow and pasture, and 15.9 per cent forests. The estimated production of the chief crops in 1933, with 1932 figures in parentheses, was (in metric tons): Rye, 568,660 (573,920); wheat, 256,460 (237,500); barley, 238,950 (229,500); oats, 356,380 (362,270); peas, 54,010 (66,760); vetch, 23,020 (25,820); flax, 14,260 (17,990); linseed, 15,890 (21,070); potatoes, 1,918,800 (1,598,680). Livestock in 1931 included 597,050 horses, 1,297,376 cattle, 1,221,450 sheep, and 1,568,543 swine.

The value of industrial production (of establishments employing five or more workers) was estimated at 300,000,000 lits in 1932, 303,800,000 lits in 1931, and 263,500,000 lits in 1930 (1 lit = 10 cents at par). In 1933, there were 245 concerns producing foodstuffs, 177 woodworking establishments (including 107 sawmills), 56 textile mills with an annual production of 25,000,000 lits, 63 metal factories and machinery foundries with an annual output of 15,000,000 lits, 47 soap, match, and other chemical works with an annual production of 6,000,000 lits, 61 paper and printing establishments, and 132 garment factories.

COMMERCE. Lithuanian exports in 1932 declined to 189,125,800 lits and imports to 166,953,500 lits, from 273,119,100 lits and 277,959,100 lits, respectively, in 1931. The leading export items, by value, in 1932 were: Meat, 56,840,000 lits; dairy products, 44,030,000 lits; cellulose, 19,410,000 lits; flax and hemp, 9,130,000 lits; eggs, 6,280,000 lits. The chief import items were: Textile tissues, 19,150,000 lits; threads and yarns, 10,740,000 lits; machines and motor cars, 11,610,000 lits; coal, etc., 9,930,000 lits; gasoline and other petroleum products, 7,810,000 lits. Great Britain displaced Germany as Lithuania's most important market in 1932, taking 41.39 per cent of her exports, as against 39.14 per cent purchased by Germany. However, Germany supplied 40.27 per cent of Lithuania's total imports, against only 10.78 per cent furnished by Great Britain. Exports to the United States in 1933 were valued at \$372,691; imports from the United States, \$192,602. Total exports in 1933 were valued at 160,227,400 lits; imports were valued at 142,176,200 lits.

FINANCE. According to a report of the United States Bureau of Foreign and Domestic Commerce, the closed 1931 budget showed a surplus of 4,800,000 lits, with total revenues of 340,086,000 lits, while the closed 1932 budget showed a

deficit of 5,300,000 lits, with total revenues of 266,000,000 lits. The deficit was covered from the Treasury reserve, which at the end of 1932 totaled 14,897,400 lits. The Lithuanian Telegraph Agency reported the 1932 revenue at 293,260,000 lits and expenditure at 278,477,900 lits. The national debt on Sept. 1, 1933, amounted to 136,331,252 lits (140,380,001 lits on Sept. 1, 1932). Of the 1933 total, 134,352,207 lits represented the foreign and 1,979,045 lits the domestic debt.

COMMUNICATIONS. The railway, telegraph, and telephone systems are state owned. In 1932, the state railways carried 4,447,018 passengers and 1,599,317 tons of freight. Total operating and upkeep expenses were 31,625,279 lits and receipts were 34,414,269 lits. There were 9738 miles of highways. In 1931, 981 vessels of 445,500 tons entered the port of Memel.

GOVERNMENT. The constitution as amended May 15, 1928, vested executive power in the President, elected for seven years, who was to act through a responsible ministry. Legislative power was vested in a diet elected for five years by universal suffrage. Parliament was dissolved Apr. 17, 1927. No elections had been held from 1926 up to 1933 and government remained in the hands of a small nationalist intelligentsia, with legislation being enacted by presidential decree. President in 1933, Antanas Smetona, who was reelected by a board of directors Dec. 11, 1931. Premier and Minister of Finance, Juozas Tubelis.

HISTORY. Although a large proportion of her people were dependent upon agriculture, which felt the effects of the world depression most acutely, Lithuania showed some signs of recuperation early in 1933. It was the only country in Eastern Europe to retain an effective gold standard currency and consequently Kovno became the banking capital of the Baltic states, with favorable economic effects upon the entire country. In order to check the depletion of its gold reserves, Lithuania in February, 1933, created a commission to supervise foreign trade with a view to reducing imports. Special import licenses were required for iron, coal, salt, cotton, etc. At the same time foreign goods were excluded by means of higher tariffs, with the result that the domestic industries were kept busy supplying local needs. In the spring of 1933, the unemployed numbered less than 1 per cent of the population. However the economic upswing noted in other countries did not occur in Lithuania during the remainder of the year. On the contrary industrial activity declined, increasing unemployment. Lower prices for agricultural and manufactured goods, an unbalanced budget, and the smallest returns from foreign trade in 11 years all contributed to the unfavorable trend in 1933.

The country was much perturbed during the year by the growth of the Nazi movement in Memel, with its large German population. Nazi sympathizers won a sweeping victory in the Memel elections of May 23, 1933, but the Lithuanian minority increased its representation in the municipal assembly. Determined not to allow a relaxation of its control over its only seaport, the Lithuanian government sought to weaken the Hitlerite influence in Memel. On August 24 it abrogated the agreement between the German Protestant Church and the Protestant Church of Memel Territory. The explanation given for this action was that the capture of control over the German Protestant Church by Hitler's "German Christians" had eliminated one of

the parties to the agreement. Later the Lithuanian Governor of Memel dismissed 101 Germans from the civil service. While opposing German Fascism, the national congress of the Tautininkai party, which controlled Lithuania, adopted fascism as a governing principle on Dec. 16, 1933. President Smetona was named leader of the party and Premier Tubelis became head of its central committee. President Smetona announced that elections would be held on a corporative basis. The Soviet-Lithuanian convention for the definition of aggression, signed in London, July 5, 1933, was ratified and went into effect on Dec. 14, 1933.

Lithuania was unofficially represented at the Fourth Economic Conference of the Baltic States, held in Riga, Latvia, Sept. 8-9, 1933. See *LATVIA under History*. On June 23, 1933, Lithuania made a "token" payment of \$10,000 instead of the \$132,091 war-debt payment due the United States government and on Dec. 15, 1933, it made a \$10,000 payment instead of the \$105,474 due.

LITTLE ENTENTE. Designation applying to the three countries of Czechoslovakia, Rumania, and Yugoslavia (q.v.), whose governments in 1921 and 1922 concluded bilateral treaties forming an alliance to maintain the status quo in central Europe as established by the treaties of Versailles, St. Germain, Trianon, and Neuilly. The terms of the treaties were extended on May 21, 1929, on which date the three governments also signed an agreement providing for the conciliation, arbitration, and judicial settlement of their mutual disputes.

A closer political and economic union was effected by the Little Entente pact signed by the foreign ministers of the three countries at Geneva, Feb. 16, 1933. This extended indefinitely the treaties of alliance and the Act of Conciliation, Arbitration, and Judicial Settlement. In addition the pact gave the alliance "an organic and stable basis." It established a permanent council, composed of the foreign ministers of the three powers, and a permanent secretariat, with a branch office in Geneva. The council, which was to meet at least three times a year, was to direct the foreign policy of the Little Entente and its unanimous approval was required for all important treaties concluded by member states. An economic council also was created "for the progressive coördination of the economic interests of the three states, whether among themselves or in their relations with other states."

The closer union of the Little Entente in 1933 was the direct result of the victory of Hitler's National Socialist movement in Germany, whose primary objective was declared to be the revision of the territorial and other clauses of the peace treaties. Fearful that France would be forced to make concessions at the expense of its allies, the Little Entente powers prepared to defend themselves against a possible coalition of Germany, Italy, and Hungary. The conclusion during 1933 of Mussolini's Four-Power Pact (see *ITALY under History*) increased their determination to free themselves from dependence on France and the other great powers. This desire was reflected in the vigorous effort made by Rumania and Yugoslavia to enroll Bulgaria in the Little Entente and to establish friendly relations with the other Balkan states.

The Little Entente further strengthened its position by the conclusion of a non-aggression pact, containing a definition of aggression, with the Soviet Union at London on July 4, 1933. This

freed Rumania from fear of a Soviet attack to regain Bessarabia. The conference of the Little Entente foreign ministers at Sinaia, Rumania, Sept. 25-27, 1933, was attended for the first time by King Carol of Rumania and King Alexander of Yugoslavia. Foreign Minister Beneš of Czechoslovakia and Foreign Minister Titulescu of Rumania held a second meeting on December 10 at Kosice, a small town in the province of Slovakia, Czechoslovakia, whose return to Hungary had been demanded by Hungarian revisionists. At the conclusion of the conference M. Titulescu frankly warned Hungary, Austria, and Germany that the territorial revision of the peace treaties meant

tributed by the Federal Emergency Relief Administration. The entire programme cost about \$35,000,000. A tax levied on marketed live hogs to finance this programme and also the Corn-Hog Production programme for 1934 was set at \$.50 per 100 pounds in November and \$1 in December, and was expected to be \$1.50 in January, and \$2 per 100 pounds until the end of the 1934-35 hog marketing year. The Corn-Hog Production programme is designed to reduce corn production 25 per cent and hog production 20 per cent in 1934. The price of hogs in late 1933, although considerably above that of 1932, was below the price level of feeds and other agricultural products.

MEAT SLAUGHTERED UNDER FEDERAL INSPECTION IN THE UNITED STATES IN 1933

	Cattle	Calves	Hogs	Sheep, lambs
Number slaughtered:				
1933	8,655,000	4,907,000	47,226,000	17,854,000
1932	7,025,000	4,492,000	45,245,000	17,899,000
5-year average*	8,139,000	4,594,000	46,505,000	16,086,000
Total dressed weight of slaughtered animals:				
1933—lbs.	4,541,000,000	505,000,000	8,226,000,000	673,000,000
1932—lbs.	3,940,000,000	454,000,000	7,831,000,000	682,000,000
5-year average*—lbs.	4,201,000,000	460,000,000	8,078,000,000	617,000,000
Exports:				
1933—lbs.	16,835,000 ^b		726,213,000 ^c	321,000
1932—lbs.	12,514,000 ^b		661,186,000 ^c	259,000
5-year average*—lbs.	17,017,000 ^b		941,121,000 ^c	907,000
Per capita consumption:				
1933—lbs.	40.10 ^b		57.90	5.36
1932—lbs.	35.37 ^b		58.06	5.45
5-year average*—lbs.	38.54 ^b		58.46	5.03

* Average for 1928, 1929, 1930, 1931, 1932.

^b Beef and veal

^c 14,410,000 lbs. fresh, 116,778,000 lbs. cured, and 10,847,000 lbs. canned pork, and 584,178,000 lbs. lard.

^d 8,133,000 lbs. fresh, 99,433,000 lbs. cured, and 8,713,000 lbs. canned pork, and 552,135,000 lbs. lard.

^e 12,041,000 lbs. fresh, 217,537,000 lbs. cured, and 10,110,000 lbs. canned pork, and 683,558,000 lbs. lard.

war. The Economic Council of the Little Entente was scheduled to hold its first meeting in Prague, Czechoslovakia, early in January, 1934. For the text of the Little Entente pact of Feb. 16, 1933, see *Current History*, May, 1933, p. 200. Also see GERMANY, HUNGARY, ITALY, BULGARIA, AUSTRIA, and FRANCE under *History*; UNITED STATES OF EUROPE.

LITVINOFF, MAXIM. See UNION OF SOVIET SOCIALIST REPUBLICS; UNITED STATES.

LIVESTOCK. Unusually large surpluses, particularly of hogs and beef cattle and their products, resulting largely from the low purchasing power of consumers in this country and abroad, characterized the livestock situation in 1933. The condition was aggravated further by trade restrictions established by foreign countries, limiting importations, and by the efforts of various European countries to stimulate livestock production, especially hogs. Meanwhile, beef and pork production in this country continued without decrease.

The Agricultural Adjustment Administration of the United States Department of Agriculture attacked the situation by attempting to remove a portion of the surplus of livestock products from the market and adjust farm production more in accord with consumption and exports. An emergency hog-marketing programme, designed to bring a measure of relief to hog marketing in the fall and winter of 1933-34 resulted, during the period August 23 to September 29, in the government purchasing about 6,140,000 pigs weighing less than 100 pounds each, and 221,000 pregnant sows weighing over 240 pounds each. The pork from the smaller pigs was converted into fertilizer tankage and the carcasses from the larger pigs and sows were cured. Approximately 100,000,000 pounds of cured pork obtained in this manner was dis-

tributed by the Federal Emergency Relief Administration. Increased numbers of cattle and calves on farms, totaling 65,129,000 head on Jan. 1, 1933, high-priced feed, and unfavorable range and pasture conditions over much of the country caused increased fall marketing of beef cattle. Some aid to the beef situation, which was depressed, was expected from the purchase of about 25,000,000 pounds of canned beef by the Federal Surplus Relief Corporation early in 1934.

Sheep enjoyed a better position than cattle and hogs. The peak in sheep production was evidently past and sheep and lamb slaughter fell below that of 1932. The 1933 lamb crop was estimated at 28,988,000 head, which was about 2.5 per cent less than the 1932 lamb crop. The smaller lamb crop was further reduced by unfavorable spring weather and feed shortage in the late lambing States. Consequently, there were heavy death losses. Wool prices were favorable. (See WOOL.)

There were also indications of improvement in the horse and mule markets. The stronger demand for horses stimulated prices above 1932 levels, but they were still less than half the calculated average price for 1910-14.

Although the numbers of hens and pullets of laying age on farms in 1933 were slightly larger than in 1932, production per bird and per flock was decidedly less. As a result, prices were fairly well maintained for both fresh and storage eggs. Unusually large marketing of hens occurred during the early summer. Heavy receipts of turkeys for the fall holiday season resulted in price declines which were reflected in the market for other classes of poultry.

INTERNATIONAL CONDITIONS. Primary interest in international conditions was related to the action taken by the principal European meat-producing countries in limiting production to a point where the products could be profitably dis-

posed of, and the regulations of the importing countries to stimulate production and limit imports. The United States was mainly interested in the control of foreign hog production and its effect on marketing in the two principal European importing countries, the United Kingdom and Germany.

The embargo since 1926 on importations of fresh pork into Great Britain caused European exporting countries to turn to the production of cured pork products. The resultant increase of bacon imports into England coupled with the general decline in commodity prices caused abnormally low bacon prices and resulted in severe losses to British producers. British production was organized and licensed under the terms of the Agricultural Marketing Act. Total foreign imports of cured pork were limited to about 862,000,000 pounds annually. On November 10 this quota was further reduced about 16 per cent until Feb. 28, 1934, but Dominion allotments were increased. Canada was limited to a maximum of 2,500,000 cwt. annually, Denmark was allowed 62 per cent of the foreign supply, and the United States 6.3 per cent. As a result, during the latter part of the year bacon prices on British markets advanced sharply.

Imports of bacon, ham, and lard by the United Kingdom for the period Nov. 23, 1932 to Sept. 14, 1933 were reduced about 20 per cent as compared with the preceding year, resulting in totals of 1,114,209,000 pounds, 99,802,000 pounds, and 307,581,000 pounds, respectively. Bacon imports from Denmark during the year decreased more than 20 per cent as compared with 1932.

Germany almost eliminated foreign competition in lard by placing an import duty of 100 marks per 100 kilos, effective on July 19. Domestic production was thereby stimulated. A considerably larger proportion of the lard imports of Germany were received from Denmark during the last part of the year. Hogs marketed in Germany during the year were about 10 per cent less than in the preceding year, and bacon imports, principally from the Netherlands, although larger than usual, decreased 38 per cent.

Hog products consumed by the other European importing countries, France, Czechoslovakia, Austria, Belgium, and Italy, are so much smaller than the importations of the United Kingdom and Germany that although several of them took action to stimulate domestic production and reduce importations, the effect on world supplies was of less importance.

In the hog marketing year ended Sept. 30, 1933, Denmark exported 692,971,000 pounds of bacon to the United Kingdom. As a result of the import limitations and expansion of the industry in Great Britain there resulted a marked overproduction in Denmark, necessitating special government control of hog production. Increased competition for the bacon market of the United Kingdom since 1926 from the Baltic states, Poland, and later the Netherlands, played an important part in the situation. The Danish Hog Control Law, which became effective in February, 1933, was designed to reduce hog slaughtering, maintain the domestic bacon price, and restrict exportations to Great Britain in accord with British import regulations. Under this plan production was controlled by card permit. The plan was financed by taxes on all hogs slaughtered weighing over 110 pounds. Sows were so reduced by this plan that it was anticipated that produc-

tion and supplies would be brought in line with British and home demand by the end of 1933 or early in 1934.

In 1931 hog numbers reached relatively high levels in the Netherlands and prices fell below production costs. The increased competition on the British bacon markets further depressed the situation. By an act passed in August, 1932, the government took over complete charge of hog production and marketing. It was made illegal to own hogs over 22 pounds in weight that were not ear marked under the government limitation. Bacon hog marketing and exports were controlled and the price of bacon hogs fixed. The whole plan was financed by a tax of from 4.75 to 5.28 cents per pound live weight on all hogs killed for domestic consumption. As hog production in the Netherlands declined before the measure was put into effect, it was unnecessary to exert the curb on production which is in the form of a tax of 5 guilders per head on all pigs above the allotted numbers. Exports of hog products from the Netherlands were over 10 per cent less in 1932-33 than in 1931-32.

Exports of frozen pork carcasses from New Zealand to Great Britain showed an increase from 147,021 in the year ended Sept. 30, 1932 to 301,986 carcasses in the year ended Sept. 30, 1933.

A phenomenal increase in Brazilian exports of lard to Great Britain was reported during 1933. In recent years less than one million pounds of lard have been exported by Brazil, principally to France and Germany. By mid August, 1933, 4,950,000 pounds had been shipped to Great Britain and it was expected that this would reach 11,000,000 pounds by the end of the year.

Limitation was also attempted in the production of beef and dairy products in Denmark by slaughtering old and unprofitable cows and converting the carcasses into meat meal. In the fall of 1932, 22,000 head were disposed of, but the funds were insufficient to go further. The second plan was started in March, 1933, and by October 1, 85,000 cows had been slaughtered. It was expected that the number would reach 125,000 by the end of the year. The offerings toward the end of the year were enlarged as a result of a relatively dry summer and reduced pasturage. In July, 1933, there were in Denmark nearly 10 per cent less calves and heifers that had not calved than in 1932.

The beef exports of New Zealand increased materially for the year ended Sept. 30, 1933, to 310,678 quarters as compared with 195,313 in the 1932 period. Boneless beef exports also increased about 20 per cent in the same period. Canadian cattle exports of 28,000 head during the first seven months of 1933 were more than double those in the corresponding period of 1932. Attempts were made to stimulate beef production in the Union of South Africa and Rhodesia by offering bounties on export beef.

World sheep numbers were reduced to a point where sheep occupy an advantageous position. During the 12 months ended Sept. 30, 1933, there were 2,165,757 mutton carcasses and 8,856,549 lamb carcasses exported from New Zealand. This represented a considerable reduction as compared with the preceding year. A severe drought in South Africa reduced the numbers of sheep about 5,000,000 head.

The Fifth World's Poultry Congress, held at Rome, Italy, from September 6 to 15, was elabo-

ately arranged with sections of general and specialized interest. It was attended by some 1400 delegates from 48 countries. National exhibits were staged by Bulgaria, Canada, Denmark, France, Germany, Great Britain, Hungary, Italy, Japan, Yugoslavia, Lithuania, Netherlands, Spain, and the Vatican state.

RESEARCH. Continued attention was given to quantitative factors in livestock production as applied to both the feeds used and the marketable products. Studies of the value and utilization of feeds were no longer limited to the gains in weight, but special attention was given in many such studies to the quality of the carcass and the palatability of different cuts of meat.

As a result of the wide interest in the United States in the English market for Wiltshire and Cumberland sides, the North Dakota Agricultural Experiment Station studied the qualities desired by the English market and attempted to determine why American Wiltshire sides are judged inferior to the Danish product. Wiltshire sides from hogs of lard and bacon breeds, and crosses between them, were shipped to England for observation.

Interest in pastures increased because of the more economical production possible where pastures and forage crops are utilized. Investigations were designed to study the composition, quality, and biological value of forage and pasture crops at different stages of growth and as affected by the curing process. An extensive series of studies was conducted by Woodman, et al., at the University of Cambridge, on the influence of various factors such as soil type, season, intensity of grazing, fertilizers, and artificial drying on the chemical and botanical composition, and feeding value of the pasture herbage. Studies at the Colorado and Ohio Agricultural Experiment Stations were especially concerned with the vitamin contents of hay plants and alfalfa. The yield and composition of alfalfa was found to vary with the stage at which it was cut in investigations in New South Wales. The results of these studies demonstrate the importance of the wide variety of factors in influencing the feeding value of the plants.

The importance of minerals, particularly lime and phosphorus, for normal development has been well demonstrated and interest continued in determining sources of these products and the antirachitic vitamin which is needed for their assimilation. Sardine oil and other fish oils were compared with cod-liver oil as sources of the vitamin for poultry at the Nebraska and Washington Agricultural Experiment Stations. Although the potency of these oils was less than that of cod-liver oil, they were nevertheless effective in preventing rickets if sufficient quantities were fed. McDonald and Massengale were able to significantly raise the vitamin D potency of the eggs laid. The increase was, however, very small as compared with the extra amount of the vitamin that had to be added to the ration of the hens.

The many technical phases of livestock production continued to receive the active attention of research workers in this field. Many findings of fundamental importance to a scientific understanding of the every-day nutrition and breeding problems were reported during the year.

CHANGES IN PERSONNEL. Dr. W. F. Holst, head of the poultry department at the University of California, died on Jan. 28, 1933. Doctor Holst

was well known for his important contributions on the protein and vitamin requirements for growth, reproduction, and egg production in poultry.

Louis Vinke, head of the animal husbandry department at the Montana Agricultural college, resigned July 31 to engage in commercial work.

Dr. Joseph B. Lindsey, head of the department of plant and animal chemistry at the Massachusetts Agricultural College, retired Dec. 26, 1932. Dr. Lindsey has made important contributions in the field of animal nutrition.

Professor H. H. Kildee, head of the animal husbandry department at Iowa State University, and Prof. E. L. Anthony, head of the dairy department in the Michigan State Agricultural College, were each appointed dean of agriculture in the respective institutions.

R. S. Stephenson, associate professor of animal husbandry at Iowa State College, resigned on January 1 to engage in farming.

M. O. North was appointed assistant professor of poultry husbandry at Wyoming University vice F. J. Kohn, deceased.

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LOANS. See RAILWAYS; BANKS AND BANKING.

LOCKOUTS. See STRIKES AND LOCKOUTS.

LOEB, JAMES. An American banker and philanthropist, died near Murnau, Bavaria, Germany, May 27, 1933. He was born in New York City Aug. 6, 1867. On his graduation from Harvard University in 1888 he became a member of the New York banking firm of Kuhn, Loeb and Co., of which his father, Solomon Loeb, was founder. He retired, however, in 1901, devoting

himself thereafter to his many cultural and philanthropic interests. The most important of these was the Loeb Classical Library, which he established in 1912 for the purpose of reviving interest in the humanities. Its scope was to cover 25 centuries of Greek and Latin literature, with original texts and English translations side by side on opposite pages. By 1933 more than 250 volumes had been published. In recognition of this achievement there was conferred on him the honorary degrees of Ph.D. by the University of Munich and of LL.D. by Cambridge University. Also he was made a trustee of the American School of Classical Studies in Athens and a member of the Society for the Promotion of Hellenic Studies, the Society for the Promotion of Roman Studies, and the Deutsche Archäologische Institut.

Deeply interested in music and himself a cellist of ability, Mr. Loeb founded and endowed in New York City in 1905 the Institute of Musical Art, which was incorporated 20 years later into the Juilliard Musical Foundation. He was also one of the donors of the Music Building at Harvard and presented to the Fogg Museum of that institute his extensive collection of Aretine pottery. In 1916 he assisted in founding, and thereafter supporting, the Deutsche Forschungsanstalt für Psychiatrie in Munich, one of the first institutions for the systematic study of the causes of mental disorders and their prevention and cure. His published works, all translations, include Paul Decharme's *Euripides and the Spirit of His Drama* (1906); Maurice Croiset's *Aristophanes and the Political Parties at Athens* (1909); Philippe Legrand's *The New Greek Comedy* (1917); and Auguste Couat's *Alexandrian Poetry under the First Three Ptolemies* (1930). At the time of his death he was staying at Hochried, his estate on the Staffelsee in southern Bavaria, where he had lived intermittently since 1905.

LOEB CLASSICAL LIBRARY. See PHILOLOGY, CLASSICAL.

LOMBOK. See NETHERLAND INDIA.

LONDON ECONOMIC CONFERENCE. See ECONOMIC CONFERENCE, WORLD.

LONDON NAVAL TREATY. See NAVAL PROGRESS.

LONG, SEN. HUEY. See LOUISIANA under Political and Other Events.

LORD, CHESTER SANDERS. An American journalist, died at Garden City, N. Y., Aug. 1, 1933. Born at Romulus, N. Y., Mar. 18, 1850, he attended Hamilton College during 1869-70 and then began his newspaper career as associate editor of the Oswego (N. Y.) *Advertiser*. Removing to New York City in 1872, he joined the staff of the *Sun* as a reporter and rapidly rose through the ranks as suburban editor, assistant night city editor, and assistant managing editor to managing editor, holding the latter position from 1880 until his retirement in 1913. With Charles A. Dana, the brilliant editor of the *Sun*, he succeeded in making that paper noted for its literary style, terse, strong, and clear, through the able reportorial staff that he assembled. Among the *Sun*'s "graduates" were Frank Ward O'Malley, Arthur Brisbane, Samuel Hopkins Adams, Edwin C. Hill, Will Irwin, Frank M. O'Brien, and Walter Prichard Eaton.

Mr. Lord's resourcefulness as a managing editor was frequently tested, but his greatest triumph was the system of gathering election returns

which he devised in the national election of 1884. On that occasion, despite news from the Associated Press to the contrary and although it had been a bitter opponent of the Democratic candidate during the campaign, the *Sun* was the first paper to concede Cleveland's victory in New York State. Later in the '90's, as a result of the *Sun*'s breach with the Associated Press, Mr. Lord developed with William M. Laffan the Laffan News Bureau, which adequately supplied the paper with its foreign and domestic news over a period of 25 years. He was also one of the most ardent foes of sensational journalism, holding that "a cheap literature produces cheap mentality and consequently a cheap people."

Mr. Lord served after 1897 as a regent of the University of the State of New York, and in 1921 was elected chancellor of the board of regents. During 1923-25 he was president of the National Institute of Social Sciences. He wrote *The Young Man and Journalism* (1922).

LOS ANGELES. See AQUEDUCTS.

LOUISIANA. POPULATION. The population of the State on Apr. 1, 1930, according to the Fifteenth Census, was 2,101,593; in 1920 it was 1,708,509; in 1933, by Federal estimate, 2,153,000. New Orleans, the chief city, had (1930) 458,762 inhabitants; Baton Rouge, the capital, 30,729.

AGRICULTURE. The following table shows the acreage, production, and value of the principal crops for 1933 and 1932:

Crop	Year	Acreage	Prod. Bu	Value
Cotton . . .	1933	1,283,000	486,000*	\$22,346,000
	1932	1,668,000	611,000*	18,330,000
Sugar cane .	1933	215,000	3,125,000*	10,721,000
	1932	223,000	3,339,000*	10,730,000
Rice	1933	369,000	14,760,000	11,513,000
	1932	410,000	15,990,000	6,556,000
Corn	1933	1,198,000	15,574,000	8,877,000
	1932	1,261,000	17,906,000	6,625,000
Sweet potatoes	1933	74,000	5,180,000	2,849,000
	1932	84,000	5,544,000	2,218,000
Hay (tame) .	1933	176,000	198,000*	1,584,000
	1932	170,000	221,000*	1,503,000
Potatoes . . .	1933	41,000	2,337,000	1,729,000
	1932	40,000	2,160,000	1,469,000

* Bales. † Tons.

MINERAL PRODUCTION. Continued decline in the production of petroleum in the State's northern fields brought their year's output for 1932 down to 10,123,000 barrels, as against 12,244,000 for 1931. Fields adjacent to the coast, on the contrary, continued to increase production, attaining a total of 11,355,000 barrels for 1932, as against 9,560,000 for 1931. Thus the output for the entire State, 21,478,000 barrels (1932), was but 1 per cent short of that for 1931. The Gueydan and Darrow fields were opened in the coastal area.

The production of natural gas declined to 194,000,874 M cu. ft. (1932), or by 14.6 per cent from the total for 1931. Largely the decline was attributable to diminished activity in the production of carbon black, one of the chief applications of the Louisianian product. Draft on the Louisiana fields for piping to the southern States farther east was reduced by the pipe line's drawing on a natural-gas field in the area of Jackson, Mississippi.

Activity in the State's deposits of sulphur was resumed. Production occurred in Iberia parish, and the Grande Ecaille dome in Plaquemine parish was developed by the Freeport Sulphur Company on a large scale. An amendment to the State constitution, adopted by popular vote in November, 1932, prohibited the levying of ad-

valorem taxes on deposits of sulphur, but the severance tax on production of sulphur, fixed by statute at 27 cents a ton, was unaffected.

FINANCE. State expenditures in the year ended Dec. 31, 1931, as reported by the U. S. Department of Commerce, were: for maintaining and operating governmental departments \$26,673,036 (of which \$5,880,240 was for local education); for conducting public-service enterprises, \$55,264; for interest on debt, \$2,692,017; for permanent improvements, \$54,266,987; total, \$83,687,304 (of which \$55,664,261 was for highways, \$6,090,798 being for maintenance and \$49,573,463 for construction). Revenues were \$34,590,584. Of these, property and special taxes furnished 28.5 per cent; departmental earnings and compensation to the State for officers' services, 5.5; sale of licenses, 49.4 (in which was included a gasoline sale tax that produced \$7,334,713). Funded debt outstanding on Dec. 31, 1931, totaled \$73,454,855, of which \$51,760,000 was for highways. Net of sinking-fund assets, the debt was \$73,313,455. On an assessed valuation of \$1,666,140,457 the State levied in the year ad valorem taxes of \$9,580,307.

EDUCATION. Reductions of teachers' salaries and of the length of the year's term of school sessions were reported, in the *Journal* of the National Education Association at the end of the year, as prevalent. Lower assessments and delay or delinquency in the payment of school taxes had caused financial breakdowns in some of the parishes. Hopes of improvement were entertained by reason of proposals in the report rendered to the Legislature by its commission on tax reform. Extension courses were offered during the year in some areas for unemployed graduates of the high schools.

For the academic year 1932-33 the number of persons of school age in the State was reckoned as 663,169, of which total 399,999 were whites and 263,170 Negroes. There were enrolled in the public schools 459,706 pupils, of whom 293,485 were whites and 166,221 Negroes. Of these, 391,255 (233,164 whites and 158,091 Negroes) were in common schools or elementary grades; in high schools, 68,451 (60,321 whites and 8130 Negroes). Expenditures of the year for public-school education totaled \$13,439,008, of which \$11,898,572 was for white and \$1,540,436 for Negro schools. The salaries of teachers averaged, by the year, \$735.65 for whites and \$227.04 for Negroes.

CHARITIES AND CORRECTIONS. The State's central authority over institutions for the care and custody of persons, under the system in force in 1933, rested in a Board of Charities and Correction. This board included five ordinary members and, also, the Governor as *ex-officio* member and chairman. Exercising no administrative or executive powers, the board performed supervisory duties with regard to the State and subdivisional institutions. The State institutions themselves were conducted by separate directing bodies. The board, further, had authority to visit private eleemosynary institutions. The State institutions were: the penitentiary, at Baton Rouge; Training Institute, at Monroe; Industrial School for Girls, Alexandria; State hospitals for the insane, at Pineville and Jackson; Greenwell Springs Tuberculosis Hospital, Greenwell Springs; Charity Hospital (general), New Orleans; Charity Hospital (general), Shreveport; schools for the blind, at Baton Rouge; for the deaf, Baton Rouge;

State College and Training School (for the feeble-minded), at Alexandria.

LEGISLATION. A special session of the Legislature repealed, by an act signed on March 24, the State law for the enforcement of prohibition. It took no action with regard to repealing the Eighteenth Amendment of the Federal Constitution.

POLITICAL AND OTHER EVENTS. The State was one of the first in which the banking troubles of the late winter became acute. A legal holiday to prevent the exhaustion of banks' resources by depositors' withdrawals was decreed early in February. The popular vote by which the State's prohibition law of 1921 had been repealed in a referendum proposed to the people by the Legislature in 1932, was declared unconstitutional by the State Supreme Court on March 4. The law being consequently still valid, a special session of the Legislature (see above) was necessary to repeal it.

Payments by the State, of charges on its bonds, were delayed until late in May by reason of the inability of the Hibernia Bank and Trust Company, of New Orleans, containing State deposits, to reopen on a solvent basis. The formation of a successor, the Hibernia National Bank, aided by the Reconstruction Finance Corporation with a subscription to the bank's preferred stock, made 43 per cent of deposits in the old bank immediately available, and the State's payments were resumed. Similarly, the National Bank of Commerce was created, to take over and release 30 per cent of the deposits of the old Canal Bank and Trust Company. Deposits released in the two cases totaled, respectively, \$14,000,000 and \$18,000,000. Payment of the teachers of New Orleans, interrupted by the banks' failure to pay on salary checks in February, was resumed only in May. Widespread inability to make money payments led the State to cut the penalty on tax delinquency temporarily in April; the State ordered on May 15 indefinite postponement of sales of property to satisfy taxes levied in 1932.

Opponents of Senator Huey Long's political organization agitated for a recount of votes cast in November, 1932, on proposed State constitutional amendments favored by the Long faction and declared to have been carried. It was alleged that in some New Orleans precincts a negligible adverse vote or none at all had been counted. District Attorney Stanley of New Orleans began late in 1932 a grand-jury inquiry into the count, whereupon Attorney General Porterie, a supporter of Long, took over the inquiry and the grand jury adjourned. A new grand-jury inquiry was started in the spring. Efforts were made by the State Bar Association to act against Porterie, and he resigned from the Association in June. Judge O'Donnell directed District Attorney Stanley to bring before him on August 2 six of the contested ballot boxes; thereupon Governor Allen, a partisan of Long, proclaimed qualified martial law, and progress in the recount proceeding was checked. Opponents of Long testified at hearings in New Orleans during February and again late in the year, by a committee of the United States Senate investigating charges against the election of J. H. Overton to the Senate in 1932.

OFFICERS. The chief officers of the State, serving in 1933, were: Governor, Oscar K. Allen; Lieutenant-Governor, John B. Fournet; Secretary of State, E. A. Conway; Treasurer, J. S. Cave; Auditor, L. B. Baynard, Jr., Attorney General,

G. L. Porterie; Superintendent of Education, T. H. Harris.

Judiciary. Supreme Court: Chief Justice, Charles A. O'Neill; Associate Justices, Winston Overton, John St. Paul, W. G. Rogers, John R. Land, H. F. Brunot, Fred M. Odom.

LOWELL, JAMES ARNOLD. An American jurist, died Nov. 30, 1933, at Newton, Mass., where he was born Feb. 5, 1809. He was graduated from Harvard with the A.B. degree in 1891 and the LL.B. degree three years later. Admitted to the Massachusetts bar in 1894, he began his law practice in Boston with his father, John Lowell. Ten years later he made his entry into politics on his election to the Massachusetts House of Representatives for the term 1904-06. He served as chairman of the Commission on Workmen's Compensation in Massachusetts during 1910-12, and of the Massachusetts Board of Labor and Industries during 1913-14. In 1917 he sat as a member of the Massachusetts Constitutional Convention and during the next three years was a member of the Massachusetts Commission to Consolidate the Laws. In 1922 President Harding appointed him judge of the United States District Court in Boston.

Judge Lowell became widely known for his liberal attitude in interpreting the immigration law by admitting "conscientious objectors" to citizenship and the prohibition law by denouncing the wire-tapping methods of prohibition agents in obtaining evidence of violations and by refusing to impose any more jail sentences in prohibition cases on account of the imminent repeal of the Eighteenth Amendment. Previous to his death, however, he faced impeachment for his refusal to allow the extradition of George Crawford, a Georgia negro wanted for the murder of two white residents of Virginia. His decision in freeing the negro was based on "Yankee common sense"—that his trial in Virginia would not be a fair trial, since negroes were not permitted to serve on the State's juries. The writ of habeas corpus which he granted in April, 1933, was later overruled by the Circuit Court of Appeals and the United State Supreme Court, and in October Crawford was returned to Virginia for trial. He edited *Lowell on Bankruptcy* (1898).

LUBECK. See GERMANY under *Arca and Population*.

LUKS, GEORGE BENJAMIN. An American painter, died in New York City, Oct. 29, 1933. Born at Williamsport, Pa., Aug. 13, 1867, he attended the Pennsylvania Academy of Fine Arts and then went to Germany where he studied at the Düsseldorf Academy. On his return he became staff artist for the Philadelphia *Press* and during the Cuban revolution of 1895-96 was war correspondent and artist for the Philadelphia *Bulletin*. He originated also the comic strip "The Yellow Kid," in the New York *World*, from which the term "yellow journalism," as applied to sensational papers, was derived.

After 1905 George Lusk devoted himself seriously to his painting, gaining recognition with such works as "The Wrestlers," "East Side Docks," and "Little Madonna" in which he early portrayed his instinctive sympathy with the "other half." His individuality was still further displayed in the vital colors which he used, the saliency of his style, and the striking variety of his characterizations. He twice received the Logan Medal of the Art Institute of Chicago, in 1920 for "The Player" and in 1926 for "Otis Skinner

as Col. Philippe Brideau in 'The Honor of His Family.'" The Temple Gold Medal was awarded him in 1918 by the Pennsylvania Academy of Fine Arts for "Houston Street, New York." In addition to the Hudnut Water Color Prize and the Locust Club Gold Medal, he received the Corcoran Art Gallery prize for his "Woman and Black Cat."

Among Mr. Lusk's other canvases were: "Mrs. Gamely" (Whitney Museum of American Art, New York City); "The Dominican" and "Ducks, Morris Canal" (Phillips Memorial Gallery, Washington); "Three Top Sergeants" (Detroit Art Institute); and "The Breaker Boys" (Albright Art Museum, Buffalo). In private collections were: "The Guitar"; "Clown"; "Old Woman with White Pitcher"; "Mount Vernon Street, Boston"; "Commonwealth Avenue, Boston"; "East Side Waifs"; "The Pawnbroker's Daughter"; "Little Milliner"; "Tango Artist"; and "The Round Houses at Highbridge." He was a member of the National Association of Portrait Painters and of the New Society of Artists.

LUMBER. See FORESTRY.

LUNACHARSKY, ANATOL VASILIEVITCH. A Soviet author and politician, died at Mentone, France, Dec. 26, 1933. He was born at Poltava, Ukraine, Nov. 24, 1875, and was educated at the University of Kiev where he specialized in literature, and at the University of Zurich where he studied natural science and economics. On his return to Moscow in 1897 he became prominently identified with the revolutionary Social Democratic party, but his activities led to his arrest and deportation to Vologda the following year. He succeeded in escaping in 1901 and went to Paris, where he continued to work for the cause of the Social Democratic party. On its split in 1903 into the Menshevik and Bolshevik wings he joined the latter. The following year he became associated with Lenin in editing the Bolshevik organ *Vpered* (Forward) in Geneva.

Lunacharsky returned to Russia during the Revolution of 1905, acting as a delegate to the St. Petersburg Workmen's and Peasants' Council, but was obliged to flee when the reactionary forces again came into control. While in Italy in 1910 he became associated with Gorky and Bogdanov in forming the radical wing of Bolshevism, which was opposed to Lenin on certain theoretical points in the application of Marxian doctrines, and in founding at Capri and Bologna Social Democratic schools. During the early part of the World War he was engaged in disseminating pacifistic propaganda in France and Switzerland, becoming reconciled in the meanwhile with the Lenin group.

On the outbreak of the revolution of 1917 Lunacharsky joined Lenin and Trotsky in Russia, where he was one of the principal agitators for the overthrow of the provisional government. In the ensuing months he acted as emissary of the Military Revolutionary Committee to the war fronts, where he successfully spread among the despairing soldiers extravagant promises of what a Bolshevik régime would accomplish in fulfilling their longings for peace, for land, and for proletarian privileges. After Kerensky's fall in October he served as vice-president of the Petrograd Municipal Council.

Chosen People's Commissar for Education for the Russian Socialist Federated Soviet Republic in November, 1917, and a few months later for the Union of Soviet Socialist Republics, Lunacharsky instituted many educational reforms dur-

ing his 12-year administration, the most important of which was education for the masses. Under his direction there was developed a system of public schools, owned and directed by the State, in which loyalty to Communist principles was thoroughly inculcated. Lack of money, however, prevented the carrying out of an extensive programme anywhere but in the large cities, but in spite of these difficulties he succeeded in laying the foundation for wiping out the illiteracy which prevailed among two-thirds of the nation's population. By 1928 more than 10,000,000 pupils were enrolled in the primary and intermediate grades, as compared with 7,000,000 in 1914. Adult education was provided for by a sort of university extension system, while skilled workers for industry were trained in technicums and in factory and shop schools. At the end of the first five-year plan in 1932 literacy among the city population had increased to 97 per cent and among the village population to 88 per cent.

Lunacharsky contributed to the preservation of Russia's cultural traditions by organizing the Academy of Science, by furthering the artistic interests of the theatre, and by renewing the vogue of Dostoyevsky, Turgenev, Tolstoy, and other novelists whose work, though bourgeois in conception, was extolled for its art form. After he relinquished the post of Commissar for Education in 1929 he was appointed chairman of the Administration Committee for Scientific and Educational Institutions and served as editor of *Land and Factory and Academia*. Previous to his death he was appointed Soviet Ambassador to Spain. Among his political works were *Religion and Socialism* (2 vols., 1911) and *Culture and the Working Class* (1919). He was the author of 14 plays, the more important of which were *Oliver Cromwell*, *Ivan in Paradise*, *Vasilisa the Wise*, *The Magi*, and *Faust and the City*.

LUNG REMOVAL IN CARCINOMA. See MEDICINE AND SURGERY.

LUTHERAN CHURCH. A church that expresses itself in groups of religious bodies and synods that receive and hold the canonical Holy Scriptures of the Old and New Testaments as the inspired Word of God and the only infallible rule and standard of faith and practice and that declare the unaltered Augsburg Confession to be a correct exposition of the faith and doctrine of the Evangelical Lutheran Church. The membership of the church, while found chiefly in central and northern Europe and in the United States and Canada, is distributed throughout the world, there being in 1933 a total of about 83,000,000 members in 75,000 congregations, served by more than 50,000 pastors.

In the United States, as the result of mergers and the formation of federations, the Lutheran Church expresses itself in practically a threefold equal division in the United Lutheran Church in America, the American Lutheran Conference (consisting of the American Lutheran Church, the Augustana Synod, the Norwegian Lutheran Church, the Lutheran Free Church, and the United Danish Church), and the Synodical Conference (consisting of the Missouri Synod, the Joint Wisconsin Synod, the Slovak Synod, the Norwegian Synod, and the Negro Missions). In addition there are the following minor religious bodies: Eielsen Synod, Church of the Lutheran Brethren, Danish Church, Icelandic Synod, Finnish Suomi Synod, Finnish National Church, Finnish Apostolic Church, and a number of non-synodical or in-

dependent congregations. Further efforts toward Lutheran unity were manifested during the year by the many intersynodical associations, agencies, and organizations, which gave hope that the day was not far distant when there would be but one Lutheran Church in America.

An outstanding event during 1933 was the 450th anniversary of the birth of Martin Luther. The anniversary was observed unanimously by the Lutheran Church in every country of the world. In America it took the form of great mass meetings in the larger centres of population like New York, Chicago, Detroit, and St. Louis. Protestant Churches, Lutheran, and non-Lutheran, participated in some form in observance of the occasion. The mass meetings in New York and Washington were participated in by the ambassadors and consuls of the various nations. The chief address of the Washington celebration was by the German Ambassador, Dr. Hans Luther. Various clergy and lay readers of the Lutheran Church were present when the treasurer of the National Lutheran Council, the Hon. E. F. Eilert of New York City, presented in the name of the council a plaque of Martin Luther to President Roosevelt.

Of equal importance was the stand of the 6000 and more Evangelical Lutheran pastors in Germany against the secularization, regimentation, and nationalization of the Lutheran and Protestant Churches in Germany, the Lutheran Church of Germany standing four-square on their Lutheran Confessions and the Bible and the Word of God, as the re-organization of the Lutheran-Protestant Church in Germany proceeded under the momentum of the pressure of the state.

Two gatherings of world-wide significance were the meeting of the executive committee of the Lutheran World Convention in Hanover, Germany, attended by the Rev. R. H. Long and L. W. Boe of America, and the Bishops Conference of northern countries held in Naantali, Finland, August 23-27, attended by Pres. J. A. Aasgaard of the Norwegian Lutheran Church of America and President A. Haapanen of the Finnish (Suomi) Synod. Two Archbishops Lari Ingham of Finland and Erling Eidem of Sweden, and 24 bishops of Finland, Sweden, Norway, Denmark, and Iceland were in attendance.

Statistics for 1932-33 for the United States and Canada were as follows: pastors, 12,267; congregations, 16,717; baptized members, 4,497,999; confirmed or communicant members, 3,012,276; communing members, 2,466,178; church schools, 20,628; officers and teachers, 368,581; scholars, 1,868,349; value of church property, \$367,039,678; congregational expenses, \$33,323,645; congregational benevolences, \$7,980,834; congregational expenditures, \$41,304,479. The per capita gifts were for congregational expenses, \$11.00; for congregational benevolences, \$2.64; and for congregational expenditures, \$13.71.

In 1933 the Lutheran Church in the United States and Canada maintained 29 theological seminaries, 29 colleges, 75 junior colleges, academies, and schools with a total enrollment of 25,580 students, 1718 instructors, an endowment amounting to \$16,167,109, and a property value of \$43,921,135. Steps were taken by the American Lutheran Church looking toward the consolidation of Eureka Lutheran College of Eureka, S. D., with St. Paul-Luther College, of St. Paul, Minn., at St. Paul, Minn., and the Wartburg Normal College of Waverly, Iowa, with the Wartburg College of Clinton, Iowa, at Clinton, Iowa, and the

discontinuance of St. John's Junior College at Petersburg, W. Va. The first and last steps were consummated during the year. In the United Danish Church, Dana College of Blair, Neb., and Trinity Theological Seminary of Blair, Neb., were incorporated as separate educational institutions.

Lutheran inner mission institutions, such as deaconesses' homes, hospitals, old people's homes, orphanages, immigrants' and seamen's homes, numbered 417, with an endowment of \$5,509,791 and a property value of \$53,014,550. During the year they sheltered, cared for, and ministered to 9089 children and 1,184,112 women and men at an annual expense of \$12,761,538. In addition to the institutional work, congregational and society inner mission work was done at an expense of approximately \$9,000,000.

The National Lutheran Inner Mission Conference met in Detroit, June 11 to 17, 1933, with the General Conference of Social Work, which was attended by 3000 delegates representing 42 social agencies. They reported an expenditure of over \$13,000,000 in Lutheran work on charities, more than the combined expenditures for home and foreign missions and education. The four divisions of work which received special attention were the family, children, institutions, and health services. The theme of the convention's programme was "The crusade of compassion." In the field of home missions the American Lutheran Conference started the national survey of the home missions of the various general Lutheran Church bodies federated in that conference, the survey being the elimination of overlapping of fields and the development of greater cooperation.

The work of the American Lutheran churches in fields outside of the United States and Canada was carried on principally in India, Africa, Japan, China, New Guinea, Argentina, and British Guiana in charge of 398 pastors, serving 2989 congregations and missions with 286,796 baptized members, 137,115 confirmed members, 134,356 communing members, 2244 church schools, 3437 officers and teachers, 98,537 scholars. The property value was \$4,322,560; the local congregational expenses, \$14,283; the benevolences, \$351,573; the total congregational expenditures, \$365,856.

The church maintains 25 publishing houses, with a total property value of \$5,663,798. The official periodicals are: *The Lutheran* (United Lutheran Church), *Lutheran Standard* (American Lutheran Church), *Lutheran Companion* (Augustana Synod), *Lutheran Herald* (Norwegian Lutheran Church), *Lutheran Witness* (Missouri Synod), *Northwestern Lutheran* (Wisconsin Synod), *Ansgar Lutheran* (United Danish Church), *Lutheran Men* (American Federation of Lutheran Brotherhoods), and *National Lutheran* (National Lutheran Council). Headquarters of the National Lutheran Council, in which the United Lutheran Church in America and the American Lutheran Conference cooperate, are at 39 East 35 Street, New York City, the executive director being the Rev. Ralph H. Long, D.D.

LUXEMBURG (LUXEMBOURG), lük'sembürg. A small European state adjoining the southeast corner of Belgium to which country it is linked economically by a customs union (May 1, 1922). Area, 999 square miles; population (1930), 299,782. Luxemburg, the capital, had 53,791 inhabitants in 1930; Esch-Alzette, 29,429; Differdange, 17,567; Dudelange, 14,657; and Petange, 11,008.

Agriculture is the occupation of 32 per cent of the population, the 450,000 acres under cultivation in 1930 being devoted primarily to oats and potatoes. On Dec. 1, 1931 there were 91,908 cattle; 148,958 pigs; 16,967 horses; 7733 sheep; and 5046 goats. The principal industries are mining and metallurgical; the 1932 production was iron ore, 3,215,000 metric tons (estimated); pig iron, 1,958,930 metric tons; steel, 1,955,665 metric tons. In 1931 there were 46 blast furnaces and 7 steelworks in operation. Figures for foreign trade are included in those for Belgium. The estimated budget for 1932 was revenue, 394,120,907 Luxemburg francs; expenditure, 388,248,608 francs (the Luxemburg franc averaged \$0.1391 in 1932). The public debt on Jan. 1, 1932 amounted to 551,827,967 francs.

Executive power is vested in the sovereign, who appoints the Cabinet, and legislative power is vested partly in the sovereign and partly in the Chamber of Deputies of 54 members elected by direct suffrage for six years. The Council of State of 15 members, chosen by the sovereign for life, acts as a Senate. Premier in 1933, Joseph Beck (Catholic-Conservative), who is assisted by three director-generals. Ruler in 1933, Grand Duchess Charlotte.

LYNCHINGS. Undoubtedly the increased deepening of the depression during 1933 had its effects in recurring outbreaks of mob violence. The result was that 28 lynchings occurred as compared with 10 in 1932 and 25 in 1930, which was the high point in recent years. Of the 28 lynchings during the year under review, Alabama led with 5, Louisiana followed with 4, Georgia with 4, South Carolina with 3, Tennessee with 3, Mississippi with 2, California with 2, and Florida, Missouri, North Carolina, Texas, and Maryland with 1 each. Particularly reprehensible not only in the ugly temper they displayed but in the official approval they received were the lynchings occurring in San Jose, Calif., on November 26 and on the eastern shore of Maryland in November.

In San Jose, a mob, after having stormed the city jail for the greater part of a day, seized and hanged the two men who had confessed to the kidnapping and brutal murder of young Brooke L. Hart, a son of a prominent local merchant. The next day Gov. James Rolph, Jr., of California, who had been apprised of the movement of the mob and who had refused to send State aid to the local authorities, even delaying a trip out of the State lest lesser officials send necessary assistance in his absence, shocked the world when he condoned the lynching. In an interview he declared:

That was a fine lesson to the whole nation. There will be less kidnapping in the country now. They made a good job of it. If any one is arrested for the good job I'll pardon them. . . . I am checking up at San Quentin and Folsom prisons to find out what kidnappers they have. I am thinking of paroling them to those fine patriotic citizens of San Jose who know how to handle such a situation. It would clean this kidnapping out of California. Their method is the best way to get rid of kidnappers, and I think San Jose citizens are good parole officers.

Immediately following this occurrence came another lynching at St. Joseph, Missouri, and a lynching in the town of Prince Anne on the eastern shore in Maryland. In the case of the Missouri lynching, Governor Parke condemned the mob and told the State's attorney-general to go to the limit to punish its leaders. In the Maryland lynching, however, the local authorities made no effort to apprehend the criminal leaders of

the mob or to proceed with elementary investigations. Governor Ritchie, of Maryland, however, spurred on by the tide of indignant sentiment throughout the country, after a preliminary investigation had been conducted by the State attorney, ordered the local national guard to arrest nine men against whom information had been gathered. Four persons were taken from their homes in the early morning and despite the appearance of a threatening mob were successfully carried off to Baltimore by the militiamen. The arrested men were subsequently released by the courts on the ground that the evidence offered against them had been insufficient.

The failures on the part of the constituted authorities to apprehend and punish the participants of such deeds of mob violence roused public sentiment throughout the country. Immediately following Governor Rolph's approval of the San Jose's mob's action, a group of prominent Californians, among them ex-President Hoover, attacked the action of the Governor as undermining "the very foundations upon which the State and all civilized society are built." Most of the outstanding writers of the country banded together in an organization called the Writers' League Against Lynching, sent an indignant telegram to Rolph and called upon President Roosevelt, as the leader of American public opinion, to condemn the continuance of mob outrages. This organization formed itself into a permanent body naming Mr. Harry Hansen, as its president, and Miss Suzanne LaFollette, as its secretary. The Federal Council of Churches of Christ in America made a similar appeal to the President and it was heartening to observe that on December 6, in a radio address to this body, President Roosevelt made public a statement attacking lynching.

As a result of these examples of mob violence there was a renewal of demand of enactment of a Federal anti-lynching law. Numerous States have such acts already on their statute books. In the six States of Alabama, Indiana, Kansas, Kentucky, Virginia, and North Carolina there are statutes which define lynching and make it a special crime. Mob violence is also a special crime in the four States of Illinois, Pennsylvania, New Jersey, and West Virginia. The maximum punishments for lynchings in the States enumerated are life imprisonment or death. Records show, however, that while lynchings have occurred in 8 of the 11 States, in only Alabama and Georgia have participants in such acts been punished.

Eleven States also provide for recovery against the city or county in which a lynching or mob death occurs, ranging from \$1000 in Nebraska to \$10,000 in Pennsylvania. These States are Connecticut, Kansas, Illinois, Minnesota, Nebraska, Ohio, Pennsylvania, South Carolina, New Jersey, North Carolina, and West Virginia. In nine States provisions have been made for the removal of peace officers who fail to prevent lynchings. In the four States of Illinois, Kansas, Kentucky, and New Jersey, the mere fact that a lynching occurred calls for the immediate and automatic removal of the officer in charge by the governor.

Federal bills in recent years have frequently been introduced in Congress but have met with no success. In 1920 Representative Dyer, of Missouri, introduced in the lower house a bill to protect aliens and citizens from lynching. In 1922 this measure was adopted by the House but was

defeated in the Senate as a result of a filibuster. The Dyer bill, which gave Federal courts authority to punish county officers and lynchers and provided for the forfeiture to the United States of \$10,000 by any county in which a lynching had occurred, was reintroduced in Congress in 1925 and again in 1929.

An intensive case study of each of 21 lynchings that took place in 1930 was made available as a result of the study conducted at the request of the Commission on Interracial Cooperation. These findings were published in the volume called *The Tragedy of Lynching*, written by Mr. Arthur Raper, research and field secretary of the commission. The study showed that practically all of the usual charges about the cause of lynching were false. It was demonstrated that individual Negroes were not more leniently treated than whites in Southern Courts. For the 18 months period in 1930-31, only 13 out of 81 persons executed in the South were white and all these had been convicted of murder. On the other hand 68 Negroes were executed, 57 having been charged with murder, 8 with rape, and 3 with theft. Once again the report disproves the commonly accepted charge that most of the Negro victims of lynch mobs had raped white women. In 1931 only 8 of the 21 victims were charged with rape, and in that year the proportion of victims accused of sex crimes was higher than in any year since lynching records have been kept. Mr. Walter White, field secretary of the National Association for the Advancement of the Colored People, made the following comment on the report:

If *The Tragedy of Lynching* has a weakness, it is its insufficient emphasis upon the economic factor—the abject poverty of whites as well as Negroes. It does not pretend to be anything more than a factual examination of lynchings of a given year, and it is all the more impressive because of the objectivity of its approach, and the fact that the authors are Southerners at last speaking out boldly against an intolerable crime.

MACAO, mǎ-k'ü'ô. A Portuguese colony on a peninsula of Macao island at the west side of the estuary of the Canton River in South China, forming with the nearby islands of Taipa and Colôane a province of Portugal. Area, 4.6 square miles; population (1927 census), 157,175, of whom 152,738 were Chinese and 3846 were Portuguese. The Chinese control trade, which is mostly of a transit nature. In 1930, imports were valued at 20,571,497 patacas; exports, 11,014,782 patacas (pataca equals approximately \$0.48). For 1932-33, revenue was estimated at 5,254,040 patacas; expenditures, 5,222,413 patacas. Governor in 1933, Artur Tamagnini.

McCONNELL, IRA WELCH. An American civil engineer, died in Buenos Aires, Brazil, Jan. 8, 1933. He was born at Schell City, Mo., Oct. 17, 1871, and was graduated from Cornell University in 1897. Successively he held the positions of instructor in civil engineering at Cornell, 1899-1903; contractor's superintendent in Chicago and New Orleans, 1901-03; and professor of civil engineering at the Missouri School of Mines, 1903. In 1904 he became connected with the United States Reclamation Service as project engineer, having charge during the next six years of the construction of the Gunnison Tunnel, a part of the Uncompahgre irrigation project in Colorado, and of the Pathfinder Reservoir of the Platte River in Wyoming. After serving for two years as vice-president and general manager of the Idaho Irrigation Co., Ltd., he was appointed in 1912 hydraulic engineer with Stone and Web-

ster, Boston construction engineers, and in 1917 chief engineer. During the World War he was assistant general manager for the American International Shipbuilding Corp. at the Hog Island shipyard, Philadelphia.

Mr. McConnell became vice-president of Dwight P. Robinson and Co., Inc., New York construction engineers, in 1919, and four years later was sent to Brazil to direct construction by that company of an irrigation project in the Province of Ceara. He superintended during 1927-31 the construction in Buenos Aires of the La Croze subway, a special feature of which was that it served to connect the Central Railroad of Brazil with the heart of the city. On the merger of the Robinson company in 1928 with the United Engineers and Constructors, Inc., of Philadelphia he became senior vice-president. He resigned his engineering affiliations in 1932 but remained in Buenos Aires to represent New York banking interests in the operation of the La Croze subway.

MCCUMBER, PORTER JAMES. An American lawyer and Senator, died in Washington, D. C., May 18, 1933. He was born at Crete, Ill., Feb. 3, 1858, and was graduated in law from the University of Michigan in 1880. The following year he established with B. L. Bogart the law firm of McCumber and Bogart at Wahpeton, N. D. A Republican in politics, he was elected to the Territorial House of Representatives in 1885 and again in 1887, the last sessions of that body held previous to North Dakota's admission to the Union. He also served during 1896-97 as State's attorney for Richland Co.

Elected to the United States Senate in 1899, Mr. McCumber served four terms, being defeated in the primaries of 1922. He was chairman first of the Committee of Manufactures, being active in securing the passage of the Pure Food and Drugs Act of 1906. Throughout the Taft administration he was chairman of the Committee on Pensions and in 1919, as a member of the Foreign Relations Committee, was the only Republican to urge ratification of the Versailles Peace Treaty and to sponsor the entry of the United States into the League of Nations. During his last term he served as chairman of the Senate Finance Committee and was co-author with Representative Joseph W. Fordney of the Fordney-McCumber Tariff Bill, enacted Sept. 15, 1922, for the purpose of producing additional revenue to carry the heavy burden of indebtedness caused by the World War.

In 1926 President Coolidge appointed Mr. McCumber a member of the International Joint Commission, concerned with boundary water disputes between the United States and Canada. After his retirement from the Senate he practiced law in Washington as a member of the firm of McCumber and Brand.

MCGIFFERT, m'-giff'ert, ARTHUR CUSHMAN. An American theologian and author, died at Dobbs Ferry, N. Y., Feb. 25, 1933. He was born at Sauquoit, N. Y., Mar. 4, 1861, and was graduated from Western Reserve University in 1882 and from Union Theological Seminary in 1885. Afterward he continued his studies in Germany at the Universities of Berlin and Marburg, receiving the Ph.D. degree from the latter in 1888. Ordained to the Presbyterian ministry, he became instructor in Church history at Lane Theological Seminary in 1888 and professor there in 1890. In 1893 he was called to the same chair at Union

Theological Seminary, and from 1917 to 1926 also served as president of that institution.

One of the outstanding modernists among Protestant theologians, Dr. McGiffert incurred the criticism of some of his fundamentalist colleagues with the publication of *A History of Christianity in the Apostolic Age* (1897), which caused his voluntary resignation from the Presbyterian ministry. He further expounded his views in *The Apostles' Creed* (1902); *The Christian Point of View* (with Francis Brown and G. W. Knox, 1902); *Protestant Thought before Kant* (1911); *Martin Luther, the Man and His Work* (1911); *The Rise of Modern Religious Ideas* (1915), based on the Earl Lectures delivered in 1912 at the Pacific Theological Seminary; *The God of the Early Christians* (1924); and *A History of Christian Thought* (2 vols., 1931-32).

MCGILL UNIVERSITY. A coeducational institution of higher learning in Montreal, Quebec, Canada, founded in 1821. The enrollment for the autumn session of 1933 was distributed as follows: Faculties of arts and science, 1117; medicine, 491; engineering, 348; dentistry, 50; law, 101; music, 135; and graduate studies, 211; and schools or departments of agriculture, 157; architecture, 46; commerce, 217; household science, 108; graduate nurses, 23; physical education, 15; library administration, 16; and teachers' training school, 194. The registration in the French summer school of 1933 was 120 and in the summer library school, 37. The number of members on the teaching staff was 549.

At Macdonald College, an affiliated college of McGill University at Sainte Anne de Bellevue, Quebec, there was completed during the year construction of the Institute of Parasitology, of which T. W. M. Cameron was appointed director and professor of parasitology. The endowment of the university amounted to \$18,738,786; the income for the year was \$2,044,328. Among the important gifts received during the year were \$132,500 for the construction of the Neurological Institute; \$15,000 for the department of biochemistry; and \$29,500 for the library and library school. The library contained 450,000 volumes. Principal and Vice-Chancellor Sir A. W. Currie (q.v.) died on Nov. 30, 1933.

MACIA Y LLUSA, FRANCISCO. A Spanish statesman, died in Barcelona, Dec. 25, 1933. Born at Villaneuva, Catalonia, in 1859, he attended a military academy and after receiving his commission fought in the Spanish-American War and in the Moroccan Wars of 1908 and 1911. His political career began on his election in 1909 to the Cortes, but on the unsuccessful attempt of Francisco Ferrer a few months later to seize Barcelona and set up a provisional, republican, and anticatholic state in Catalonia he resigned both his post as deputy and his commission as colonel in the army. In 1917 he led the extremist Catalan party, whose demands for a greater measure of local autonomy became more and more insistent. On account of his demand, however, that ties with the Bourbon dynasty be severed he was exiled from Spain along with Ventura Gassols, the popular Catalan poet, who later became his principal political and literary supporter.

Shortly after his return to Spain in 1922, Macia was again expelled on account of his attempt to overthrow Primo de Rivera. Settling in Paris, he directed from there the separatist movement, encouraging the Catalans in their refusal to use the Spanish language. The plan by which in 1926

he attempted to lead a band of 400 rebels across the border into Spain was discovered by the French police and resulted in his imprisonment for two months, after which he made his headquarters in Brussels. During 1927-30 he was ejected from the United States as well as from several South American countries where he tried to raise money for his cause among Catalan immigrants.

On the granting of amnesty and the restoration of constitutional guarantees in February, 1931, Macia once more made his appearance in Barcelona, this time to stay. He immediately organized his party from the communist syndicalists, the Republicans, and the Socialists and was victorious over the monarchic Right in the election that followed. Early on the day of the collapse of the monarchy (Apr. 14, 1931), he led his supporters to the Barcelona city hall where they proclaimed Catalonia to be a republic. He was chosen Provisional President of the first Catalan Generalidad in 400 years, charged with the framing of a state constitution. The Madrid government, however, was determined that the constitution should provide for a unitary instead of a federal republic. Its position was strengthened through the sending of government troops to quell the Barcelona general strike of September, which was aimed at establishing a soviet government. A compromise was finally achieved through the Cortes's incorporating in the constitution of the Spanish republic a clause which designated Spain as "an integral republic with ample facilities for regional autonomy."

In 1932 the Cortes approved a statute defining Catalonia as an "autonomous region within the Spanish state" and authorizing the Catalans to use their own language, national anthem, and flag. The completion of the autonomy programme was insured through the election in November of Macia's Esquerra party to the majority of seats in Parliament. In the elections of the following year, however, his party suffered reverses, and on his death bed he expressed the fear, "All this will collapse now." See SPAIN; CATALONIA.

MACKENZIE, DISTRICT OF. See NORTHWEST TERRITORIES.

McMILLIN, BENTON. American lawyer, Congressman, governor, and diplomat, died in Nashville, Tenn., Jan. 8, 1933. He was born in Monroe Co., Ky., Sept. 11, 1845, and was educated at Kentucky University (later Transylvania University), Lexington, Ky. Admitted to the Tennessee bar in 1871, he began practice at Celina. In 1874 he was elected to the House of Representatives of the Tennessee Legislature and the following year was a member of a commission appointed by the governor to treat with Kentucky for the purchase of land along the State boundary. He was a presidential elector on the Democratic ticket during the Hayes-Tilden contest of 1876 and sat thereafter in each electoral college, with the exception of that of 1920.

Appointed a special judge of the Circuit Court in 1877, Mr. McMillin resigned upon his election the following year to represent the Fourth Tennessee District in the 46th Congress. During the 10 terms that he served in the House of Representatives he was one of the most forceful opponents of the Republican tariff, being a member for 14 years of the Ways and Means Committee. He was elected Governor of Tennessee in 1898 and was reelected in 1900. At the end of his second term he became engaged in the insurance business in Nashville. In 1913 President

Wilson appointed him Minister to Peru. Later he was transferred to Guatemala, and on his retirement in 1921 returned to his law practice in Carthage, Tenn.

MADAGASCAR. A French island colony separated from the east coast of Africa by the Mozambique Channel (which is 240 miles wide at its narrowest point). Area, 241,094 square miles; population (1931 census), including the dependent Comoro archipelago, 3,701,770, of whom 3,665,234 were Malagasy, 23,076 were French, and 13,460 were foreigners. Tananarive, the capital, had 92,475 inhabitants in 1931; Majunga, 20,000; and Fianarantsoa, 12,575. On Jan. 1, 1932, there were 1600 schools with a total of 179,000 students.

Cattle breeding and agriculture are the chief occupations, the principal crops being rice, sugar, coffee, manioc, cacao, cotton, beans, cloves, rubber, and mulberry trees. On Jan. 1, 1932 there were 9,000,000 cattle; 255,000 sheep; 500,000 pigs; 70,000 goats; 3000 horses; and 2000 ostriches. The forests produce many valuable woods and gums. Phosphate, graphite, and mica are mined; the total output of minerals in 1931 was valued at 16,110,000 francs. The balance of foreign trade has been unfavorable since 1925. In 1931, imports were valued at 507,322,279 francs (franc equals \$0.0392 at par); exports, 361,349,497 francs. Of the imports France supplied 378,136,962 francs, and received 291,579,633 francs of the exports, in 1931. During 1931, there were 7561 ships totaling 3,312,823 tons entered and 7629 ships totaling 3,319,566 tons cleared the ports of the colony.

There are over 2000 miles of highways. Railway mileage (including narrow-gauge local lines) on Jan. 1, 1928 was 430 miles. The budget for 1932 was estimated to balance at 267,042,150 francs. The colony is under a governor-general assisted by a consultative council. A delegation of 24 French citizens and 24 natives meet once a year to examine budget proposals. Chiefs represent the natives in their relations with the government. Governor-General in 1933, Leon Cayla.

MADEIRA, mã-dê-rá. An archipelago in the North Atlantic approximately 350 miles from the west coast of Morocco, politically an integral part of Portugal. It comprises the inhabited islands of Madeira and Porto Santo, and several uninhabited rocks. Area, 314 square miles; population at its latest census was 210,220. Funchal, the capital on the island of Madeira, had 24,238 inhabitants.

MADOERA (MADURA). See NETHERLAND INDIA.

MAHÉ. See FRENCH INDIA.

MAINE. POPULATION. The population of the State on Apr. 1, 1930, according to the Fifteenth Census, was 797,423; in 1920 it was 768,014; in 1933 (Federal estimate), 802,000. Portland, the chief city, had 1930) 70,810 inhabitants; Augusta, the capital, 17,198.

AGRICULTURE. The table on page 465 shows the acreage, production, and value of the principal crops for 1933 and 1932.

FINANCE. State expenditures in the year ended June 30, 1932, as reported by the U. S. Department of Commerce, were: for maintaining and operating governmental departments \$14,573,122 (of which \$2,394,210 was for local education); for conducting public-service enterprises, \$91,081; for interest on debt, \$1,098,579; for permanent improvements, \$11,022,199; total, \$26,784,981

Crop	Year	Acreage	Prod. Bu.	Value
Potatoes	1933	150,000	42,000,000	\$25,200,000
	1932	170,000	40,460,000	10,115,000
Hay (tame)	1933	966,000	804,000*	8,522,000
	1932	966,000	804,000*	7,960,000
Oats	1933	130,000	5,200,000	2,132,000
	1932	130,000	4,940,000	1,581,000
Apples	1933	.....	1,884,000	1,225,000
	1932	.....	2,575,000	1,288,000

* Tons.

(of which \$14,421,530 was for highways, \$4,285,107 being for maintenance and \$10,136,423 for construction). Revenues were \$22,971,645. Of these, property and special taxes furnished 30.1 per cent; departmental earnings and compensation to the State for officers' services, 9.8; sale of licenses, 45.7 (in which was included a gasoline sale tax that produced \$4,815,725). Funded debt outstanding on June 30, 1932, totaled \$27,251,500, of which \$21,487,500 was for highways. Net of sinking-fund assets, the debt was \$27,008,837. On an assessed valuation of \$756,800,383 the State levied in the year ad-valorem taxes of \$5,857,791.

EDUCATION. The work of the public schools fared better than in some other States, where revenues for that purpose had become inadequate. According to the *Journal* of the National Education Association, the school system in Maine was maintained through 1933 without serious impairment. A survey of the finances of the public schools was made by a commission of 15 members appointed by the Governor. University-extension courses were conducted in Portland under a faculty of college standing.

For the academic year 1932-33 the number of persons of school age in the State was reckoned as 255,179. There were enrolled in the public schools 171,681 pupils. Of these, 138,484 were in common schools or elementary grades; in high schools, 33,197. The year's expenditures for public-school education totaled \$10,214,811, or some 10 per cent less than the total for the year before. The average salaries of teachers, by the year, sustained diminution in almost the same proportion, to \$815.97 for elementary positions and \$1418.83 in the high schools.

LEGISLATION. The Legislature convened in regular session on January 4. It made a material innovation in the distribution of State authority by granting the Governor, at his urging, sweeping powers to reduce State expenditure. These powers included the immediate reduction, by his order, of the salaries of the majority of State employees. An emergency measure enacted in the course of the banking panic of March empowered the State commissioner of banking whenever the Governor should declare that an emergency existed, to restrict the transactions of any or of all banks; also, authorized the commissioner to permit the issue of clearing-house certificates, scrip, or other evidence of claims against the assets of a bank. To declare the will of the State with regard to the proposed repeal of the Eighteenth Amendment of the Federal Constitution, there was created a State convention, to be composed of 80 unpledged delegates, to be chosen by popular election on September 11, as apportioned among the 16 counties. The State's prohibition system was not repealed, but it was made lawful by statute to manufacture, transport, and sell beer of such alcoholic content as the State's supreme judicial court might permit. An effort to alter the date for

State elections, so that it might coincide with that fixed for National elections, failed.

A special session that convened on November 14 legislated to permit banks to enter the Federal system for insuring deposits.

POLITICAL AND OTHER EVENTS. At an election on September 11 the voters chose, by counties, 80 delegates all unpledged but all informally known to favor the repeal of the Federal Eighteenth Amendment. An advisory opinion of the State's supreme judicial court, which had guided the Legislature in providing for the election of the delegates, had enjoined that nominees must be free of any pledge on the subject of the convention's deliberations, but the precautions in the law did not prevent the circulation of cards informing voters as to nominees' intentions. The delegates met in State convention on December 6 and voted Maine's adoption of repeal through the superseding amendment proposed by Congress. The popular vote of September 11 was about three-fifths of the State's presidential vote of 1932 and favored repeal in the approximate proportion of 2 to 1. Because of the State's standing as the "birthplace" of the prohibition movement and of its adherence to prohibition as a fixture of its constitution ever since 1884, the vote displayed a striking overturn of traditions.

The voters rejected on September 11 proposals, by referendum, to render lawful the use of the voting machine, to authorize an issue of \$2,000,000 in State bonds in order to provide relief for the needy, to tax the gross earnings of companies selling electric current, and to impose a tax on intangible property. Conflagrations, a week apart, destroyed the homes of 400 persons at Ellsworth on the night of May 7, doing damage estimated at \$2,000,000, and burned 231 buildings in Auburn on May 15, causing loss in excess of \$1,000,000.

OFFICERS. The chief officers of the State, serving in 1933, were: Governor, Louis J. Brann; Secretary of State, Robinson C. Tobey; Treasurer, George S. Foster; Auditor, Elbert D. Hayford; Attorney General, Clyde R. Chapman; Commissioner of Education, Bertram E. Packard.

Judiciary. Supreme Judicial Court: Chief Justice, William R. Pattangall; Associate Justices, Charles J. Dunn, Guy H. Sturgis, Sidney St. F. Thaxter, Charles P. Barnes, James H. Hudson. Superior Court: Justices, George L. Emery, H. T. Powers, W. H. Fisher, George T. Worster, Herbert E. Holmes, Arthur Chapman, Harry Manser.

MAINE, UNIVERSITY OF. A coeducational State institution of higher learning at Orono, founded in 1865 and opened for students in 1868. The enrollment for the autumn of 1933 was 1470 and for the summer session of 1933, 326. There were 166 members on the faculty. The productive funds of the university amounted to \$906,337, and the income for the year was \$1,603,214. The library contained 109,000 volumes. President, Harold Sherburne Boardman, C.E., D.Eng., LL.D.

MAKINS, SIR GEORGE HENRY. A British surgeon, died in London, Nov. 2, 1933. Born Nov. 3, 1853, he was educated at St. Thomas's Hospital Medical School and the Universities of Halle and Vienna. In addition to his private practice he was consulting surgeon to St. Thomas's Hospital, the Evelina Hospital for Sick Children, King Edward VII Hospital, and the Royal Hospital for Incurables at Putney and was lecturer on surgery

and anatomy at the St. Thomas's Hospital Medical School. He gained his greatest distinction, though, as an army surgeon, serving as consultant to the South African Field Force in the Boer War and to the British Expeditionary Force during the World War and being commissioned honorary Major-General of the British Army Medical Service. In 1918 he was chairman of the committee appointed to inquire into the standard of comfort and accommodation in the hospitals of British Troops to India.

In addition to being president of the Royal College of Surgeons, Sir George was a member of its court of examiners, president of the board of examiners for the Naval Medical Service, examiner for the Army and Indian Medical Services, and member of the consultation committee of the Queen Alexandria Military Hospital. At the time of his death he was a member of the council of the British Red Cross Society, treasurer of the Imperial Cancer Research Fund, and chairman of the distribution committee of the Hospital Sunday Fund. He was created a Companion of the Bath in 1900, a Knight Commander of St. Michael and St. George in 1915, and a Knight of the Grand Cross of St. Michael and St. George in 1918. He wrote *Surgical Experiences in South Africa* (1901) and *On Gunshot Injuries to the Blood-vessels* (1919).

MALACCA. See STRAITS SETTLEMENTS.

MALAYA. See BRITISH MALAYA.

MALAY STATES. See BRITISH MALAYA; FEDERATED MALAY STATES; UNFEDERATED MALAY STATES; STRAITS SETTLEMENTS; BRITISH NORTH BORNEO; BRUNEI; SARAWAK.

MALDIVÉ ARCHIPELAGO. See CEYLON.

MALTA. A British crown colony in the Mediterranean, 58 miles south of Sicily, Italy, comprising the island of Malta (95 square miles); Gozo (26 square miles); Comino (1 square mile); and the islets Filfla and Cominotto. Total area, 122 square miles; population (1931 census), 241,621 not including the garrison. Chief towns: Valetta, the capital, had 22,779 inhabitants in 1931, including suburbs it had 48,240; "Three Cities" (Senglea, Cospicua, and Vittoriosa) 26,319; Citta Vecchia, 10,032; and Victoria (Gozo), 5,531. Malta is an important link in British Imperial communications and is the base of the British Mediterranean Fleet. Italian and English are the official languages but Maltese is in general use. In 1931-32 there were 165 elementary schools with 30,134 students; 3 government secondary schools with 623 students; 25 technical schools; 50 private schools with 3513 students; and a university with 120 students.

The church owns one-third of the land. Cereals, vegetables, cotton, and fruits are the leading agricultural crops. Fishing, and the manufacture of lace, cotton, filigree, beer, and cigarettes are other industries. Excluding transit trade but including bullion and specie, imports (1931) were valued at £3,714,530; exports (1931), £490,055. The principal imports were wheat, gasoline, coal, flour and semola, textiles, metals, cattle foods, and wines. Vessels entering the ports in 1931 numbered 2322 and aggregated 3,639,918 tons. Revenue in 1931-32 amounted to £971,313; expenditure, £967,189.

Under the Constitution of 1921 (suspended June 26, 1930; restored Mar. 2, 1932; and again suspended on Nov. 2, 1933) local affairs were controlled by a legislature, consisting of the senate of 17 members, 10 of whom were appointed,

and a legislative assembly of 32 elected members. There was a responsible ministry for local affairs. A governor, appointed by the King, controls the naval, military, and air forces, Imperial interests, external relations and trade, coinage, immigration, and had the power to veto local legislation. He is assisted by an appointed executive council and a nominated council, consisting of a Lieutenant-Governor, a legal adviser, and three officers of the military forces. Governor and Commander-in-Chief in 1933, General Sir David Campbell.

HISTORY. The governor, Sir David Campbell, on Nov. 2, 1933 dismissed the Malta ministry headed by Sir Ugo Mifsud, dissolved the local legislature, suspended the Constitution, and personally assumed control of the local government of the island. These steps were taken, on instructions from the Secretary of State for the Colonies, because of the policy pursued by the Mifsud ministry, since it assumed office in June 1932, of evading the language provisions of the Letters Patent of May, 1932. The leading Nationalist newspaper, *Malta*, was suspended by the Governor December 15 under the Sedition Ordinance. For the growth of the Nationalist movement, see 1931 and 1932 YEAR BOOKS.

MAMMALS. See ZOOLOGY.

MANADO. See NETHERLAND INDIA.

MANCHOUKUO. A new state established under Japanese auspices on Mar. 1, 1932; comprising the Chinese provinces of Fengtien (Liaoning), Kirin, and Heilungkiang in Manchuria and Jehol province in Inner Mongolia. Geographically, Manchoukuo also includes the Kwantung Leased Territory (q.v.) and the South Manchuria Railway Zone. Following the establishment of Manchoukuo, Hsangan (Khingan) province was created out of the western parts of Fengtien and Heilungkiang. Capital, Hsinking (formerly Changchun).

AREA AND POPULATION. The western boundary of Manthoukuo has not been clearly defined and no census has been taken in recent years. Accordingly the accompanying statistics for the area and population, by provinces, compiled by the Manchoukuo government, are rough estimates.

MANCHOUKUO: AREA AND POPULATION

Province	Area, sq miles	Population, Dec. 31, 1932
Fengtien	74,017	15,143,420
Kirin ..	101,683	7,135,542
Heilungkiang	170,339	3,672,777
Jehol	52,113	2,054,805
Hsangan ..	147,996	920,400
Tungsheng Special District ..	464	553,364*
Hsinking Special Municipality		126,309
Total	546,612	29,606,117

* Including Harbin Special Municipality.

Including the population of the Kwantung Leased Territory and the South Manchuria Railway Zone, estimated on May 31, 1933, at 1,353,047, the total population approximated 30,950,164. With the exception of 287,061 Japanese, about 750,000 Koreans, a few Mongols, and 139,221 foreigners, the population was entirely Chinese. According to Japanese estimates, the population of the chief cities in 1931 was: Mukden, 421,727; Harbin, 332,680; Dairen, 386,405; Antung, 157,979; Port Arthur, 136,605; Hsinking (Changchun), 133,705; Yingkow, 110,975. Dairen and Port Arthur are in the Kwantung Leased Territory.

EDUCATION. About 90 per cent of the population are illiterate. A survey by the Manchoukuo department of education in July, 1933, showed 12,877 primary schools, with 460,633 pupils; 269 middle schools, with 27,882 pupils; 131 normal schools, with 8068 students; 67 vocational schools, with 5069 students; and 8 colleges and universities, with 2121 students. In addition, the Japanese maintained 222 schools of all classes in Kwantung Leased Territory and the South Manchuria Railway Zone, with a total of 86,155 students.

PRODUCTION. Manchuria proper is one of the world's most fertile and rapidly developing agricultural regions. Arable land was estimated at about 83,000,000 acres, or 28 per cent of the total area, of which about 38,000,000 acres were under cultivation in 1932. Estimated production of the chief crops of Manchoukuo in 1933 was (in metric tons): Soy beans, 5,166,049; other beans, 320,530; kaoliang, 3,908,132; millet, 3,144,840; maize, 1,738,795; wheat, 1,717,812; rice, 132,592; upland rice, 141,087; miscellaneous crops, 1,921,783. Livestock in January, 1933, included about 682,874 cattle, 969,681 horses, 407,579 mules, 425,704 sheep and goats, 2,610,670 swine. Forests cover about 28,756,000 acres. Iron deposits, chiefly in Fengtien Province, are estimated at more than 1,299,470,000 metric tons; coal deposits, about 3,866,229,000 metric tons. Mineral and metallurgical production (1931) was (in metric tons): Iron ore, 963,529; coal, 9,048,703; magnesite, 36,034; limestone, 545,131; pig iron, 342,269; coke, 409,066; oil shale, 1,245,094. There were about 2025 industrial establishments in 1931 (chiefly bean-oil and flour mills), with 73,336 employees and a production valued at 224,327,515 yen (yen equals \$0.4985 at par).

COMMERCE. Imports into Manchoukuo in 1932 were valued at 192,991,900 Haikwan taels (218,948,972 in 1931) and exports totaled 394,969,070 Haikwan taels (473,868,941 in 1931). The Haikwan tael exchanged at an average of about \$0.34 in 1932. Of the total 1932 imports, Japan supplied 225,747,118 Haikwan taels; China, 35,236,097; British India, 11,795,493; United States, 11,376,847; Korea, 8,211,984. Of the exports, Japan took 121,624,486 Haikwan taels; China, 108,953,415; Germany, 47,401,209; Korea, 27,129,264; Soviet Union, 21,657,989. The value of the chief export items in 1932 was: Soy beans, 143,859,524 Haikwan taels; bean cakes, 66,311,390; coal, 32,604,805; bean oil, 24,511,557; kaoliang, 18,206,351.

FINANCE. The estimated national budget for the fiscal year ended June 30, 1933, balanced at 113,308,055 Manchoukuo yuan. Ordinary revenues were placed at 97,386,000 yuan; ordinary expenditures, 104,482,088 yuan. On Oct. 11, 1932, a supplementary budget of 24,048,945 Manchoukuo yuan was adopted. It was covered by a 30,000,000-yen construction loan floated in Japan. For the fiscal year 1933-34, the budget estimates balanced at 149,169,178 Manchoukuo yuan. The revenue estimates were: Ordinary, 132,134,300; extraordinary, 17,034,878. Expenditure estimates: Ordinary, 107,448,708; extraordinary, 41,720,470. The new monetary unit of Manchoukuo is the yuan containing 23.91 grammes of pure silver. The exchange rate for American dollars was quoted in Japan at approximately the yen exchange rate. Through the agency of the Central Bank of Manchou, established at Hsinking, July 1, 1932, the 15 different kinds of paper money previously in circulation were being replaced by the

new national currency at officially fixed exchange rates.

COMMUNICATIONS. Railway lines in operation in Manchoukuo in 1932 aggregated 3874 miles, divided among 18 different systems. Excluding a few of the minor lines, from which returns were not available, the railways during 1932 carried 12,236,851 passengers and 22,339,122 metric tons of freight. The chief systems were the South Manchuria Railway (700 miles of line) and the Chinese Eastern Railway, jointly owned and operated by the Soviet Union and China (1800 miles). In 1932 all the railways except the Chinese Eastern were unified under the management of the South Manchuria Railway, acting for the Manchoukuo government. Negotiations for the sale of the Soviet share in the Chinese Eastern to Manchoukuo were under way in 1933 (see JAPAN under *History*). The South Manchuria Railway's net profits in 1933 were estimated at 40,000,000 yen; in 1932 revenues aggregated 87,933,218 Manchoukuo yuan. The extension of the Hsinking-Tunhua line to the port of Raashin in northeast Korea and the Koshan-Hailun link in Heilungkiang province were completed during 1933, while much additional construction of both strategic and economic nature was under way.

Highways in 1933 were in a primitive condition, with only about 8197 miles suitable for motor traffic. A 10-year programme calling for the building of 31,050 miles of additional highways was inaugurated in 1932. In December, 1933, the Manchoukuo Highways Board announced the completion of 2484 miles of new highways. At the beginning of 1933, a Japanese company was operating a passenger, express, and mail service over eight air routes, aggregating 1484 miles. On July 10, 1933, new lines were inaugurated connecting Hsinking and Lungchingsun (1320 miles) and Tsitsihar and Heiho (1304 miles).

GOVERNMENT. The Manchoukuo Constitution of Mar. 11, 1932, vests executive power in the hands of the Chief Executive, who acts upon the advice of his Privy Council and is assisted by a State Council consisting of a Prime Minister and eight other heads of departments. There is a Legislative Council, appointed by the Chief Executive, whose functions are to draft and approve laws and budget bills. A third body, the Supervisory Council, has supervisory and auditing functions. It is under the direct control of the Chief Executive and independent of the State Council. The provincial governments, contrary to the practice under the former Chinese régime, have no control over the military or finance. They consist of a governor and five boards, all under the jurisdiction and control of the Minister of Civil Affairs at Hsinking. The constitution made all residents in Manchoukuo eligible to hold office. In accordance with this principle, Japanese were appointed to key positions, especially to the presidency of the Board of General Affairs and head posts in the six bureaus comprising the Board. Having complete control over the budget and wielding the power of dismissal over ministers and officials, the Board of General Affairs was the actual sovereign authority in the government. Chief Executive in 1933, Henry Pu Yi, the former Manchu "boy emperor" of China. President of the Privy Council, Gen. Chang Ching-hui; Prime Minister, Cheng Hsiao-hsu; Director of General Affairs Board, Ryusaku Endo; President of the Legislative Council, Dr. Chao Hsin-po.

Japan on Sept. 15, 1932, extended formal recog-

dition to the state of Manchoukuo and concluded with it a treaty of alliance. Up to the end of 1933 no other foreign government had recognized the Manchoukuo government. The non-recognition policy adopted by the United States and the League powers in 1932 was extended by the action of the League's Manchurian Advisory Committee in 1933. The committee on June 14, 1933, sent a circular to the 21 governments composing its membership, recommending a procedure for the practical application of the principle of non-recognition of Manchoukuo. By Nov. 8, 1933, 11 members, including the United States, had definitely approved the recommendations while the others gave their tacit approval. See JAPAN, CHINA, and UNION OF SOVIET SOCIALIST REPUBLICS under *History*; LEAGUE OF NATIONS; KWANTUNG.

MANCHURIA. See MANCHOUKUO.

MANDATES. See LEAGUE OF NATIONS; SAMOA; PALESTINE; SYRIA; JAPAN.

MANGANESE. Preliminary returns received from all present known producers of manganese and manganiferous ores in 1933 indicate that the shipments of ore containing 35 per cent or more manganese were slightly more than in 1932; that the shipments of ore containing 10 to 35 per cent manganese were considerably less than in 1932; and that the shipments of ore containing 5 to 10 per cent manganese were substantially greater than in 1932, according to a preliminary summary of the U. S. Bureau of Mines.

Shipments of manganese ore containing 35 per cent or more metallic manganese from domestic mines (exclusive of Puerto Rico) in 1933 were approximately 18,500 long tons valued at \$447,000, compared with 17,777 tons valued at \$377,222 in 1932. Compared with the five-year average for 1928 to 1932, which amounted to 46,249 tons, the 1933 shipments showed a decrease of 60 per cent. Shipments of manganese ore from Puerto Rico to the United States during the twelve months ended Dec. 31, 1933, were 1638 long tons valued at \$66,450, compared with total shipments for the year 1932 of 2302 tons valued at \$65,509. The total shipments of manganese ore in 1933 (exclusive of Puerto Rico) consisted of 10,700 tons of metallurgical and miscellaneous ores valued at \$185,500 (10,765 tons valued at \$137,955 in 1932) and 7800 tons of battery ore valued at \$261,500 (7012 tons valued at \$239,267 in 1932). Manganese ore was reported shipped from Alabama, Arkansas, Georgia, Montana, Virginia, and West Virginia in 1933 in quantities ranging from about 100 tons in West Virginia to about 9200 tons in Montana. Montana and Virginia together supplied about 13,800 tons, or about 75 per cent of the total shipments.

The imports of manganese ore for the eleven months ended Nov. 30, 1933, amounted to 152,169 long tons containing 76,785 tons of metallic manganese, compared with 110,034 tons of ore containing 53,553 tons of metallic manganese during the entire year 1932. Of the ore imported in 1933, 83,780 tons were from Soviet Russia, 39,546 tons were from the Gold Coast, and 28,257 tons were from Cuba. Shipments of domestic ore containing 10 to 35 per cent manganese (ferruginous manganese ore) in 1933 were about 12,000 long tons, compared with 15,635 tons in 1932. Compared with the five-year average for 1928 to 1932, which amounted to 65,177 tons, the 1933 shipments showed a decrease of 82 per cent. The ferruginous manganese ore shipped in 1933 was from Alabama,

Arkansas, Georgia, and Virginia. Shipments of domestic ore containing 5 to 10 per cent manganese (manganiferous iron ore) in 1933 were about 204,000 long tons valued at \$542,000, compared with 9799 tons valued at \$29,546 in 1932. Compared with the five-year average for 1928 to 1932, which amounted to 626,118 tons, the 1933 shipments showed a decrease of 67 per cent. All the manganiferous ore shipped in 1933 came from Minnesota and Michigan.

MANITOBA, mǎn'tō'bǎ. A province of Western Canada, bounded by Ontario and Hudson Bay on the east and Saskatchewan on the west. Total area, 251,832 square miles; population (1931 census), 700,139, compared with 610,118 in 1921. Chief cities: Winnipeg, the capital, had 218,875 inhabitants in 1931 (Greater Winnipeg had 300,001); Brandon, 17,082; St. Boniface, 16,305; Portage la Prairie, 6597. In 1931, births totaled 14,391; deaths, 5344; marriages, 4888. In the 4304 public schoolrooms there were 153,553 students enrolled in 1930-31. Intermediate schools (having one room for high school work) numbered 121; other schools for higher education numbered 97. The University of Manitoba at Winnipeg had 3162 full-course students in all courses for 1931-32.

Agriculture, mining, and manufacturing are the principal industries. In 1932, the area under field crops totaled 5,866,800 acres (5,664,109 in 1931) and the value of production was \$28,981,000 (\$24,847,000 in 1931). The total value of all agricultural production in 1932 was estimated at \$49,113,000, of which wheat accounted for \$14,416,000; oats, \$5,156,000; barley, \$3,402,000; hay and clover, \$3,757,000; potatoes, \$1,205,000. Livestock (1931 census): 324,659 horses; 668,878 cattle; 216,790 sheep; 390,043 swine; 5,566,793 poultry; 975 mules.

Mineral output for 1932 was valued at \$8,719,863, of which gold represented \$2,538,294; copper, \$3,362,803; zinc, \$1,004,016; silver, \$328,283. The gypsum production for 1931 amounted to 23,076 tons valued at \$231,124. The 1931 fish catch was valued at \$1,241,575. In 1931 there were 955 manufacturing establishments, with a total capital investment of \$191,935,311; employees numbered 24,193, the gross value of production was \$118,540,865, and the net value was \$63,391,473. For the fiscal year ending June 30, 1931, ordinary revenues amounted to \$13,842,511; expenditures, \$14,491,673; provincial bonded debt was \$89,630,906 (subject to revision). The government of the province is administered by a lieutenant-governor and a legislative assembly of 55 members elected for five years. The 19th legislative assembly had 39 Progressives, 10 Conservatives, 5 Laborites, and 1 Independent. In the Dominion Parliament at Ottawa the province is represented by 6 members in the Senate and 17 in the House of Commons. Lieutenant-Governor in 1933, J. D. McGregor; Premier and President of the Council, John Bracken. See CANADA.

MANUFACTURING. See BUSINESS REVIEW.

MARBURY, ELIZABETH. An American feminist, died Jan. 22, 1933, in New York City where she was born June 19, 1856. After receiving a private school education she began her colorful career as an author's representative. Her first client was the French dramatist, Sardou. She later introduced to the American public the works of Feydeau, Halévy, Meilhac, Richepin, Bataille, and Moreau, twice receiving decorations from the French government for the service she had thereby

rendered. In the British field her most important clients were Oscar Wilde and George Bernard Shaw. Besides selling Wilde's *Ballad of Reading Gaol* to the New York World, she arranged for the production of his plays in the United States. She succeeded also in dispelling much of the prejudice that was attached to Shaw's earlier plays, such as *Mrs. Warren's Profession*, and in creating a vogue for *Candida*, *John Bull's Other Island* and *Man and Superman*. At the time of her death she was vice-president of the American Play Co.

Miss Marbury was active in the woman suffrage movement, and on the passage of the Nineteenth Amendment was appointed a member of the Democratic National Committee. She was also prominently identified during the World War with relief work for the Allied armies on the western front and in recognition of these services was decorated by the American, Belgian, and Italian governments. A bitter opponent of prohibition, she invited many persons, including Lady Astor, to debate the subject with her. She wrote *My Crystal Ball* (1923), a volume of reminiscences, and translated Maurice Barrès's *Faith of France* (1918).

MARIETTA COLLEGE. A nonsectarian co-educational institution at Marietta, Ohio, founded in 1835. The total registration for the autumn term of 1933 was 384 of whom 230 were men and 154 women. The 1933 summer school enrollment was 29. The faculty numbered 36. The endowment amounted to \$1,383,786 and the income for the year to \$114,761. The library contained 103,206 volumes. President, Edward Smith Parsons, L.H.D., LL.D.

MARINE DISASTERS. See SAFETY AT SEA; FIRE PROTECTION.

MARITIME PROVINCES. The Atlantic Coast provinces of Eastern Canada, comprising PRINCE EDWARD ISLAND, NOVA SCOTIA, and NEW BRUNSWICK. See CANADA.

MARLING, SIR CHARLES MURRAY. A British diplomat, died in London, Feb. 10, 1933. Born Dec. 3, 1862, he was educated at Wellington College and at Trinity College, Cambridge. He began his diplomatic career in 1888 as attaché at Sofia, Bulgaria, becoming third secretary in 1890, second secretary in 1894, and acting agent and consul-general in 1902. He held the latter post for three years, with the exception of a short period in 1904-05 when he acted as chargé d'affaires in Madrid, Bucharest, and Athens. In 1905 he was transferred to Crete as acting consul-general and in 1906 became counselor at the British Embassy in Teheran, Persia. He held the same post at Constantinople from 1908 to 1913 and then returned to Teheran as Minister. During the World War his diplomacy was largely responsible for Persia's neutrality, in spite of German propaganda to undermine the influence of the Allies and successive Russian and Turkish invasions of the province of Azerbaijan. He also succeeded in 1915 in inducing the Shah to dismiss his pro-German premier, Mohammed Ala Khan, and to appoint a pro-Ally cabinet under Prince Firman Firma.

After the War Sir Charles was appointed Minister to Denmark, serving in 1920 as British delegate and president of the International Commission for taking the plebiscite in the former Danish duchy of Schleswig. His last post was that of Minister to the Netherlands during 1921-26. In 1931 he was elected a governor of Welling-

ton College. He was created Knight of the Grand Cross of St. Michael and St. George in 1926.

MARQUETTE UNIVERSITY. An institution of higher education for men and women, under Roman Catholic direction, in Milwaukee, Wis., organized as a college in 1881 and chartered as a university in 1907. It comprises the following colleges and schools, for which registrations of regular students in the autumn of 1933 were as follows: College of liberal arts, 730; business administration, 208; dentistry, 168; engineering, 367; journalism, 124; law, 266; medicine, 359; graduate school, 236; speech, 8 (with 750 students enrolled in speech courses from other schools and colleges of the university). In addition, there were 257 students in evening courses in business administration, 21 in dental hygiene, and 241 in late afternoon and Saturday morning liberal arts teachers' courses, making a grand total of 3045. The registration for the 1933 summer session was 568. The faculty in the autumn numbered 349 members. Endowment funds amounted to \$2,670,941. The income for the year was \$858,928, which includes the value of the services rendered gratis by Jesuit priests in 1932-33. The library contained 60,000 volumes. President, the Rev. William M. Magee, S.J., A.M., LL.D.

MARRIAGE AND DIVORCE. According to the Bureau of the Census, during the year 1932 there were 981,759 marriages performed in the United States as compared with 1,060,791 in 1931. These figures represent a decrease of 79,032, or 7.5 per cent. During the year 1932 there were 160,329 divorces granted in the United States as compared with 183,664 in 1931, representing a decrease of 23,335, or 12.7 per cent. There were 3900 marriages annulled in 1932, as compared with 4339 in 1931. The estimated population of continental United States on July 1, 1932 was 124,822,000, and on July 1, 1931, 124,070,000. On the basis of these estimates the number of marriages per 1000 of the population was 7.9 per cent in 1932, as against 8.5 in 1931; and the number of divorces per 1000 of the population was 1.28 in 1932, as against 1.48 in 1931. While the net decrease in the number of marriages performed in the country as a whole was 7.5 per cent, the relative change in the different States ranged from a decrease of 43.5 per cent in Iowa to an increase of 6.6 per cent in Nebraska. Only 10 States reported increased rates—Missouri, 3.5 per cent; South Dakota, 2.7 per cent; Nebraska, 6.6 per cent; West Virginia, 1.7 per cent; Mississippi, 5.1 per cent; Arkansas, 5.2 per cent; Oklahoma, less than one-tenth of 1 per cent; New Mexico, 6 per cent; Arizona, nine-tenths of 1 per cent; and Utah, five-tenths of 1 per cent. All 10 States adjoin those in which recent changes made in the marriage laws require from 3 to 5 days to elapse between the application for a marriage license and the issuance of the same. Missouri, South Dakota, and Nebraska adjoin Iowa where the change became effective July 1, 1931; South Dakota and Nebraska also adjoin Wyoming where the law changed June 1, 1931; and South Dakota further borders Minnesota where the restrictions began Apr. 29, 1931. Missouri, Mississippi, and Arkansas border Tennessee where the change in laws was made July 1, 1929. West Virginia is neighbor to Ohio with a change effective July 23, 1931. Oklahoma and New Mexico both adjoin Colorado and Texas where restrictions began Sept. 1, 1931 and June 13, 1929, respectively. Utah also adjoins

Colorado, while Arizona borders California where the change in laws was made July 29, 1927. In 1932, for the United States as a whole, 6.1 marriages for each divorce were reported, as against 5.8 in 1931. The District of Columbia and New York State, each having but one cause for absolute divorce, reported 35.3 and 21.4, respectively, while the rates in other States ranged from 15.4 marriages to each divorce in West Virginia to 1.8 marriages to each divorce in Nevada. The changes in the various States as regards the number of divorces compared with the year 1931, ranged from a decrease of 34.9 per cent in the District of Columbia to an increase of 12.5 per cent in Arkansas. Increased rates for divorces were reported in 2 other States, Rhode Island and Vermont. The following table gives the number of marriages and divorces for each State for both 1932 and 1931, as well as the number of marriages annulled during the same period. The figures for 1932 are preliminary and subject to correction.

MARSEILLES. See PORTS AND HARBORS.

MARSH, DANIEL BRAND. A Canadian clergyman and astronomer, died at Hamilton, Ont., Sept. 22, 1933. Born near Walters Falls, Ont., in 1859, he attended Knox College and about 1885 entered the ministry of the Presbyterian Church, his first pastorate being at Blackheath. His avocation was the construction of various mechanical devices, such as a stethoscope, audiphone, and cylinder phonograph. From these he turned to astronomy and the construction of refracting telescopes with equatorial mounting. He designed also a mechanism by means of which the stars and planets could be photographed through small telescopes and was mainly responsible for the establishment of the centres of the Royal Astronomical Society of Canada at Peterboro, Guelph, and Hamilton.

Called to St. Andrew's Church in Hamilton, Bermuda, in 1920, Dr. Marsh was chosen leader of the party sent by the Bermudian government

MARRIAGES AND DIVORCES COMPARED FOR TWO YEARS

Division and State	M a r r i a g e s			D i v o r c e s		A n n u l m e n t s	
	1932	1931	Per one divorce	1932	1931	1932	1931
United States	981,759	1,060,791*	6.1	160,329	183,664	3,900	4,339
New England:							
Maine	5,564	6,234	4.6	1,219	1,342	17	5
New Hampshire	5,437	5,535	8.6	629	660	9	10
Vermont	2,405	2,554	6.6	365	325	2	...
Massachusetts	22,819	26,296	6.5	3,537	3,585	53	60
Rhode Island	4,080	4,635	5.6	730	674	...	...
Connecticut	9,150	10,030	8.0	1,140	1,351	14	15
Middle Atlantic:							
New York	104,665	114,322	21.4	4,898	5,091	1,025	1,049
New Jersey ..	22,840	26,458	8.3	2,736	3,152	75	89
Pennsylvania	55,947	59,826	9.6	5,815	7,241	41	54
East North Central:							
Ohio	29,663	43,004*	2.7	11,176	13,312	58	82
Indiana ..	36,105	38,372	5.7	6,322	7,278	76	84
Illinois	65,088	71,634	5.5	11,745	13,893	131	204
Michigan	28,552	28,856	3.7	7,821	9,425	64	76
Wisconsin	14,035	14,784	6.0	2,356	2,643	48	62
West North Central:							
Minnesota	17,346	19,207	7.0	2,473	2,807	11	23
Iowa	8,014	14,190	2.4	3,353	4,117	21	27
Missouri	35,158	33,971	4.5	7,887	8,994	52	44
North Dakota	3,600	3,633	9.7	370	437	8	10
South Dakota	7,185	6,995	10.9	662	753	4	12
Nebraska	11,757	11,030	8.1	1,454	1,531	46	29
Kansas	16,890	18,311	5.2	3,244	3,842	20	27
South Atlantic:							
Delaware	902	1,013	5.1	176	181	6	8
Maryland	22,779	24,703	13.3	1,714	2,014	13	20
District of Columbia	4,947	5,316	35.3	140	215	48	4
Virginia	24,626	25,295	9.4	2,613	3,130	19	34
West Virginia ..	18,480	18,173	15.4	1,201	1,599	35	43
North Carolina	11,614	13,130	8.9	1,311	1,525	16	16
South Carolina	25,513	26,404	...	...	...	29	19
Georgia	25,618	28,331	11.9	2,158	2,346	38	33
Florida	15,301	17,336	5.0	3,089	3,563	24	26
East South Central:							
Kentucky	31,684	34,250*	8.0	3,985	4,472	13	22
Tennessee	18,054	19,696	4.3	4,181	4,669	9	13
Alabama	25,102	25,945	11.6	2,166	2,942	3	7
Mississippi	22,688	21,589	11.9	1,912	2,015	6	4
West South Central:							
Arkansas	25,802	24,537	6.6	3,910	3,476	14	8
Louisiana	19,127	20,167	13.6	1,404	1,601	19	17
Oklahoma	33,935	33,923	5.7	5,992	6,901	127	143
Texas	40,192	40,512	2.8	14,167	15,788	137	121
Mountain:							
Montana	4,970	5,062	4.9	1,022	1,253	25	24
Idaho	1,526	2,268	1.9	800	961	15	16
Wyoming	777	1,244	1.3	598	653	9	18
Colorado	6,614	9,952	3.1	2,105	2,209	71	106
New Mexico	8,879	8,880	12.8	696	725	15	9
Arizona	7,642	7,575	9.0	848	1,125	33	38
Utah	5,768	5,788	5.8	986	1,037	17	24
Nevada	7,088	7,680	1.8	3,989	5,260	27	34
Pacific:							
Washington	15,999	17,886	4.7	3,434	3,971	65	49
Oregon	6,668	7,339	3.9	1,708	2,417	25	27
California	43,164	47,525	3.1	14,097	15,113	1,267	1,499

* Revised since publication of last report.

to observe the total eclipse of the sun at New Haven, Conn., Jan. 24, 1925. The discoveries that he made at this time regarding the coronal spectra led to his devising light filters that were used in photographing the total eclipse at Acton Vale, Quebec, Aug. 31, 1932, the resulting image being amplified by means of a concave lens inserted inside the focus of the telescope. The totality duration was fixed at 90 seconds. Dr. Marsh was a Fellow of the Royal Astronomical Society of Great Britain and a member of the astronomical societies of France, Belgium, and Mexico. Previous to his death he received from the Dominion government a grant of \$1000 and had retired from the ministry so as to devote more of his time to astronomical study.

MARSHALL, (DAVIS) EDWARD. An American editor and author, died at New Brunswick, N. J., Feb. 24, 1933. He was born at Enfield Center, N. Y., Mar. 31, 1869, and attended Benedict's Preparatory School, Rochester, N. Y. He began his newspaper career as a reporter in Rochester and in 1885 became news editor of the American Press Association, being located successively in Buffalo and New York City. From 1890 to 1895 he was Sunday editor of the New York *Press*. In 1896 he was European correspondent for the Bacheiler and Johnson Newspaper Syndicate, in 1897 Sunday editor of the New York *Journal*, and in 1897-98 European correspondent and Sunday editor of the New York *World*. During the Spanish-American War he served as a war correspondent for the New York *Journal*, attaching himself to Col. Theodore Roosevelt's Rough Riders. At the action of Las Guasimas, June 24, 1898, he was badly wounded, being struck by a bullet which shattered a vertebra. The injury resulted several years later in the amputation of one leg and paralysis from the waist down.

Mr. Marshall became editor of McClure's Newspaper Syndicate in 1900 and the following year attended as correspondent the first Peace Conference at The Hague. Later in 1901 he became Sunday editor of the New York *Herald* but had to relinquish this post on account of ill health. After a long sojourn in the Middle West to regain his health he became in 1911 correspondent for the *Columbian Magazine* and other publications during the Mexican insurrection. From 1910 to 1914 he contributed a series of special articles to the New York *Times* and other Sunday newspapers throughout the United States. He then organized in New York City the Edward Marshall Newspaper Syndicate, Inc., which in 1916 purchased the Curtis Brown News Bureau of London. During the World War he was a correspondent in England, France, Belgium, and Italy and had a miraculous escape when the Channel steamer *Sussex*, on which he was passenger, was sunk by a torpedo in 1916. After the war he was American correspondent to the London *Observer* and a consulting editor of the *Aéro Digest*.

After 1894 Mr. Marshall was secretary of the New York State Tenement House Commission and contributed numerous articles to newspapers and magazines on tenement house reform as a result of his study of slum conditions not only in New York City but in the larger European cities. As an official historian of the Spanish-American War he wrote *The Story of the Rough Riders* (1898). During his sojourn in the Middle West he began to write fiction, his published novels in-

cluding *Lizette* (1902); *The Middle Wall* (1904); *The Writing on the Wall* (1909); *The Old Flute-Player* (with Charles T. Dazey, 1911); and *Bat: An Idyl of New York* (1912). He collaborated with several dramatists in writing a fiction version of such plays as Charles T. Dazey's *In Old Kentucky* (1910); Porter Emerson Browne's *The Spendthrift* (1911); Robert Herbert Davis's *The Family* (1911); Edgar James's *Master of the House* (1912); and George M. Cohan's *Broadway Jones* (1913), and was co-author with Earl Mayo in the dramatization of *Cape Cod Folks* (1902).

MARTINIQUE, mār'ti-nēk'. A French island colony in the Lesser Antilles group of the West Indies, between Dominica on the north and St. Lucia on the south. Area, 385 square miles; population (1931 census), 234,050, of whom 10,000 were whites, and the remainder Negroes, mulattoes, East Indians, and Chinese. Fort-de-France, the capital and chief seaport, had 48,395 inhabitants in 1931. In 1931, the primary schools had 24,000 students enrolled; four secondary schools had 2389 students; the law school at Fort-de-France had 65 students.

The chief exports are sugar, rum, bananas, preserved pineapple, and cacao beans. The production of sugar in 1932 amounted to 48,280 tons. Exports were valued at 180,070,000 francs and imports at 220,457,000 francs (franc averaged \$0.0392 for 1931), in 1931. Vessels entering the ports in 1931 numbered 603 and aggregated 1,134,032 tons. The budget for 1931 was balanced at 93,450,000 francs; public debt amounted to 1,023,755 francs. A governor administers the colony assisted by a privy council. The budget is voted by an elected general council; the communes, of which there are 32, are administered by elected municipal councils. The colony is represented in the French Parliament by a senator and two deputies. Governor in 1933, L. Gerbinis.

MARYLAND. POPULATION. The population of the State on Apr. 1, 1930, according to the Fifteenth Census, was 1,631,526, as against 1,449,661 in 1920. Baltimore had (1930) 804,874 inhabitants; Annapolis, the capital, 12,531.

AGRICULTURE. The following table shows the acreage, production, and value of the principal crops for 1933 and 1932:

Crop	Year	Acreage	Prod. Bu.	Value
Corn	1933	560,000	14,000,000	\$6,440,000
	1932	548,000	16,440,000	5,096,000
Hay (tame)	1933	403,000	529,000*	6,031,000
	1932	403,000	468,000*	4,446,000
Tobacco	1933	32,200	17,710,000 ^b	8,188,000
	1932	33,900	26,272,000 ^b	4,466,000
Wheat	1933	395,000	6,320,000	5,246,000
	1932	380,000	4,940,000	2,470,000
Potatoes	1933	30,000	2,700,000	2,943,000
	1932	31,000	2,852,000	1,483,000
Sweet potatoes	1933	6,000	840,000	462,000
	1932	8,000	888,000	311,000

* Tons. ^b Pounds.

EDUCATION. The need of the year, to provide instruction for increased enrollment out of reduced country-school budgets, was reported to have been met without serious decrease in efficiency. The number of persons of school age (5 to 18 years, inclusive) in the State was reckoned for November, 1932, as 413,328. There were enrolled in the public schools, in the academic year 1932-33, 294,119 pupils. Of these, 240,199 were in elementary grades or schools and 53,920 in high schools. The year's current expenditures

for public-school education totaled \$17,793,076. Salaries of teachers, by the year, averaged \$1452.

CHARITIES AND CORRECTIONS. The central functions of the State with regard to the administration of its institutions for the care and custody of persons, under the system in force in 1933, were somewhat widely distributed. The Department of Welfare, headed by a board of seven appointees and by the Director of Welfare, who was chairman of this board, held authority over correctional institutions. These were the Maryland Penitentiary, at Baltimore, which had 1106 inmates on Sept. 30, 1932, and the Maryland House of Correction, Jessups, 1164. Prisoners employed by these institutions or by contractors produced in the previous year revenue of about \$416,000, of which somewhat more than a third was reckoned to the prisoners' own account.

Institutions for mental patients and for the feeble-minded were independently operated. They included the Eastern Shore State Hospital at Cambridge, the Springfield State Hospital, at Sykesville (about 2500), Spring Grove State Hospital, Catonsville (capacity 1500), and the Crownsville State Hospital (Negroes), at Crownsville, each of which had its own board of managers, appointed by the Governor; also the Rosewood State Training School, at Owings Mills (for the feeble-minded) under a Governorially appointed board of visitors.

The Department of Charities, composed of a board of six members, a Director of Charities and a staff, was charged with the investigation of the whole system of State aid to public and private institutions. It administered certain laws as to the placement of children and against the separation of mothers and infants in the first six months of infancy. The Legislature charged the board in 1933 with the duty of administering emergency relief to the temporarily unemployed and destitute. A system of State sanatoria for sufferers from tuberculosis cared for some 465 patients at the State Sanatorium in Frederick County, 50 at the Eastern Shore Branch at Salisbury, 150 at the Mount Wilson Branch (Baltimore County), and 150 at the Colored Branch, at Henryton.

LEGISLATION. A regular 90-day session of the General Assembly was held, convening on January 4. It made extensive provisions for meeting the trouble caused by reduced public revenues. Among these were: authorization of an issue of \$12,000,000 of bonds by Baltimore to cover the anticipated cost of relief to the city's needy for two years to come and to replace the funds previously spent by the city for this purpose; authorization of an issue of \$4,000,000 of bonds by the State Road Commission for improving the system of main roads connecting with the North; reduction of the State's budget by some \$2,815,000 a year to \$29,000,000 a year for the ensuing biennium; increase of Baltimore's share of the lateral-road tax on gasoline, to 30 per cent, from 20; taxation of chain stores, according to the number of such stores operated as a chain in the State, at rates rising from \$5 a store up to \$150 for each unit in excess of 20; authorization to reduce teachers' salaries by from 10 to 15 per cent; imposition of a tax of 1 per cent on pari-mutuel bets at racetracks; increase of charges for motor-truck licenses.

There was created a State convention of 24 delegates, to be elected by popular vote, 3 from each Congress district and 6 at large, to act

for the State with regard to the proposed repeal of the Federal Eighteenth Amendment. The sale of beer of the strength permitted by Federal law was permitted throughout the State, except Carroll County, and with special powers of local control to Baltimore and 8 other counties; save in the specified counties, licenses to sell beer were made to cost \$50 for sellers where consumption was on the premises and \$25 for other sellers. The Legislature ratified the Federal Twentieth Amendment, but only after its adoption had been proclaimed. An emergency banking measure to provide authority for control of the reopening of State banks was enacted during the banking panic early in March.

POLITICAL AND OTHER EVENTS. Some of the large banks of Baltimore were in weakened condition when the banking panic started to spread over the country in February. Governor Ritchie was obliged to declare a legal holiday as early as February 24 in order to prevent defaults of payment upon demands of depositors. He prolonged the holiday by successive proclamations at intervals until the general closure of banks. When banks reopened it was found impossible to let the Baltimore Trust Company and the Union Trust Company resume payment of depositors in full. A new institution, the Baltimore National Bank, was opened on August 7, taking over the liquid resources of other institutions.

There were elected on September 12 by popular vote 24 delegates, who met on October 19 and voted the State's adoption of the repeal of the Federal Eighteenth Amendment through the repealing amendment proposed by Congress. The popular vote of the State favored repeal by somewhat less than 5 to 1.

The public service commission of the State was reported in August to have refused that utility companies under its control be accorded higher rates in the event of their incurring added expense for more employees in conformity with the general demand of the National Recovery Administration on utility companies. The Consolidated Gas, Electric Light, and Power Company, citing its consequent inability to increase its expenditures, declined to undertake what the Administration demanded.

Local authorities having failed to proceed against persons accused of having lynched a Negro at Princess Anne on October 18, Governor Ritchie called out the National Guard, who arrested 4 of the accused on November 28. The prisoners were discharged by a local tribunal on the following day.

OFFICERS. The chief officers of the State, serving in 1933, were: Governor, Albert C. Ritchie; Secretary of State, David C. Winebrenner, 3d; Treasurer, J. R. Dennis; Auditor, Edmund R. Stewart; Comptroller, William S. Gordy, Jr.; Attorney General, William Preston Lane, Jr.; Superintendent of Schools, Albert S. Cook.

Judiciary. Court of Appeals: Chief Judge, Carroll T. Bond; Associate Judges, John R. Patison, T. Scott Offutt, W. H. Adkins, Francis N. Parke, Hammond Urner, W. M. Digges, D. Lindley Sloan.

MARYLAND, UNIVERSITY OF. A coeducational State institution of higher learning at College Park and Baltimore, Md., founded in 1807. The enrollment for the autumn term of 1933 was 3280; the summer school enrollment was 840. The faculty in the autumn numbered 567. The total income from appropriations and

other receipts amounted to \$2,537,240. The library contained approximately 87,332 volumes. During 1933 work was begun on the construction of a new University Hospital at Baltimore, for which the State made an appropriation of \$1,500,000. President, Raymond A. Pearson, D.Agr., LL.D.

MASHONALAND. See RHODESIA.

MASSONS. See FREEMASONRY.

MASSACHUSETTS. POPULATION. The population of the State on Apr. 1, 1930, according to the Fifteenth Census, was 4,249,614, as against 3,852,356 in 1920. Boston, the capital, had (1930) 781,188 inhabitants.

AGRICULTURE. The following table shows the acreage, production, and value of the principal crops for 1933 and 1932:

Crop	Year	Acreage	Prod. Bu.	Value
Hay (tame)	1933	330,000	433,000 ^a	\$7,058,000
	1932	332,000	404,000 ^a	6,464,000
Cranberries	1933	14,000	470,000 ^b	2,585,000
	1932	14,000	395,000 ^b	2,765,000
Tobacco	1933	3,600	5,051,000 ^c	1,066,000
	1932	5,600	8,232,000 ^c	1,077,000
Apples	1933	....	3,486,000	2,092,000
	1932	....	3,525,000	2,115,000
Potatoes	1933	15,000	2,325,000	2,441,000
	1932	13,000	1,950,000	1,072,000
Corn	1933	38,000	1,520,000	1,034,000
	1932	38,000	1,520,000	760,000

^a Tons. ^b Barrels. ^c Pounds.

EDUCATION. The public-school system succeeded in 1933, in the face of the prevalent fiscal difficulties, in offering a full academic year of instruction to every child. Free daytime courses were extensively provided for unemployed adults, through the cooperation of the State's Department of Education with colleges and universities in the eastern part of the State. The number of postgraduate students in the high schools rose to twice the normal total.

For the academic year ending June 30, 1933, the number of persons of school age (from 5 to 16 years) in the State was reckoned as 845,067. There were enrolled in the public schools 780,446 pupils. Of these, 505,155 were in common schools or elementary grades; in junior high schools, 108,153; in upper high schools, 167,138. The expenditures of the year for public-school education totaled \$66,843,644, exclusive of outlays, which totaled \$5,515,359. The salaries of teachers, by the year, were estimated to have averaged \$1838.

CHARITIES AND CORRECTIONS. The State's institutions for the care and custody of persons, under the system in force in 1933, were not under the central authority of a single administrative body; but each of divers groups of institutions was under its respective governmental department. A Department of Public Welfare, composed of a commissioner and an advisory board of six members, dealt with divers welfare problems; it gave some sort of State assistance to about 80,000 individuals during the year at an expenditure of some \$9,000,000. Among these were 3028 mothers and 11,784 children assisted under the mothers'-aid law. The department had custody (December 1) of 7067 children declared to be State wards. It had charge of 3372 other minors, on parole from the State training schools. Its duties included granting State old-age assistance, supervision of town-planning, control of housing regulations, supervision over charitable bodies of divers sorts, and investigation of adoptions.

It directed the State Infirmary, at Tewkesbury (3097 inmates); Massachusetts Hospital School, Canton (300); Lyman School for Boys, Westborough (409); Industrial School for Girls, Lancaster (247); Industrial School for Boys, Shirley (278).

Under the government of a Commissioner of Correction were: the State Prison, Boston; Massachusetts Reformatory, Concord; Reformatory for Women, Framingham; Prison Camp and Hospital, Rutland; State Farm, Bridgewater. A Department of Mental Diseases supervised mental hospitals at Worcester, Taunton, Northampton, Danvers, Westborough, Medfield, Monson, Foxborough, and Grafton. The Department of Health had authority over five State sanatoria.

LEGISLATION. The General Court, convening on January 4, held a protracted regular session. It authorized an issue of \$30,000,000 of State bonds for purposes of economic relief and imposed on the dividends of domestic corporations a tax at the rate of 6 per cent, of which the proceeds were to be used for purposes of relief among municipalities. A measure to create an advisory State banking board somewhat similar to that of New York State was passed but was vetoed by Governor Ely. Provision was made for reductions of public salaries by the City of Boston. There was created, to act for the State with regard to the proposed repeal of the Federal Eighteenth Amendment, a convention to be composed of 3 delegates from each Congress district, or 45 in all, who were to be elected by the people on June 13 from nominees (3 for prohibition and 3 for repeal) chosen for each district by the Governor, his council, the secretary of State and the State auditor. The manufacture and sale of beer of the alcoholic strength of 3.2 per cent was made lawful. A committee of 15 members of the General Court was appointed to prepare a code of laws to regulate traffic in alcoholic drinks in the event of repeal of Federal prohibition. The State's system of certificates of insurance for automobiles, in connection with liability for damages, was subjected to more stringent regulation. The existing law prohibiting employment of women at night in textile and leather industries was rendered, by act, subject to suspension by the commissioner of labor and industry.

A special session in November authorized banks under State charter to sell preferred stock to the Reconstruction Finance Corporation.

POLITICAL AND OTHER EVENTS. Banks in the State were closed, at the height of the banking panic, by a proclamation of legal holidays on March 4. They reopened generally eight days later, with the exception of savings banks, and comparatively little need was found to liquidate or restrict payments by banks in the State. On June 13, by a popular vote in the approximate proportion of 4 to 1 there were elected delegates in favor of the repeal of the Eighteenth Amendment, who met in State convention on June 26 and voted the State's adoption of repeal as provided in the superseding amendment proposed by Congress.

The State authority and the Federal Public Works Administration clashed in July over the question whether Federal loans for public works under the National Recovery Act might be made directly to municipalities and other public bodies in the State or must be made through the intermediary of the State. The State laws for supervision over the debts of cities were held by Gov-

ernor Ely to render it impossible for cities to contract debt lawfully save as the State approved. In addition the General Court had created a general-finance board to supervise the financial steps taken by cities in providing aid to check the effects of economic depression, and it had charged this body with the particular duty of passing upon cities' intended borrowings from Federally provided funds. Secretary of the Interior Ickes declined to proceed as the State had provided and attacked Governor Ely's position in an allusion to "political influence" as likely to mark State control. Fortunately he had appointed a Federal board to pass upon municipal requests in the State, for loans under the Federal act; Former Governor Fuller had been made the head of this board, which was virtually to duplicate the work of the State board. The difficulty was composed by Governor Fuller's undertaking, early in August, that his board would cooperate fully with that of the State.

The City of Boston, in order to render bankers willing to help it issue some \$30,000,000 of tax-anticipation notes in advance of its September collection of taxes, made an agreement to reduce its payroll by \$5,000,000; the requisite reductions in salaries were ordered on April 21. The seven members of the supreme judicial court of the State made a voluntary cut of 15 per cent in their own salaries. A strike of some 6000 workers in the shoemaking industry at Brockton and Lynn started on September 18. In October a move on the part of some of the interests affected to remove machinery from Lynn led to opposition from a mob. The ancient emblem commonly known as the sacred cod was stolen on April 26 from the chamber of the State's House of Representatives; it was later returned, after the act had reportedly been traced to college students.

OFFICERS. The chief officers of the State, serving in 1933, were: Governor, Joseph B. Ely; Lieutenant-Governor, Gaspar G. Bacon; Secretary of the Commonwealth, Frederic W. Cook; Treasurer, Charles F. Hurley; Auditor, Francis X. Hurley; Attorney General, Joseph E. Warner; Commissioner of Education, Payson Smith; Commissioner of Public Welfare, Richard K. Conant.

Judiciary. Supreme Judicial Court: Chief Justice, Arthur Prentice Rugg; Associate Justices, John Crawford Crosby, Edgar P. Pierce, William C. Wait, F. Tarbell Field, Charles H. Donahue, Harry T. Lummus.

MASSACHUSETTS INSTITUTE OF TECHNOLOGY. A non-sectarian institution for scientific and technical education in Cambridge, Mass., founded in 1861. The enrollment for the autumn of 1933 was 2606, including 500 graduate students. For the summer session, the registration was 1055. There were 231 members on the faculty and 274 others on the active staff of the institute. The productive funds amounted to \$32,700,000. The income for the year was \$3,300,000, received from various sources as follows: Funds, \$1,450,000; student fees, \$1,475,000; miscellaneous, \$375,000. The book value of land and buildings in Boston and Cambridge was \$15,700,000. The library contained 288,000 volumes. President, Karl Taylor Compton, D.Sc., D.Eng., Ph.D., LL.D.

MASSACHUSETTS STATE COLLEGE (formerly MASSACHUSETTS AGRICULTURAL COLLEGE). A State institution for agricultural and scientific training in Amherst, founded in 1867. The enrollment in 1933 was 1245. There were 203

members on the faculty, including 110 in resident teaching, 63 in research at the experiment station, and 30 in extension service in agriculture and home economics. The income in 1933 amounted to \$1,128,837, of which \$933,070 was from State appropriation and \$195,707 from Federal appropriation. The library contained approximately 95,000 volumes. As a part of the Federal and State emergency building programme, plans have been announced for the construction of a new library and a men's dormitory at the College early in 1934. President, Hugh P. Baker, M.F., D.Oec, LL.D.

MASTITIS OF DAIRY CATTLE. See VETERINARY MEDICINE.

MATABELELAND. See RHODESIA.

MAURITANIA. See FRENCH WEST AFRICA.

MAURITIUS. An island crown colony of Great Britain in the South Indian Ocean some 500 miles east of Madagascar. The dependencies of the colony consist of many small islands from 200 to 1200 miles away, the largest being Rodrigues which had an estimated population of 8091 on Jan. 1, 1933. Total area, 720 square miles; population of Mauritius (1931 census), 393,323, of whom 268,049 were Indians. The estimated population on Jan. 1, 1933 was 388,400, including 262,428 Indians. For 1932, births numbered 10,266; deaths, 12,848; marriages, 1271. Port Louis, the capital, including suburbs, had 54,290 inhabitants in 1931. In 1932 there were 127 elementary schools with 36,436 students and 11 secondary schools with 2005 students.

The production of sugar is the main occupation of the population; in 1932 the production from over 134,915 acres was 247,220 metric tons. Coconuts, cacao, tobacco, coffee, tea, aloe fibre, and vanilla also are grown. In 1932, merchandise imports were valued at 27,014,125 Indian rupees; merchandise exports, 27,662,851 rupees; bullion and specie exports amounted to 1,042,352 rupees (rupee averaged \$0.2635 in 1932). The only harbor suitable for ocean-going ships is at Port Louis where in the foreign trade for 1932, 184 ships totaling 553,347 tons entered and 181 ships totaling 551,780 tons left. For the year ending June 30, 1932, revenue amounted to 12,160,278 rupees; expenditure, 17,704,574 rupees; public debt, £3,396,994. Government is vested in a governor who is assisted by an executive council of 4 members and a council of government of 27 members. Governor in 1933, Sir W. E. Jackson.

MAURY, DABNEY HERNDON. An American hydraulic engineer, died at Chevy Chase, Md., May 11, 1933. He was born in Vicksburg, Miss., Mar. 9, 1863, and was graduated from the Virginia Military Institute in 1882 and from the Stevens Institute of Technology in 1884. After spending two years as assistant engineer in the construction of the Fort Worth and New Orleans Railway, he accompanied his father, Gen. Dabney H. Maury, then minister to Colombia, to South America where he was engaged as engineer and general manager of various mining enterprises. Upon his return to the United States in 1892 he became engineer and superintendent of the Peoria (Ill.) Water Works Co., and in 1912 opened an office as consultant on hydraulic and sanitary engineering in Chicago.

On the entry of the United States into the World War, Mr. Maury became advisory engineer on water supply to the construction division of the Army, holding the rank of major in the Engineers Reserve Corps, and also acted as

adviser to the Marine Corps on water supplies at Paris Island and Quantico and to the Navy on those at Pearl Harbor and other stations in Hawaii. He rendered his most important service, however, when he was assigned by the War Industries Board to develop joint water supplies for the Army, Navy, and Shipping Board and Housing Corp. in the Hampton Roads (Va.) district. On his discharge in 1919 he returned to his consulting practice in Chicago as a member of the firm of Maury and Gordon, retiring in 1927. He was a past president of the American Water Works Association, and in 1920 won the James Laurie prize of the American Society of Civil Engineers.

MAYO-ROBSON, SIR ARTHUR WILLIAM. A British surgeon, died in London, Oct. 12, 1933. Born Apr. 17, 1853, he attended the medical school of Yorkshire College (later the University of Leeds) and on his graduation in 1874 served successively during the next 12 years as demonstrator and lecturer on anatomy. In 1886 he was appointed lecturer on pathology, in 1888 lecturer on operative surgery, and in 1890 professor of surgery, holding the latter chair until his retirement as professor emeritus in 1904. He held also from 1884 to 1902 the post of surgeon to the Leeds General Infirmary and after 1902 that of consulting surgeon. In 1896 he was elected president of the Leeds and West Riding Medico-Chirurgical Society, and in 1897 held the office of president of the British Gynaecological Society. A member of the council of the Royal College of Surgeons from 1893 to 1909, he served as its vice-president for two terms (1902-03 and 1904-05), as Hunterian professor (1897, 1900, and 1904), and as Bradshaw lecturer (1905). At the International Medical Congress held in Paris in 1900 he was honorary president of the surgical section.

On removing to London in 1905 Sir Arthur was named honorary surgeon to the "Dreadnought" Hospital. He served during the World War at Gallipoli and in Egypt with the Mediterranean Expeditionary Force, holding the rank of colonel (assistant military secretary). On his return in 1917 he became a member of the Consultative Medical Council at the War Office and consulting surgeon to the Southern Command in France. The following year he was appointed inspector of military orthopedic hospitals. At the time of his death he was governor of the Imperial Service College and honorary consulting surgeon to the King Edward VII Memorial Hospital, both at Windsor.

Sir Arthur was knighted in 1918, having been previously created a Commander of the Royal Victorian Order (1911) and a Companion of the Bath (1916). In 1919 he was made a Knight Commander of the Order of the British Empire and in 1921 a Chevalier of the French Legion of Honor. Among the other honors bestowed on him were Member of the Order of St. John of Jerusalem, Knight of Grace, and Fellow of the Royal College of Surgeons. His publications pertained to his researches: *Diseases of the Stomach and Their Surgical Treatment* (1901); *Diseases of the Pancreas and Their Surgical Treatment* (1902); *Diseases of the Gall-Bladder and Bile Duct* (1904); *Cancer and Its Treatment* (1905); *Cancer of the Stomach* (1907); and *On Gall-Stones and Their Treatment* (1909).

MAYOTTE (má'yôt') AND **COM'ORO ISLANDS.** An archipelago midway between the

east coast of Africa and northern part of Madagascar, consisting of the islands of Mayotte, Anjouan, Grande Comore, and Moheli. It is a colony under the general government of the French colony of Madagascar of which it is the 21st province. Total area, 836 square miles; total population 130,253 including 501 Europeans.

MECHANICAL ENGINEERS, THE AMERICAN SOCIETY OF. An organization founded in 1880 to promote the art and science of mechanical engineering and the allied arts and sciences. It includes 16 professional divisions—aeronautics, applied mechanics, fuels, hydraulic, iron and steel, machine shop practice, management, materials handling, national defense, oil and gas power, petroleum, power, printing industries, railroad, textile, and wood industries. The membership at the beginning of the fiscal year, Oct. 1, 1933, was 20,200.

The society has established local sections in 72 industrial centres of the United States to foster and promote the welfare of strong local engineering societies, inclusive of members of all branches of the engineering profession, together with architects and chemists. Also it has 108 student branches, in 48 of which a new plan of membership more closely affiliating students with the work of the society has been adopted.

There were held during the year nearly 400 meetings of the local sections of the society, as well as meetings of the student branches and professional divisions. The major meetings, however, were the semi-annual meeting held in Chicago, June 25-30, during engineering week of the Century of Progress Exposition, and the annual meeting held in New York City, December 4-8.

During 1933 the society devoted itself particularly to unifying the engineering profession and to improving the status of the engineer. It participated in the Engineers' Council for Professional Development, a joint organization of a number of engineering societies, and was represented on the Coördination Committee of Engineering Societies. It approved the model law for the registration of engineers and land surveyors as a basis for framing new registration laws and amended existing laws so as to attain a uniform standard throughout the United States.

The society assisted also in relief work for unemployed engineers through the employment service, operated by the civil, mining and metallurgical, electrical, and mechanical engineering societies, with offices in New York City, Chicago, and San Francisco. Its local work was carried on through the Professional Engineers Committee on Unemployment in New York and through similar agencies set up by local sections of the society, in coöperation with other bodies, in a number of other cities.

The technical committees of the society carried on their work in research, standardization, and the formulation of safety, power test, and boiler codes and rules. The regular publications during 1933 were: *Mechanical Engineering*, the monthly journal; *Transactions*, containing the year's papers of specialized interest and issued in 24 sections, including the Record and Index, which contains annual reports, necrology, and an index to all publications of the society for the year; *The Engineering Index*; and *Mechanical Catalog*.

The officers for 1933-34 were: President, Paul

Doty; vice-presidents, Harold V. Coes, James D. Cunningham, C. F. Hirshfeld, William L. Batt, H. L. Doolittle, Ely C. Hutchinson, Elliott H. Whitlock; managers, Eugene W. O'Brien, Harry R. Wescott, Alexander J. Dickie, Robert L. Sackett, Alex D. Bailey, John A. Hunter, James A. Hall, Ernest L. Ohle, James M. Todd; treasurer, Erik Oberg; secretary, Calvin W. Rice; executive secretary, C. E. Davies; assistant secretaries, Ernest Hartford, C. B. LePage.

The main office of the society is in the Engineering Societies Building, 29 West Thirty-Ninth Street, New York, N. Y. There is a mid-west office at 205 West Wacker Drive, Chicago, Ill., and a mid-continent office, concerned principally with the problems of the petroleum industry, at 202 Midco Building, Tulsa, Okla.

MECKLENBURG-SCHWERIN. See GERMANY under *Area and Population*.

MECKLENBURG-STRELITZ. See GERMANY under *Area and Population*.

MEDICAL ASSOCIATION, AMERICAN. A union of the constituent, or State and Territorial, medical associations, founded in 1847 to "promote the science and art of medicine and the betterment of public health." Members of the association must be members of constituent associations; those in good standing, who have qualified as fellows, constitute the scientific assembly of the association. On Dec. 1, 1933, there were 96,467 members, of whom 62,005 were fellows.

The scientific assembly is divided into 16 sections, each having its own officers who serve for a year. These sections are: Practice of medicine; surgery, general and abdominal; obstetrics, gynecology, and abdominal surgery; ophthalmology; laryngology, oology, and rhinology; pediatrics; pharmacology and therapeutics; pathology and physiology; nervous and mental diseases; dermatology and syphilology; preventive and industrial medicine and public health; urology; orthopedic surgery; gastro-enterology and proctology; radiology; and miscellaneous topics.

The eighty-fourth annual session was held in Milwaukee, Wis., June 12-16, 1933, the house of delegates, in which there are vested the legislative powers of the association, convening on June 12 and the scientific assembly the following day. At the section meetings leading authorities and investigators in the field of medical science announced and discussed the latest discoveries and methods in treating the sick. The scientific exhibit and the technical exhibits were also of great interest. The session was concerned primarily with the problem of socialized medicine, the association scoring group hospitalization plans. Dr. Dean Lewis, the newly inaugurated president, urged better geographical distribution of physicians to cover sections in need of medical care. There were 4601 persons in attendance.

The officers elected for 1933-34 were: President, Dean Lewis, Baltimore, Md.; president-elect, Walter L. Bierring, Des Moines, Iowa; vice-president, John H. Musser, New Orleans, La.; secretary and general manager, Olin West, Chicago, Ill.; and treasurer, Herman L. Kretschmer, Chicago, Ill. The official publication is the *Journal of the American Medical Association*, Morris Fishbein, editor. Eight other scientific journals, each dealing with a special field of medicine, as well as *Hygeia*, a health magazine,

are published by the association. Headquarters are at 535 North Dearborn Street, Chicago, Ill.

MEDICINE AND SURGERY. AMEBIC DYSENTERY IN CHICAGO. A recent epidemic of amebic dysentery originating in Chicago has served to call attention to this disease, long considered almost exclusively a tropical one, and to emphasize the necessity of regarding it as a potentially serious menace to public health, even in temperate zones. The infection is caused by a protozoal parasite, *endamoeba histolytica*. The mode of its transmission (by the ingestion of food contaminated by excreta from the intestinal tract of infected persons and containing the organisms in an encysted stage) is well known. Once arrived in the intestine of the new host the cyst liberates a single ameba with four nuclei. This divides once, producing eight small "amebules" which then develop into adult forms and by burrowing under the submucous coat of the intestine begin to produce the clinical symptoms associated with the disease. Further division of the mature protozoa occurs until conditions for growth become unfavorable, when again the encysted form begin to appear in the feces. The cyst, unlike the motile organism, is very resistant and may live under suitable conditions for periods of many hours. The destructive effect of the organism in the intestine is produced by the liberation of tissue destroying toxins.

Clinically the disease may present several different forms. After a variable incubation period there may be an acute illness with diarrhea and abdominal pain (mistaken in some instances for appendicitis or ulcerative colitis). This may prove fatal, or may after several days subside, only to be followed by repeated milder attacks of the same nature. Or rather insidiously there may develop a chronic form of the disease with attacks of colic and diarrhea, bloody stools, and all the symptoms of a wasting illness. Treatment in the early cases by emetine or certain other parasitocides (chiniofon, acetarsone, etc.) is usually successful, although in no more perhaps than a third of the cases is the patient completely freed of the organism. Relapses, which are apt to occur, respond very well as a rule to therapy. (*Jr. Am. Med. Assn.*, 101, 1639, 1933, after Craig, Simons, and others.)

One interesting feature of the disease is that presumably well persons may harbor amebas in their digestive tracts and thus serve as "carriers" in a manner quite analogous to the well known "typhoid carrier." And furthermore infected persons may, after the subsidence of clinical symptoms, still carry the organism. Recent studies carried out in this country seem to show that the incidence of the organism is much greater than had previously been suspected; that from 3 to 10 per cent of the population harbor the organisms. A relatively greater number of cases are found in the South.

The outbreak in Chicago became apparent in August of this year and a thorough investigation instituted at once by officials of the Chicago Board of Health soon traced the source of the infection to a large hotel where roughly a quarter of the persons employed in the handling of food were found to be harboring the *endamoeba histolytica*. Up to September 1, 15 active cases and 11 carriers were found among 364 employees examined. A subsequent investigation, October 25, revealed that 60 additional food-handlers whose stools had been negative at the first examination were now harboring the organism. (Also a study of 498 non-

food handlers showed that 100 had amœbas in their stools). The results of this study were reported in the *Journal of the American Medical Association* for Nov. 18, 1933 (Budesen, Rawlings, and Fishbein, p. 1636; Tonney, Hoeft, and Spector, p. 1638).

The present epidemic is interesting from several points of view, but especially because as a result of the fact that most of the guests were not residents of Chicago (many of whom were attending the Century of Progress Exposition) the disease was spread widely to other parts of the country. Because of the long incubation period, symptoms did not usually develop until the infected persons had returned home. A questionnaire sent to all individuals who had been guests at the hotel after May 1st (about 22,000 in all) revealed that of approximately 3500 who replied 69 had had illnesses positively diagnosed as amœbic dysentery, 23 others were suspected of having it, and 88 had had illnesses which in some instances might have been amœbic dysentery. Up to November 14 there had been in Chicago 185 cases with 19 deaths, and 193 carriers had been discovered. From various other parts of the country 69 cases had been reported in which a positive laboratory diagnosis of amœbiasis had been made.

Quite a few prominent persons succumbed in the present epidemic. The death of "Texas" Guinan, especially attracted comment in the press.

The Board of Health's study revealed that the present epidemic probably could be traced to a mild outbreak occurring in 1927. Two employees who were found to be harboring amœbas had also been discovered to be "carriers" during the previous epidemic. They had been treated at that time and apparently cured, only to turn up with the organisms two years later, and it seems not unlikely that they served as a source for the infection of their fellow workers. If this be the case, it is apparent that the employment of previously infected persons is fraught with danger in spite of the fact that they may have been subjected to extensive treatment and apparently cured. Vigorous measures to control the epidemic were taken. These included prompt isolation and treatment of all active cases and of all carriers, and various measures to promote cleanliness of the hands and to prevent the contamination of food by excreta. A standard for cure was established and the recommendation made that all persons with a history of amœbiasis should be subjected to examination every four months as long as they work as food handlers.

The questionnaire mentioned previously was probably very helpful in locating cases and in suggesting to those responsible for treatment that the disease might be amœbic dysentery. In fact, because of the rarity in the past of obvious clinical cases, many competent physicians are not familiar with the condition and in some instances treatment resulted unfortunately because of mistakes in diagnosis. Due to the prominence given the report by the *Journal*, physicians throughout the country have been put on their guard against the disease. It appears that we must now consider amœbiasis as an endemic disease in this country and that public health measures to prevent its wide dissemination, centring especially on a careful examination of all those who work in connection with the preparation or serving of food, is warranted.

ENCEPHALITIS IN ST. LOUIS, THE EPIDEMIC OF. In 1917 there appeared in Austria, in a mildly epidemic form, a disease of the central nervous system

characterized by fever, somnolence and visual disturbances caused by paralysis of the extra-ocular muscles. Von Economo in Vienna first called attention to the condition, but cases were soon recognized throughout Central Europe and shortly later in England and in this country. Their occurrence roughly coincided with the pandemic of influenza which raged so disastrously during the latter part of the World War. Pathologically the disease presented no especially characteristic features, and in spite of numerous investigations both here and abroad no very enlightening information concerning its etiology could be obtained. Most workers felt that it was a disease produced by an as yet unrecognized filtrable virus, and that possibly it bore some relationship to influenza, which too seemed likely to be a virus disease.

The disease has varied somewhat in different epidemics and indeed there has been a fairly wide variation in individual cases depending upon the particular part of the brain most involved by the infection. In the early typical cases, from which the name encephalitis lethargica was derived (so called "sleeping sickness"), the lesion was confined largely to the basal ganglia of the midbrain. The mortality has ranged between 20 and 40 per cent during various outbreaks of the disease, but what is especially disturbing is that not infrequently those surviving the acute attack may be left with residual disturbances—character changes, insomnia, ocular paralyses—or may develop a year or more later a train of symptoms—called rather formidably "post-encephalitic Parkinsonism"—practically identical with the well known paralysis agitans or "shaking palsy" of the aged, a very pathetic and totally disabling condition.

The first major epidemic of encephalitis in this country since the war has recently occurred in St. Louis and has prompted further study of the nature and causation of the disease. According to Dr. J. P. Leake of the United States Public Health Service, who has been in charge of the Encephalitis Investigation (*Jr. of the Am. Med. Ass'n*, 101, 928 (Sept. 16), 1933), the present epidemic is similar to ones described in Japan (1924) and in Australia, and probably is not identical with the disease as it appeared here in 1918. This atypical form varies from the classic one, according to Dr. Leake, in the rarity of ocular disturbances, the more frequent involvement of the meninges, and the greater incidence of prompt and apparently complete recovery. It might be said that not all workers agree with Dr. Leake regarding the difference in identity of the two outbreaks.

Between August 7 and September 10th of 1933 there appeared in St. Louis city and county 656 cases with more than 115 deaths, a case mortality of about 20 per cent. There has been as yet no reported spread of the disease, and it seems more than likely that the epidemic will be localized to St. Louis. One interesting feature of the present epidemic is that older persons have been more frequently attacked, and that among them the disease has proved to be more serious. Whereas in the past the incident of the disease has been roughly the same in the various age groups, in the present instance 35 per cent of the cases have been among those over 55, who comprise but 15 per cent of the population. The death rate in this group has been double that in other age groups.

The lesions found at post-mortem resemble

those found in other epidemics but are more diffuse as a rule, and do not involve so characteristically the basal ganglia. One important observation made by Dr. Margaret Smith of the Department of Pathology of the Washington University Medical School was that in half the cases examined, "inclusion bodies" could be demonstrated in the kidneys. These small intra-cellular masses are found with a high degree of frequency in diseases known to be caused by filtrable viruses, and their presence suggests that this disease, too, is caused by a virus.

Epidemiologic studies have been undertaken by the United States Public Health Service and by officials of the Army Medical School in Washington. Attempts to transmit the disease by the bite of the mosquito have been made but with no positive results as yet. This experiment which involved the voluntary participation of a group of persons confined to the Missouri State Penitentiary received wide notice in the daily press. As far as can be determined, drinking water and milk have been excluded as factors in the spread of the disease, although as Dr. Leake points out, the epidemic was at first primarily suburban. Up to the present time none of the studies has contributed any very certain information regarding the mode of transmission.

Interesting experimental studies have been carried out by a group including Drs. Muckenfuss and McCordock of Washington University and Dr. Armstrong of the Public Health Service who reported on September 8 that "six monkeys inoculated with material from five different patients dying with encephalitis have shown fever beginning with the eighth to the fourteenth day after inoculation. Coincident with the rise of temperature tremors, incoordination and weakness have appeared. Three of these animals have been submitted to pathological examination, and their central nervous systems showed lesions consistent with the picture found in human epidemic encephalitis. Reinoculations of materials from these monkeys into normal monkeys is also progressing. While these results are encouraging, many weeks' work has yet to be done before it can be stated that the human disease has been established in animals."

In a disease such as this, whose etiology is so obscure, no specific treatment is possible; nor indeed have any empirical methods proved of great value. If the careful studies being made during the present epidemic result in throwing any light on the cause of the process, as it seems now that they possibly may, a very important step forward will have been made.

METABOLISM BY A NEW DRUG, STIMULATION OF. For some years extracts of the thyroid gland, and more recently its active principle, thyroxine, isolated by Kendall, have been used to increase the body's rate of metabolism. These preparations have proved to be exceedingly valuable in the treatment of myxedema, a disease caused by a deficiency of thyroid secretion and characterized by a conspicuously lowered metabolic rate. Physicians have found, also, that thyroxine may be an important adjuvant in the treatment of obesity, although in general chief reliance has been placed upon a strict dietary régime, with a limitation of the caloric intake below the amount the body ordinarily consumes. The use of thyroid preparations has been restricted because of their tendency to produce such symptoms as nervousness, palpitation, tachycardia, and sweating—symptoms which regularly

accompany hyperfunction of the thyroid. Recent studies of a new drug, alpha-dinitrophenol, seem to indicate that it may prove useful in conditions requiring a metabolic stimulant; and further that by its use certain of the objectionable features of thyroid medication may be avoided.

Alpha-dinitrophenol, a chemical closely related to picric acid (tricresol) has been known for some time as an intermediate product in the manufacture of munitions, and cases of poisoning attributed to it were encountered not infrequently among munition workers, especially in France, during the World War. Studies from the toxicological standpoint were made at that time and measures to prevent poisoning hit upon, but apparently no very complete investigation of the pharmacological properties of the substance were undertaken. It is interesting that the symptoms of poisoning originally described—loss of weight, nervousness, sweats, etc., should have suggested that the drug caused a stimulation of a metabolism, although this essential action was not discovered at that time.

Recent thorough pharmacological studies of alpha-dinitrophenol carried out in this country by Cutting, Tainter, and others at the Stanford University School of Medicine, and abroad by Magne, Meyers, and others have shown that the drug "markedly augments metabolism in doses which are not demonstrably harmful." (Cutting, Mehrtens, and Tainter, *Jr. Am. Med. Ass'n*, 101, 193 (July 15) 1933). From these experimental observations, Cutting and his co-workers concluded that "Dinitrophenol possesses prompt and striking pharmacologic actions" the outstanding features of which are "sustained increases in metabolism and body temperature, enormous activity of all metabolic functions, and fatal pyrexia with excessive doses." . . . "Doses within the therapeutic range cause in man increases in metabolism without fever, which may be useful in the treatment of obesity, hypothyroidism, and similar depressed metabolic states." They undertook a clinical study to determine its value in these conditions and have recently reported on their experience with it in the treatment of obesity. (Tainter, Stockton, and Cutting, *Jr. Am. Med. Ass'n*, 101: 1472 (Nov. 4) 1933.)

In their first report to the *Journal* (July 15) they write:

Preliminary results indicate that dinitrophenol can satisfactorily increase metabolism for therapeutic purposes in patients. The limiting factor would seem to be the fever caused by the increased heat production. The metabolism has been maintained at a rate 50 per cent above normal for months, with no deleterious symptoms, such as the hyperirritability caused by equivalent doses of thyroid gland. Therefore, dinitrophenol offers this advantage over thyroid. It would appear generally useful for increasing the metabolic rate, experimentally and therapeutically.

Oral administration of the drug to obese patients in daily doses of about 8. mg. per kilogram has resulted in a steady reduction of their weight without demonstrable side actions.

They point out, however, that since the drug has not been subject to wide use nor administered over a long period of time very little is known concerning the possibility of a cumulative toxic effect or of individual idiosyncrasy to it, and since it is known to produce a fatal hyper-pyrexia in excessive doses, they advise that it be used "only as an experimental therapeutic procedure in carefully selected patients under close observation by the physician."

At the time of their November report, 113 consecutive cases of obesity encountered in clinic and

office practice had been treated. The period of treatment averaged forty days although some patients had been treated over four months. The average initial weight of their patients was 188% lbs. and the average weight at the end of treatment 179% lbs. Treatment was considered successful in all but twelve cases; in three probably because of insufficient dosage and in the remaining nine because of the occurrence of undesirable "side-actions," the most important of which was the appearance of a skin rash (7 per cent of total cases) and the temporary loss of the taste of salt and sweets (5.3 per cent). The authors remark, "These results show that dinitrophenol can be used therapeutically to reduce the weight of obese patients regardless of the etiology of the obesity and even when low caloric diets or thyroid are ineffective. The loss of weight takes place predominantly from the hips and abdomen, as shown by measurements; the other regions share in the loss but to a less degree. A sufficient amount of the drug can usually be taken without discomfort to cause a loss of from 2 to 3 pounds weekly over extended periods. Indeed, some patients even experience a feeling of improved well being."

"Aside from skin reactions, the chief danger from the drug is in the indiscriminate or careless overdosing that may result from its sale to the public. . . . For maximal safety the initial dose of dinitrophenol should be small, and increasing doses may be employed only as the clinical response seems to warrant."

That the warning against the injudicious use of so potent a substance is warranted is indicated by the fact that a fatal case of hyper-pyrexia resulting from an overdose of the drug has already been reported. Also, Anderson, Reed, and Emerson of San Francisco have described their experience with a patient who apparently had an idiosyncrasy to dinitrophenol and developed an extensive and troublesome skin rash after the administration of the drug in the customary small preliminary dose. (*Jr. Am. Med. Ass'n* -01: 1053 (Sept. 30), 1933.)

REMOVAL OF THE NORMAL THYROID IN HEART DISEASE. In a series of recent publications, Blumgart and his co-workers of the Beth Israel Hospital in Boston have presented a new method for the treatment of certain intractable forms of chronic heart disease, and have detailed their experiences with its clinical application in a number of cases. In brief, the method consists in lowering the metabolic rate by completely removing the normal thyroid gland and thus decreasing the body's demands on the heart.

This plan of treatment was suggested by Blumgart only after extensive investigations on the rate of blood flow, carried on over a period of years, and seems to be based on sound physiological reasoning. Blumgart found in studying normal individuals that the "velocity of blood flow was determined directly by the metabolic demands of the body." This demand may be estimated clinically by determining the basal metabolic rate. In patients with congestive heart failure, the velocity of blood flow was found to be markedly decreased; but, strikingly enough, similar rates of blood flow were observed in patients with myxedema, a disease caused by hypoactivity of the thyroid and accompanied by a conspicuously lowered metabolic rate, who presented no signs of heart failure. It seemed, therefore, that "the diminished circulation was evidently adequate to the diminished demands of the body."

Patients with hyperthyroidism were found to have, in the early stages before any signs of heart failure had developed, greatly increased rates of blood flow, due it seemed to the greatly increased metabolic demands. And the fact that serious involvement of the heart is such a frequent accompaniment of advanced hyperthyroidism seemed explained on the basis of the greatly increased work demanded of the heart over long periods of time.

It seemed to Blumgart that if in the treatment of chronic heart disease it became impossible to maintain a rate of blood flow adequate to meet the body's needs, it still might be possible to so decrease the body's metabolic demands, that the lowered supply of blood would still match the lowered demand for it. On this basis, then, he suggested that an artificial state of hypothyroidism be produced by removing the normal thyroid.

Realizing the difficulties inherent in a purely clinical study, Blumgart and his co-workers established certain criteria for patients to be included in the study. The patient, they said, must show evidence of a progressive, incapacitating condition; he must have normal thyroid function; be intelligent enough to accurately describe any subjective changes in his health; and finally be not too old, and in general a good operative risk. At the time of the first report four patients satisfying these conditions had been operated upon (Blumgart, Levine, and Berlin, *Arch. Int. Med.* 51: 866 (June), 1933). In the first two cases the thyroid was subtotally removed. In both instances there was a transient drop in the basal metabolic rate accompanied by definite objective evidence of improvement in the patient's clinical condition. These two patients who had been confined to bed for long periods were able to be up and about the ward, and were free from edema. In both cases, however, after the third week the basal metabolic rate began to rise, and symptoms of heart failure began to re-appear. It became apparent, then, that in order to produce a permanent lowering of the metabolic rate it is necessary to completely remove the thyroid gland, a much more difficult and hazardous procedure than ordinary subtotal thyroidectomy. A technique for total ablation of the gland was devised by Dr. Berlin (*Am. Jr. Surg.* 21: 173 (August) 1933) and in all subsequent cases this procedure has been carried out. In the third patient (the first to have the thyroid completely removed) a lowering of the basal metabolic rate to —30 per cent was accomplished, and there was striking clinical improvement. He was a man of 52 who had been confined in a hospital for chronic diseases for more than two years with congestive heart failure due to arteriosclerotic heart disease, and who apparently had been going slowly but steadily down hill. After operation the signs of heart failure cleared, he was able to be up and about without discomfort and at the time of a later report (*Arch. Int. Med.* 52: 165 (August) 1933) had maintained his improvement for over six months and had been able to work eight hours a day. The fourth case, a man of 51 with angina pectoris of five years' duration, had a consistently lowered metabolic rate after operation and was free from attacks of angina.

By the time of their August report eleven additional patients had been subjected to operation. There was one operative death, and one patient died suddenly three weeks after operation although he had apparently been improved in health

following the operative procedure. Of the remaining patients all showed definite clinical improvement. It also became apparent that the degree of myxedema produced by the total removal of the thyroid in adults does not compare in severity with the spontaneous disease and that it does not seriously discommode the patient. Another interesting finding was that the velocity of blood flow in most cases was even slower after operation than before, so that the heart was required to do less work. The degree of decrease of the metabolic demands of the body was sufficiently greater than the decrease in blood flow, however, to allow a certain degree of "cardiac reserve."

Subsequently attempts to create a state of hypothyroidism by intensive irradiation of the thyroid with X-ray were made (Friedman and Blumgart, *Jr. Am. Med. Assn.*, 102: 17 (Jan. 6) 1934) in the hope that the rather formidable operative procedure might be avoided, but these proved quite unsuccessful. Only by completely removing the thyroid, apparently, can a permanent lowering of the basal metabolic rate be accomplished. At the time of this last report total thyroidectomy had been performed in approximately fifty cases and their conception of the value of the procedure fully confirmed.

Blumgart suggests that, until more exact information be obtained concerning the permanency of the therapeutic effects apparently attained, the observation be reserved for those suffering from progressive congestive heart failure or angina pectoris in whom medical treatment has proved to be of no avail.

It would seem that for this group at least a real contribution in therapy has been made; and many patients who have been totally incapacitated for long periods may enjoy a certain degree of activity, though at a lower metabolic level.

LUNG REMOVAL IN CARCINOMA. Graham and Singer of the Washington University School of Medicine and the Barnes Hospital in St. Louis have recently reported what is apparently the first successful case of removal of an entire lung in carcinoma. (*Jr. Am. Med. Ass'n* 101, 1371, (Oct. 28), 1933). Their report is significant from many points of view, but especially because it seems to indicate that the radical surgical extirpation of a malignant new growth of the lungs is a feasible technical procedure. Primary carcinoma of the lung, Graham points out, is in reality a fairly common type of cancer, constituting perhaps from 5 to 10 per cent of all carcinomas, and consequently equaling in frequency much better known cancers such as those of the large bowel; and what is more interesting, although its significance is not as yet known, is that in recent years there has been a definite and rather marked increase in the incidence of this type of tumor. Moreover, since the development and refinement of such comparatively new diagnostic procedures as bronchography (delineation of the bronchial tree in the X-ray by means of opaque iodized oils) and bronchoscopy (direct examination of the interior of the trachea and bronchi by means of an ingenious instrument devised by Dr. Chevalier Jackson of Philadelphia) it has become possible to diagnose this condition clinically, and often in its early stages, though it must be confessed that even to-day, certainly in most cases, the diagnosis of lung cancer is far behind that of other internal neoplasms.

According to Graham there is at present no evidence in the literature that carcinoma of the

lung may be cured by other than surgical means—that is, there are no authenticated cases of patients alive and well five years after treatment by X-ray or radium. And apparently only six cases of successful treatment by means of surgery are recorded. It must be added that in most of these cases not enough time has elapsed to be sure that the growth has been permanently eradicated, although all the patients were well at the time of the reports, a year or more after operation. Of these surgical cases, in only one was more than one lobe of the lung removed. Churchill of the Massachusetts General Hospital in Boston reported in February, 1933 the successful removal of the lower and middle lobes of the right lung. Graham's case is apparently the first in which an entire lung was deliberately removed in one stage.

His patient, a physician of 48, had been ill for seven months with cough, fever, and pain in the chest. By means of X-ray examination and bronchoscopy a small growth was discovered in the bronchus of the upper lobe of the left lung. Examination of a piece of tissue removed through the bronchoscope revealed that the growth was a carcinoma. Surgical removal of the upper lobe of the left lung was advised and operation undertaken on Apr. 5, 1933. Exploration disclosed that the growth lay so close to the bronchus of the lower lobe that its removal seemed indicated along with the upper lobe. Excision of the lower lobe seemed further advisable because of the presence of nodules in its upper surface suggesting cancer. Graham therefore deliberately excised the entire left lung and in order to fill the space formerly occupied by the lung removed parts of seven ribs and allowed the chest wall to collapse over the "dead space." (This latter procedure, thoracoplasty, is well known in thoracic surgery and has proved of great value in the treatment of certain cases of tuberculosis which are benefited by the collapse of one lung.) The patient, after another minor procedure necessary to obtain complete collapse of the chest wall on the affected side, made a surprisingly smooth convalescence and left the hospital about two months after operation. At the time of the report, four and a half months after operation, he was apparently well and had gained 16 pounds.

Examination of the excised lung showed that the growth was small, apparently localized, and so far as could be determined, had been completely removed. Examination of lymph nodes removed from the thorax at the time of operation again failed to disclose the presence of cancer, another very favorable finding, because in its spread carcinoma usually involves first these neighboring nodes. The nodules felt in the upper part of the lower lobe proved not to be cancerous but rather to be small abscesses. In other words, all the findings would seem to indicate that the patient had been cured of a cancer, which without operation would certainly have proved fatal; although, of course, it is too early yet to say finally that an absolute cure has been obtained.

As Graham says, "It seems particularly important to call attention to the fact that an entire lung has been successfully removed for carcinoma of the bronchus because if this should prove to be a feasible operation in properly selected cases, it is probable that many cases would be saved who otherwise would die of carcinoma."

It might be added that Graham's Clinic at the Barnes Hospital has been for some time one of

the outstanding centres in this country for the surgical treatment of disease of the thorax; and further, that it was in this same clinic that the now widely used and exceedingly valuable method of demonstrating the gall bladder outline in the X-ray (so-called "cholecystography") originated.

According to the Associated Press of Dec. 11, 1933 Dr. Wm. F. Rienhoff of the Johns Hopkins Hospital in Baltimore reported before the Interurban and Cosmopolitan Medical Clubs in Baltimore that he had twice during the past year completely removed one lung for neoplastic disease and in a brief report in the *Bulletin* of the Johns Hopkins Hospital for December, 1933 (v. 53, no. 6, p. 390) devoted primarily to the technical aspects of the problem, a few details are added. His first patient, a girl of three and a half years with a malignant tumor of the left primary bronchus, was subjected to a left pneumonectomy (complete removal of the lung) on July 24th of this year. She had an afebrile and an uneventful convalescence. His second patient, a woman of twenty-four with a benign tumor of the bronchus, was operated upon on November 3, and she too made a complete recovery.

Rienhoff stresses certain features of the operative procedure, among them the advisability of a preliminary pneumothorax. He believes that in uninfected cases thoracoplasty is unnecessary because the normal lung, he finds, soon expands to practically fill the chest. He believes drainage unnecessary if "mass ligation" and cauterization of the bronchial stump are avoided.

TRANS-URETHRAL PROSTATECTOMY. One rather complicated technical problem of the sort that would not ordinarily be discussed in such a review as this seems worthy of attention because it promises to effect wide changes in the field of urological surgery which will be of public interest. This problem is that of the surgical treatment of prostatic hypertrophy and prostatic carcinoma; and it had best be prefaced by a brief discussion of the question of the relation of diseases of the prostate to urinary obstruction.

The prostate is a small gland found in the male whose secretion is an important component of the seminal fluid. Its chief interest and importance from the surgical point of view lies in two facts: first, that in men past middle life it very frequently enlarges. The cause of this enlargement, so-called "benign hypertrophy of the prostate," is not known. It is not apparently neoplastic, although carcinoma arising in the prostate produces similar functional results. And second, that because of the peculiar situation of the gland, surrounding as it does the neck of the bladder and a portion of the urethra, its enlargement causes an interference with the outflow of urine from the bladder. Once a partial obstruction has been established the patient is liable to a sequence of changes in the urinary tract, the most important of which are degenerative changes in the kidneys and infection. It is imperative that this obstruction be relieved if the patient is to be kept in a state of good health. This is usually accomplished by the surgical removal of the gland, either by an abdominal approach ("supra-pubic route") or through the perineum. The results of prostatectomy, especially since the development of the present pre-operative régime, have been surprisingly good, and countless sufferers have been permanently relieved. The operation, however, in the best of hands is a major and rather serious one, and since many of the patients suf-

fering from prostatic hypertrophy are aged and debilitated, there is inevitably a certain percentage of operative deaths. It is indeed surprising, however, to what a low level competent urologists have reduced their mortality figure.

The development of the cystoscope, an ingenious instrument which when introduced through the urethra allows inspection of the interior of the bladder, not only allowed accurate diagnosis of diseases of the lower urinary tract, but also made possible certain intra-urethral and intravesical surgical procedures. In 1926 Stern presented a greatly improved instrument, which he called a "resectoscope," by means of which it was possible to carry out extensive electro-surgical operations. Since then, improvements by Kirwin, McCarthy, and Davis, and others have widened the field of trans-urethral surgery and made practicable the removal of the prostate without open operation. (Grauer has recently reviewed the literature dealing with this subject—*Surg. Gyn., and Obs.*, 57: 401 (November), 1933.)

That this new procedure is of great value in certain types of cases nearly all urologists agree. Kirwin (*Jr. Urol.*, 28: 539, 1932) believes that it is the ideal procedure for contractions of the neck of the bladder, for carcinoma (which in most cases is inoperable) and for moderate degrees of hypertrophy. He believes that for marked degrees of hypertrophy when the lateral lobes of the prostate extend well into the bladder, open operation is still the procedure of choice. Others believe that trans-urethral procedures are indicated in nearly all cases.

The advantages of the trans-urethral operation are well outlined by Kretschmer (*Surg. Gyn. and Obs.* 57: 654 (November) 1933). He points out that 1st, the period of incapacity after operation is brief and that the hospital stay is greatly shortened (in his series the average duration of hospitalization was only nine days; some patients stayed but two); 2d, because of the relative lack of danger inherent in this procedure many patients previously considered inoperable by older methods could be treated; 3d, because of the increased safety of the procedure patients will submit to operation earlier; 4th, in most cases there is no "surgical shock," a complication so frequent after open operation; 5th, obstruction in cases of carcinoma can be relieved and the necessity of permanent bladder drainage avoided; and 6th, the method is useful in treating certain conditions found after prostatectomy (i.e. removing tissue previously overlooked, etc.).

While it seems certain that this new method of treatment will prove of great value, and has for that matter a wide vogue in this country at the present time, it seems only fair to state that its limitations have not as yet been clearly defined and many conservative urologists feel that its use at present has been perhaps pushed a little further than is advisable.

AWARD OF THE AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE. Dr. R. L. Kahn, well known bacteriologist and immunologist, of the University of Michigan Medical School at Ann Arbor, was the recipient of the eleventh annual prize of the American Association for the Advancement of Science at its recent meeting in Cambridge, Mass. (W. L. Laurence in a special dispatch to the *New York Times*, Dec. 31, 1933). Dr. Kahn's paper, "Tissue Reactions in Immunity," which was deemed the most noteworthy of the present meeting, challenged present concepts of

the mechanism of immunity, and presented experimental evidence that the so-called "fixed tissues" of the body (such as the skin, muscle, peritoneum, and so on) were not, as they had previously been considered, hypersensitive to infection, but rather possessed powers of immunity, in some instances many times greater than that of the blood, to which in the conventional theories most of the body's ability to resist bacteria and other noxious foreign protein substances had been attributed. By means of an especially devised experimental method Dr. Kahn was able for the first time to measure, with a degree of accuracy comparable to that obtainable in studies of the blood serum, the immunologic properties of fixed tissues. These determinations showed the skin to have resistive powers ten times greater than that of blood serum; and further that the peritoneum, muscle, and brain (in the order named) all exceeded the blood in their ability to protect against infection. Dr. Kahn's studies showed that protective substances could be detected in the skin, so frequently the portal of entry of infection, before they appeared in the blood, and further that they persisted in the fixed tissues for long periods after their disappearance from the blood.

Dr. Kahn's new concept of immunity seems likely to produce wide changes in immunologic theory and procedure and may have important therapeutic applications.

BRIEF NOTICES. Two interesting medical items have quite recently found their way into the daily press, and despite the lack of full accounts in technical journals, seem worthy of notice.

The first of these deals with the transplantation of human tissues, a subject of great interest and of considerable practical importance in medicine. While transplantation of skin and of certain other tissues from one part of the body to another (so-called "autograft"), has proved feasible and indeed found a wide field of usefulness in surgery, it has been considered that the transplantation of tissue from one individual to another ("isograft") is impossible, with the possible exception of skin (and here too the prevailing opinion seems to doubt that the grafted tissue ever really becomes a part of the new host). However, Dr. Harvey B. Stone of the Johns Hopkins Medical School reported before the Interurban Medical Society (*Associated Press*, Dec. 11, 1933) that by means of a newly developed technique he had been able to successfully transplant portions of the thyroid and para-thyroid glands from one patient to another. His method is in brief as follows: small portions of tissue taken from normal persons (who suffer no ill effects because the amount of tissue removed is never great enough to interfere with the function of the gland, which besides rapidly regenerates) are grown for a time outside of the body in a culture medium obtained from the blood of the prospective recipient. (This method of "tissue culture" is widely used in experimental medicine.) After having remained in the fluids of the new host long enough to become adapted to them, the tissue is then transplanted and according to Dr. Stone grows normally and becomes an integral part of the new organism.

If Dr. Stone's work is confirmed and the method proves practicable, it will be of unusual significance, for it will make it possible to supply to patients lacking certain vital organs perfectly normal ones obtained without harm from other persons. In the past it has been possible to treat

certain glandular deficiencies by the daily injection of extracts of the gland obtained from animals, as in myxedema, a disease caused by a lack of thyroid secretion, where the symptoms may be alleviated by the injection of thyroid extract. If in such a case a portion of thyroid gland could be successfully transplanted into the sufferer, a permanent cure could be obtained.

It is of course too early to attempt any appraisal of what significance Dr. Stone's work may have.

The second item deals with the treatment of lobar pneumonia by the induction of an artificial pneumothorax, and emanates from the University of Pennsylvania Hospital in Philadelphia where, according to Dr. Alfred Stengel, Professor of Medicine in the University of Pennsylvania Medical School, the method has been used with considerable success. The procedure of pneumothorax consists of injecting a quantity of gas (atmospheric air or nitrogen usually) through the chest wall into the pleural cavity. This causes a collapse of the lung on the corresponding side, varying in extent upon the quantity of gas introduced. Pneumothorax is extensively used in the treatment of pulmonary tuberculosis, and has been used to a limited extent in the treatment of pneumonia in Europe.

Before beginning the clinical use of pneumothorax in the treatment of pneumonia, Drs. Leopold and Liebermann of the University of Pennsylvania Medical School conducted a series of experiments in dogs where it was found that fifteen of eighteen animals thus treated survived, whereas thirteen of the untreated controls died. According to Doctor Stengel the clinical results are "comparable, in every respect, with the effects of this form of treatment in animals, and with patients who have been similarly treated abroad.

"In the treatment of lobar pneumonia by this method, two or three injections of air are usually given at intervals of eighteen to twenty-four hours, depending on the rate of absorption of the air administered at the previous injection.

"The impressiveness of the results lies not alone in the high percentage of recoveries but also in the dramatic promptness of the patient's response, indicating an early artificial limitation of an infection which under ordinary conditions of medical treatment is self limited after a usual duration of seven to nine days."

There are according to Dr. Stengel certain limitations in the method. He says, "In the present state of our knowledge it is believed that it should be used when only one lung is diseased, and in cases in which the effect of the introduction of air in order to splint the affected lung will not throw an impossible burden on the heart." (*Associated Press*, Dec. 9, 1933.)

It will be of considerable interest to watch the results of the further use of this method of combating pneumonia, and to learn if further experience will confirm Doctor Stengel's impression of the value of the procedure.

MEDIUMS. See **PSYCHICAL RESEARCH.**

MELCHERS, GARI. See **ART EXHIBITIONS.**

MELCHIOR, CARL JOSEPH. A German banker, died Dec. 30, 1933, in Hamburg, where he was born Oct. 13, 1871. He attended the Universities of Bonn and Berlin and in 1902 began his association with the banking firm of M. M. Warburg and Co., serving as managing partner after 1917. With the Paris Peace Conference of 1919 began his rôle as mediator for Germany at the various

international conferences, such as those of London, Brussels, Spa, and Genoa, at which reparations and post-war finances were discussed. In 1929 and 1930 he was a delegate to the Conferences held in Paris and The Hague at which there was formulated, under the Young Plan, the total World War reparation Germany was expected to pay. On the latter occasion a major factor in securing the German delegates' assent was the Allied promise to evacuate the Rhineland within eight months after the ratification of the Young Plan by France and Germany. He had also been a member of the League of Nations financial committee from 1926 to 1930, and on the establishment of the Bank for International Settlements in 1930 served as deputy chairman of its administrative board until his resignation in April, 1933. At the Lausanne Conference of 1932 he successfully negotiated the agreement which provided for the final settlement of Germany's reparation obligations by the payment of a lump sum of 3,000,000,000 reichsmarks (\$714,000,000).

Besides being awarded the Rathenau prize in 1932 for his work in the interests of the German Republic, Dr. Melchior received the Stolten Medal, the highest award of his native city. In 1922 he was named one of a committee of six German experts to assist the Carnegie Foundation for the Advancement of Teaching in the preparation of an economic and social history of the World War.

MELLON, RICHARD BEATTY. An American banker and philanthropist, died Dec. 1, 1933, in Pittsburgh, Pa., where he was born Mar. 18, 1858. After a private school education he began his career with his brother, Andrew W. Mellon, as a lumber dealer. The panic of 1873, however, caused the brothers to abandon this trade and enter their father's banking house, known thereafter until its incorporation in 1902 as a national banking institution as T. Mellon and Sons. There were later affiliated with the Mellon National Bank two other Pittsburgh banks, the Union Trust Co. and the Union Savings Bank, all three of which soon ranked among the soundest and most influential of Pennsylvania's financial institutions. On the appointment of Andrew W. Mellon as Secretary of the Treasury in President Harding's cabinet in 1921, his brother Richard assumed the presidency of the Mellon National Bank. He served also as a director after 1917 of the Federal Reserve Bank of the Fourth District (Cleveland) and as president of the Pittsburgh Clearing House Association.

Mr. Mellon assumed the supervision of the various Mellon industrial interests after his brother's entry into public life, including in particular the Ligonier Valley Railroad, which they had constructed in 1877 from Latrobe, Pa., eastward to the Somerset Co. boundary of Westmoreland Co., and the Gulf Oil Corp., which they had developed independently of the Standard Oil System during the '90s. Among the other corporations of which he was a director were the Aluminum Co. of America, American Surety Co., Crucible Steel Co. of America, Guaranty Trust Co. of New York, Minnesota By-Products Coke Co., National Union Fire Insurance Co., Pennsylvania Railroad Co., Pennsylvania Water Co., Pittsburgh By-Products Coke Co., Pittsburgh Coal Co., Pittsburgh Plate Glass Co., St. Lawrence River Power Co., United Gas Improvement Co., United States Aluminum Co.

The Mellon Institute of Industrial Research, which Andrew and Richard Mellon founded at the University of Pittsburgh in 1913, is often referred

to as "the West Point of America's industrial system." In recognition of the contribution which they had thereby made toward advancing the science of industrial chemistry the brothers received in 1931 the medal of the American Institute of Chemists. Richard Mellon was also prominent in the Presbyterian Church, being one of the chief sponsors in 1926 of a campaign to raise a ministerial pension fund of \$15,000,000 and giving \$3,000,000 in 1930 toward the construction of a new edifice for the East Liberty Presbyterian Church of Pittsburgh.

MEMEL, mā'mēl, or KLAIPEDA. A territory on the Baltic including the city of Memel (population 37,400) and the lower reaches of the Memel or Niemen River, which was detached from Germany by the Treaty of Versailles and incorporated in Lithuania (May, 1924). The German population received a large degree of political and financial autonomy. The governor is appointed by the President of Lithuania. The total area is 943 square miles and the population on Jan. 1, 1932, was 146,000. Governor in 1933, M. Gyls.

HISTORY. The triumph of Adolf Hitler's National Socialists in Germany early in 1933 was reflected in the municipal elections held in Memel on May 23. A Nazi organization, the Christian Socialist Workers Alliance, captured 9860 of the 19,140 votes cast, securing 18 of the 38 seats in the municipal assembly. The Social Democrats and Communists lost heavily, while the Lithuanian vote increased from 2180 at the previous election to 4510. The German Nazi movement in Memel was countered by the growing Lithuanian Fascist movement, which was determined to prevent Memel from falling into Germany's hands. In December, 1933, the Lithuanian governor dismissed 101 Germans from the civil service in Memel, most of them teachers. In many respects the struggle for control of Memel resembled that between Chancellor Dollfuss and the German and Austrian Nazis for control of Austria. See GERMANY and LITHUANIA under *History*.

MENARDOS, SIMOS. A Greek educator, died in Athens, July 23, 1933. Born at Mytilene, Lesbos, May 18, 1872, he was educated at the University of Athens, from which he received the Ph.D. and LL.D. degrees. Appointed inspector of Greek education at Cyprus in 1907, he returned to the University of Athens in 1911 as professor of ancient Greek literature, serving also as dean of the faculty of arts in 1916 and in 1923, and as rector of the university during 1925-26. From 1908 to 1914 he lectured in modern Greek at Oxford University, in 1918 at King's College, London, and in 1919 at Cambridge University. He was also vice-president of the committee for the construction of a Historical Lexicon of Greek, vice-president of the Literary Society of Parnassos, and secretary of the Greek Academy for Science and Art.

In 1930 Dr. Menardos was president of the committee for the Byzantine Congress, which was held in Athens in October and at which preliminary steps were taken toward greater economic unity and peace among the Balkan States. He was a frequent contributor to the *Journal of Hellenic Studies* and prepared an anthology of ancient Greek poetry translated into modern Greek verse (1924), and a collection of epigrams (1930). His chief work on the *Place Names of Cyprus* was crowned in 1909 by the Association for the Encouragement of the Study of Greek in France.

MENTAL TESTS. See **PSYCHOLOGY.**

MERSEY TUNNEL. See **TUNNELS.**

METABOLISM. See **MEDICINE AND SURGERY.**

METALLURGY. Continued curtailment of metal production, accompanied by lack of funds for research and development, has acted as a brake on progress except in the field of gold production. In the later months of 1933, however, the scale of operations was enlarged, prices were in many instances better, and progress in metallurgical lines showed signs of getting back to normal.

ORE DRESSING. In crushing machinery, an interesting development is a high-speed impact disintegrator, with horizontal shaft, operating on the hammer-mill principle, developed at the Copper Range mill in Michigan. No description has yet been published but preliminary reports indicate that it may supplant the steam stamps heretofore used in that district for crushing native-copper ore, the only place in the world where they have been accepted. The product is about one-quarter inch in diameter. Another form of impact disintegrator is being developed at the Noranda mill, in Quebec, for copper-gold ore. It is provided with a high-speed vertical shaft surmounted by a device for hurling the ore against a fixed circular die, breaking the ore solely by impact.

A new mammoth jaw crusher is reported from Germany, weighing 250 tons and with a mouth opening 63 by 96 inches. This type of crusher continues to share popularity with the gyratory type as a primary crushing device for run-of-mine ore. For secondary crushing, the so-called cone crusher continues more popular than rolls. A new short-head form of the cone crusher, recently introduced, makes a somewhat finer product. Used in closed circuit with screens, finished products as fine as 14 mesh are possible. Magnets are customarily used over the feed and discharge belts to remove all tramp iron. V-belt drives are popular.

Development of the Hadsel mill has continued, this being a slow-revolving wheel of large diameter for crushing ore by impact. Mechanical difficulties have necessitated re-design of the machine for several new installations. It appears suited to some types of ore, but of not such wide applicability as at first thought.

For fine-grinding, the ball mill and, less frequently, the rod mill continue in general use, though much study has been given recently to the deficiencies of this type of equipment. The importance of large circulating loads and quick removal of material ground sufficiently fine for the subsequent metallurgical process has been emphasized. A better desliming classifier for this work is needed; an entirely new type may be developed. It has been suggested that the cone washer, as used for coal, might be adapted to ore dressing. Another coal-washing machine, the Hydrotator, a classifier of the hindered-settling type, has possibilities. It consists essentially of a cylindrical tank in which is installed a vertical shaft bearing horizontal arms that revolve near the bottom. Water passes through the shaft and arms, from the bottom of which it emerges through small holes, the water impinging against the bottom of the tank. The ore pulp enters at the top of the tank and the falling ore particles meet the rising current of water. The slime is floated off and the larger and heavier particles removed from the bottom of the device.

In the conventional ore classifier used in closed circuit with most ball mills, a new type has been

developed to increase the duty for heavy work. This is the new Dorr "FX" machine, developed at the Braden mill in Chile and now being applied at the Wright-Hargreaves in Canada and elsewhere. The feature of the new machine is an entirely new head-motion that resembles a valve linkage on a locomotive. This permits strokes as high as fifty per minute without "weaving" of the machine and does away with the rakes' riding on the sand when heavily loaded. The machine is expensive, and weighs twice as much as the old type, but has three times the capacity. So far as metallurgical efficiency goes, the new type is no improvement on the old, for duties to which the old was adapted.

Several new forms of vibrating screens have appeared, and this method of separating fine sizes has even been applied to a wet ball-mill product, as in a silica mill in California. Here a separation is made at about 35 mesh, more efficiently than with a classifier.

Flotation continues as the dominant process for removing fine minerals of value from waste rock. As to just why minerals float, there is not, after all these years, common agreement. The "chemical" theory assumes that flotation reagents function by means of ordinary chemical reactions with molecules at the surface of the mineral. On slightly oxidized sulphide particles, the flotation reagent may react to form a compound less soluble than the oxidation product but more soluble than the sulphide itself. The hydrocarbon part of the reagent is oriented away from the surface and since it has more attraction for air than for water, the particle becomes attached to an air bubble in the pulp and is thereby floated off. Another theory holds that the flotation reagent is selectively adsorbed on the surfaces of the mineral particles, forming a monomolecular layer with the hydrocarbon groups oriented outward.

Whatever the theory, excellent results are being secured on a constantly wider variety of material, including many nonmetallics. Few quantitative data are yet available on such subjects as depth of bubble column, bubble size, and pulp temperature and density; nor on the types of machines best suited to various ores; nor on the proper position of flotation in the flowsheet.

One recent trend in ore dressing should be noted: a general acceptance of the desirability of removing a middling product early in the concentration process, and of regrinding it to unlock the mineral grains for subsequent separation. In this work, the microscope has played a conspicuous part. This instrument is now an essential part of all milling laboratory equipment. Presence of valuable minerals previously unsuspected may be determined.

In the realm of filtering concentrate, a new Laughlin continuous filter has been offered recently. It has a ring-shaped filtering medium consisting of granular magnetite, all parts of which are stirred in sequence by a traveling solenoid, allowing a thorough cleaning by a flow of water.

The importance of concentration in the treatment of nonferrous ores is attested by the data in the table on page 485, compiled by the U. S. Bureau of Mines. Comparatively little ore, other than iron ore, is smelted directly these days. Even on iron ore, progress is being made on jigging and magnetic roasting.

GOLD. Emphasis has been placed on the removal of as much gold as possible at the first opportunity, when the pulp is coarser than the final

TOTAL NONFERROUS ORE PRODUCED IN THE UNITED STATES IN 1932, BY CLASSES OF ORE AND METHODS OF TREATMENT, IN DRY TONS

Method of treatment	Copper ore	Copper-lead ore	Lead ore	Lead-silver ore	Zinc ore	Gold and silver ore	Total ore
Straight flotation concentration	8,956,121	165,490	35,816	1,141,646	194,396	97,706	10,591,175
Combined gravity and flotation concentration	2,022,846	.....	4,815,740	1,909,402	1,105,993	202,488	9,555,969
Straight gravity concentration	15	.....	8,157	24,500	11,900	12,088	51,660
Total ore concentrated	10,978,482	165,490	4,854,713	8,075,548	1,812,289	312,282	20,198,804
Direct smelting	752,527	1,616	99,155	1,216	715	225,612	1,080,841
Amalgamation or cyanidation	.....	.....	.....	.....	.....	8,619,718	8,619,718
Miscellaneous methods	581,207	.....	.....	260,800	580,509	.....	1,422,816
Total ore, all methods:							
1932	12,812,216	167,106	4,453,868	3,387,864	1,898,513	4,157,612	26,821,679
1931	34,447,480	203,334	6,048,169	6,028,825	3,912,958	4,134,076	54,764,842

product of grinding. This removal may be made by various means: amalgamation, blankets, tables, flotation. Practically all of the small gold mills that have been constructed in the last year use flotation; also many of the old established large plants, though it has not been adopted in the world's largest gold field, the Rand. When a flotation tailing can be rejected, the process is clearly advisable. Pyrrhotite has been found particularly troublesome in cyanidation, and where present, consideration should be given to its removal by flotation.

In some gold mills, flotation is the only process used, the tailing going to waste and the concentrate being shipped to a smelter. Another flow-sheet floats the ore first, regrinding and perhaps roasting the concentrate, and then cyaniding both it and the flotation tailing. Or the ore may be cyanided, and the cyanide tailing floated. One of the outstanding large new gold mills, described during 1933, is that of the McIntyre Porcupine, in Ontario. Here, flotation is followed by regrinding and cyanidation of the concentrate. The ball-mill discharge, without mechanical classification, goes to a Fahrenwald flotation cell which is equipped with a hydraulic classifier in its bottom section to catch coarse gold. It has been phenomenally successful.

Tellurides present in gold ores are treated at Kirkland Lake, Ontario, by a combination of a fine grind, highly alkaline circuit, extreme aeration, and relatively high temperatures. Possibly these conditions are indicated whenever the mineral must be broken down by chemical action to free its gold for solution in cyanide.

COPPER. Exceptionally good work is reported from the Noranda smelter, in Quebec, where the two reverberatories averaged 1193 tons of solid charge per furnace last year, using 10.65 per cent of powdered coal on the solid charge. The furnaces have an outside measurement of 29½ by 105 ft. Their great capacity has been secured by (1) using a greater percentage of 5-lb. air in the coal-dust burners; (2) widening the furnace by decreasing the thickness of the side walls, and increasing the effective width by moving the drop holes as close to the side walls as possible; (3) raising the furnace arch; (4) use of preheated primary air; (5) use of as hot and as fine calcine as possible.

Flash roasting, by dropping fine dry concentrate through a heated chamber containing air, has largely superseded roasting in the old mechanically rabbled hearth furnace at some plants. The practice has been given no publicity as yet, possibly owing to the patent situation, but is likely to become of increasing importance.

Of notable importance was the publication early in 1934 of a 740-page volume devoted to the metal-

lurgy of copper, by the American Institute of Mining and Metallurgical Engineers. This is the first book on the subject that has appeared for a number of years, and though consisting of individual papers, adequately covers current smelting, refining, and leaching practice in America. There is a particularly good section on waste-heat-boiler practice in connection with copper reverberatory furnaces.

Copper sheets are now being made by electro-deposition on a commercial scale. Considerable work has also been done in developing the treatment and extending the uses of copper powder, oxygen-free copper, and end-poured copper shapes, cast in vertical molds.

LEAD. Lead smelters have been forced recently to handle an increasing tonnage of scrap material, such as automobile battery plates. The extent of this business is shown by the fact that in 1932, 255,000 tons of lead was recovered from domestic ores in the United States and 198,000 tons from scrap material. Large smelters are handling this scrap material in reverberatory furnaces, endeavoring to get most of the antimony into the slag, which is then reduced to produce about a 30 per cent antimonial lead.

The Betts electrolytic process for refining lead, especially that high in bismuth, is gradually being abandoned, only one plant, that at Trail, B. C., now being in operation. The Betterton process, on the other hand, is becoming more popular; it employs calcium and magnesium for the removal of bismuth.

The Grasselli, Indiana, plant of the United States Smelting company has been abandoned and a new lead refinery built at Midvale, Utah, adjoining the company's smelter. Molten lead is brought from the blast furnaces in four-ton fire-brick-lined steel pots, which are dumped into the drossing kettles. These are of 1-in. welded steel, of 235 tons' capacity, supported entirely by a rolled flange on the upper edge of the kettle. The Hulst method for decopperizing the drossed lead by means of sulphur is used; the dross is added to the reverberatory charge. The drossed lead is softened in a 200-ton furnace, where the aim is to reduce the antimony to as low a figure as possible. After desilverizing in kettles the lead is treated by chlorine for the removal of zinc, and is cast by machine at the rate of 30 to 40 tons per hour.

ZINC. Complete roasting of zinc ores on large sintering machines, utilizing the gas for acid manufacture, is becoming increasingly popular, thus eliminating the old hearth-roasting furnaces. Silica brick as a furnace lining has come into quite general use. On the Continent, an improved design of the Dor-Delattre furnace has been developed, embodying automatic charging and effecting increased recoveries and better working

conditions. An electrolytic zinc plant is being constructed in Germany, to have a capacity of 25,000 long tons per year. Waelz kilns will be used to work up the leach residues. Electro-galvanizing by the Tainton process for applying heavy coatings to wire has been commercially developed by the Bethlehem Steel Co. In England, Sherard Cowper-Coles has developed a process for electrodepositing zinc on steel plate, the equipment being continuous and automatic.

Pigment zinc sulphide in the paper, floor covering, paint, and allied industries has increased to such an extent recently that the New Jersey Zinc Co. has built a new plant for its production. Raw sulphide ore is leached with sulphuric acid, producing hydrogen sulphide and crude zinc sulphate. The sulphate is leached with water, the solution purified, and then treated with the hydrogen sulphide gas to form the pigment.

Among the less common metals, beryllium is commanding increasing attention, especially in an alloy with copper containing $1\frac{1}{2}$ to $2\frac{1}{2}$ per cent of beryllium. With heat-treatment, a tensile strength of 200,000 pounds per square inch can be secured, as contrasted with 33,000 for copper alone. High fatigue resistance, attainable hardness of 350 to 400 Brinell, good electrical properties and satisfactory machining qualities are favorable to the increased use of these alloys.

Chromium is finding increased use through the development of two-ply metal sheets, mild steel clad with stainless steel. Chromium linings are finding increased use in a variety of utensils. Smelting of domestic chrome ore is being accomplished in Montana. Molybdenum is finding increasing outlets in the steel industry sufficient to keep domestic producers exceedingly busy. Selenium is being produced in a new plant just built in connection with the refinery of Canadian Copper Refiners, Montreal East, Quebec.

METALS. See **CHEMISTRY, INDUSTRIAL OR APPLIED.**

METEOROLOGY. Much public interest in the stratosphere has been aroused recently because of the flights into this region by Piccard in Europe, and by Settle in America. While some scientific data have been obtained, many more observations will be necessary before all the needed facts about the upper air can be definitely ascertained. It should be borne in mind that continuous records of the surface meteorological conditions have been made for over fifty years, yet a complete explanation of all the observed phenomena is still far from having been accomplished. Conditions in the stratosphere are known from sounding balloon records to vary from season to season, and from day to day, and undoubtedly the stratosphere is an important factor in the everyday course of the weather. Direct observations of the stratosphere should supplement the data being gathered by other means, and should add to the general knowledge of the atmosphere.

Durst has studied the structure of wind over different surfaces. He classifies winds into three types: (a) those in which there are wide fluctuations in both speed and direction which he considers are caused by convectional cells moving along with the wind, the gusts being due to down currents in the rears of the cells, and attendant frictional eddies caused by the striking of air against obstacles; (b) smooth flowing air which occurs when a surface inversion is present and external frictional eddies are heavily damped; (c) those winds in which internal frictional ed-

dies are present due to the wind gradient exceeding a critical value. Durst shows that these three types are readily recognized from the autographic records of wind direction and speed. He also points out that over the sea the short period fluctuations in wind are greater in tropical air than in polar air, although when inversions occur over the sea smooth flowing air can persist with higher speeds than over level land. Along similar lines Walker has shown that clouds may be regarded as products of a scheme of air motion in the form of cells, with upcurrents along their axes and downflow in the peripheries.

In September Admiral Byrd started on his second Antarctic Expedition. During the Expedition's stay in the Antarctic, extensive observations of the Antarctic weather will be made. These observations, as well as the weather observations of Byrd's first Antarctic Expedition, and those taken during the Jubilee Year around the North Pole, which have not yet been published, will be important additions to our knowledge of Polar meteorology.

METEOROLOGICAL PHYSICS. As a result of observations and experiments made during the past twenty years, Vegard of Norway has given a plausible explanation of the cause of aurorae; this explanation throws considerable light on the state of the earth's atmosphere at high levels. The heights of aurorae are easily determined by trigonometric methods; and aurorae are found at all levels from 70 to 800 kilometers above the earth's surface. Vegard places the average temperature of the auroral region at -31° C. Spectroscopic studies of the aurorae indicate that their glow is due mostly to electrically excited nitrogen gas which exists at considerable density at these great heights. Vegard has observed 83 lines and bands in the spectrum of the aurorae. Spectral lines characteristic of the light gases hydrogen and helium are absent or at least extremely weak, in the auroral spectrum; hence Vegard concludes that there are no layers of light gases in the very high atmosphere.

Vegard states that in the aurorae we observe the nitrogen of the high atmosphere made luminous through the action of electric rays from the sun. In the auroral region the nitrogen is brought to the high altitudes by electrical forces which result from the photoelectric action of short wave length solar radiation. The distribution of matter at the limits of the earth's atmosphere is similar to that around the sun, whose atmosphere is surrounded by the solar corona. That is, the earth may be thought of as having a corona, which differs from the solar corona chiefly in that the latter is due to influences from the sun itself, while the earth's corona is not due to terrestrial influences; moreover, the solar corona is relatively constant, while the terrestrial corona varies considerably from day to night. The shape of the earth's corona (more prominent on the day side of the earth) explains the facts that the maximum altitude reached by auroral rays increases toward the equator, and that aurorae extend higher near sunset than at midnight.

Two interesting and important papers have been published recently by Carl Störmer on clouds in the stratosphere, a region commonly free from clouds of every kind. There are two types of these clouds: the nacreous which occurs at heights of 20 to 30 km. above sea level; and the noctilucent which forms at about 80 km. above sea level. The nacreous resembles an alto-cumulus lenticularis,

or, more exactly, an alto-stratus lenticularis, though presumably it contains much less cloud material than either of these generally do, and is brightly colored like a glorified iridescent cloud. The noctilucent seems usually if not always to resemble cirrus. It is silvery, or bluish white, in color and has been seen in both hemispheres but only when the lower atmosphere was in the shadow of the earth and the cloud in full sunshine. These two kinds of clouds have long been recognized, even before the existence of the stratosphere was established, but it has been very recently that Störmer has measured their heights trigonometrically. From coronae observed in the nacreous clouds, he has computed the diameters of the particles forming them at not to exceed 0.0025 mm.

PHENOMENA. There was an unusually large number of tropical hurricanes in the North Atlantic during the year. A total of 17 were observed, more than half being severe. Usually about 7 are observed each year. Two of them struck the coasts of the United States, Florida and Southwestern Texas, respectively, on September 4; the simultaneous landfall of two tropical storms was unprecedented in the history of the Weather Bureau.

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METEORS. See ASTRONOMY.

METHODIST CONNECTION (OR CHURCH) OF AMERICA, WESLEYAN. A branch of the Methodist Episcopal Church, organized in 1843 in Utica, N. Y., as an anti-slavery and non-episcopal denomination. In 1933 it comprised 29 annual conferences. There were 649 churches, 854 ministers, and 24,350 members. The Sunday schools numbered 652, with 7174 teachers and officers, 45,039 pupils, and 7059 persons enrolled in the home department and on the cradle roll.

The different corporations of the church meet annually in February in Syracuse, N. Y. These corporations are: The Wesleyan Methodist Connection (or Church) of America; the Wesleyan Methodist Publishing Association; the Superannuated Ministers' Aid Society of the Wesleyan Methodist Connection of America; the Missionary Society of the Wesleyan Methodist Connection of America.

The church maintained the following educational institutions: Houghton College in Houghton, N. Y., Central College in Central, S. C., Marion College in Marion, Ind., and Miltonvale College in Miltonvale, Kans. The foreign missionary department of the Missionary Society continued its work in Africa, India, and Japan, and the department of home missions and church extension among the American Indians, Mexicans, and mountaineers of the South. The *Wesleyan Methodist*, weekly, is the official organ of the church. The officers are: President, the Rev. E. D. Carpenter; first vice-president, the Rev. J. S. Willett; second vice-president, Joe Lawrence; and secretary, the Rev. E. F. McCarty. Headquarters are at 330 East Onondaga Street, Syracuse, N. Y.

METHODIST EPISCOPAL CHURCH. Principal body of the denomination that sprang from the Oxford Movement of the eighteenth century, its aim, according to John Wesley, being a "revival of Christian earnestness, simplicity, and power." (For historical details, see the *NEW INTERNATIONAL ENCYCLOPEDIA*, vol. xv, and the *NEW INTERNATIONAL YEAR BOOK*, 1932.) The Methodist Episcopal Church in the United States was organized under the leadership of Francis Asbury at the Christmas conference held in Baltimore, Md., in 1784. The governing body of the church is the quadrennial general conference, composed of an equal number of ministerial and lay delegates who make all the rules and regulations and appoint commissions to carry on the work of the church. The last such conference was held in Atlantic City, N. J., May 2-25, 1932. There are also held annual conferences, presided over by the bishop of each area, at which all pastoral changes are considered and reports of the local churches are gathered and compiled.

In 1933 there were in the United States and territories 95 annual conferences and missions, 375 districts, and 14,807 charges in 18 episcopal areas. Effective ordained ministers numbered 12,445 and local, or lay, preachers, 10,092. There were 4,259,397 church members, of whom 569,934, however, were inactive. The preparatory roll had 100,210 members. Enrolled in the 23,901 church schools were 3,947,306 pupils. The Epworth League had 559,445 members. Conferences outside of the United States in 12 episcopal areas included 5 in Africa, 10 in eastern Asia, 21 in Europe and northern Africa, 5 in Latin America, 3 in southeastern Asia, and 12 in southern Asia. Of the 311,013 members 22,195 were inactive. The preparatory roll had 327,315 members. There were 1716 effective ordained ministers and 4249 local preachers. Church schools numbered 7011 with an enrollment of 339,878 pupils. There were 67,187 Epworth League members.

The administration of the missionary, educational, and philanthropic work of the Methodist Episcopal Church is committed to six general boards: Foreign missions; home missions and church extension; education; hospital, homes, and deaconess work; pensions and relief; and temperance, prohibition, and public morals. These boards cooperate in the world service movement, their budgets being fixed and their work correlated by the world service commission. On May 31, 1933, this commission reported total net receipts of \$3,495,698.

The board of foreign missions administers the missions of the church in Africa (Central and South), Europe and North Africa, Eastern Asia (China, Japan, Korea), Latin America (Mexico, Central America, South America), Southeastern Asia (Philippine Islands, Malaya, Sumatra), and Southern Asia (India and Burma). The board of home missions and church extension administers the missions in the United States and its possessions, not including the Philippine Islands, and looks after weak churches in new and growing communities in the United States. There are also two women's missionary societies, the foreign and the home.

The educational system of the church, administered by the board of education, included, in 1933, 47 colleges and universities, 24 secondary and preparatory schools, 8 schools of theology, and 15 institutions for colored students. The board of hospitals, homes, and deaconess work admin-

istered, 77 hospitals, 44 homes for the aged, 43 children's homes, 45 deaconess homes, and 27 homes for young business men and women. The board of pensions and relief reported at the general conference in 1932 a connectional permanent fund amounting to \$1,376,825; endowments and reserves in trust, \$332,028; conference stewards' fund in trust, \$303,193; and ministers' provident annuity fund, \$614,751.

The board of temperance, prohibition, and public morals is responsible to the general conference, its purpose being "to make more effective the efforts of the church to create a Christian public sentiment" and "to crystallize opposition to all public violations of the moral law and to all attempts to undermine and destroy civil and religious liberties."

The official publications of the church are the *Christian Advocate* (New York, Cincinnati, Chicago, Kansas City, San Francisco, and Southwestern editions); the *Epworth Herald* (Chicago); *Zion's Herald* (Boston); and *Der Christliche Apologete* (Cincinnati). The secretary of the general conference is the Rev. John M. Arters, 700 Hammond Street, Bangor, Me.

METHODIST EPISCOPAL CHURCH, COLORED. This denomination was organized in Jackson, Tenn., in 1870 and was composed of the colored membership of the Methodist Episcopal Church, South. In 1933, it reported 4321 churches with 493,610 members; 3060 traveling preachers and 1932 local preachers; 3268 Sunday schools with an enrollment of 323,610 pupils; and 1819 Epworth Leagues with a membership of 47,610. The amount raised during the year for educational purposes was \$98,000 and about the same for missionary purposes. More than \$1,000,000 was also contributed for home maintenance. The church has 6 bishops and 12 connectional officers. The *Christian Index* is the official organ, while the *Eastern Index* and *Western Index* serve their respective sections. A quadrennial general conference was to be held in St. Louis, Mo., May, 1934. Headquarters are in Jackson, Tenn.

METHODIST EPISCOPAL CHURCH, SOUTH. A separate branch of the Methodist Episcopal Church, formed in 1845 over the question of slavery. In 1933 there were 48 conferences and missions, of which 41 were in the United States and seven in foreign countries; 16,362 churches; 8038 traveling preachers and 4358 local preachers; and 2,701,537 church members. Sunday schools numbered 15,499, with an enrollment of 1,974,351 pupils; and Epworth League societies, 10,359, with a membership of 313,353. Contributions for all purposes in 1933 amounted to \$21,511,490. The denomination sponsored 87 educational institutions, including 48 universities and colleges, 8 academies, and 31 mission schools. Important periodicals are the *World Outlook* and the *Christian Advocate*. The executive body is the college of bishops which in 1933 had 15 members. The general conference, its governing and law-making body, was to meet in quadrennial session at Jackson, Miss., in April, 1934. Headquarters of the church are in Nashville, Tenn.

METROPOLITAN MUSEUM OF ART. See ART MUSEUMS.

MEXICAN BEAN BEETLE, MEXICAN FRUIT FLY. See ENTOMOLOGY, ECONOMIC.

MEXICO. A federal republic of North America. Capital, Mexico City.

AREA AND POPULATION. With an area of 760,290 square miles, Mexico had a population at the

1930 census of 16,552,722 (8,119,004 males and 8,433,718 females), compared with 14,334,780 in 1921. Of the 1930 population, 9,040,590 were of mixed race (white and Indian), 4,620,880 were Indian, 2,444,466 were pure white, 140,094 were of unknown racial origin, and 158,000 (including about 14,600 United States citizens) were foreigners. About 1,791,000 Indians still spoke their native language. Populations of the chief cities in 1930 were: City of Mexico, 1,029,068 (615,367 in 1921); Guadalajara, 175,539; Monterrey, 132,577; Puebla, 114,793; Mérida, 95,015; San Luis Potosí, 74,003; Tampico, 68,126; León, 69,238; Vera Cruz, 67,494; Torreón, 66,001; Aguascalientes, 62,244.

EDUCATION. The census of 1930 showed 56.08 per cent of the population illiterate, compared with 65 per cent in 1921. The population of school age in 1930 was 3,369,975, while school enrollment was 1,816,699. In 1932 there were 610,030 pupils in 7165 primary public schools, 6885 in 15 public secondary schools, and 3460 in 31 private secondary schools. There were 9472 students in the seven universities in 1930.

PRODUCTION. Agriculture is the main support of the population. About 24,000,000 acres, or 5 per cent of the total area, was under cultivation in 1932; there were 146,000,000 acres of pasture and 43,993,000 acres of forests. Livestock in 1930 included 3,735,000 cattle, 2,728,000 swine, 1,574,000 sheep, 3,150,000 goats, and 2,580,000 horses, mules, and asses. The chief crops were reduced in 1932 by drought and frost, but the 1933 harvest was unusually good. Production of the principal crops in 1932 (thousands of units—bushels except as indicated), with 1931 figures in parentheses, was: Wheat, 9658 (16,226); barley (3158 in 1931); corn, 76,458 (84,196); rice (rough), 3574 (3535); beans, 4304 (4096); tomatoes, 78 metric tons (77); tobacco (25,184 pounds in 1931); cacao beans (1753 pounds in 1931); coffee, 72,475 pounds in 1931–32 season; cotton, 45,331 pounds (100,488); henequen, 118 metric tons (84); chick-peas, 1605 (3301); alfalfa, (1637 metric tons in 1931).

The value of mineral and metal production in 1932, excluding petroleum and coal, was 147,913,000 pesos (\$47,184,000); in 1931, 202,874,000 pesos (\$72,000,000). Petroleum production in 1932 was valued at 75,687,000 pesos (\$24,144,000); in 1931, 77,530,000 pesos (\$27,515,000). Output of the chief minerals in 1932 (1931 in parentheses) was: Gold, 600,000 troy ounces (628,000); silver, 69,398,000 troy ounces (87,461,000); copper (metal content of ores), 34,938 metric tons (54,121); lead (metal content), 132,779 metric tons (226,629); zinc (metal content), 57,100 metric tons (120,292); antimony (metal content), 1737 metric tons (5443); arsenic (white), 3967 metric tons (6508); graphite, 2045 metric tons (3122); mercury (metal content), 255 metric tons (255); coal, 605,000 metric tons (808,000); petroleum, 32,805,000 barrels (33,039,000). The 1933 petroleum output was 34,000,830 barrels.

The 1930 industrial census showed 48,850 manufacturing and industrial establishments, representing an investment of 979,529,000 pesos (\$461,652,000) and employing 318,763 persons. The value added in the process of manufacturing by the chief industries in 1930 was: Foodstuffs, \$76,365,000; textiles, \$58,331,000; earth, stone, and metals, \$41,755,000; hides, rubber and paper,

\$21,780,000; chemicals, \$13,652,000; machinery and tools, \$11,686,000.

COMMERCE. Imports into Mexico in 1932 were valued at 180,912,000 pesos (\$57,621,000), compared with 216,585,000 pesos (\$92,352,000) in 1931. Exports amounted to 304,697,000 pesos (\$97,046,000), against 399,711,000 pesos (\$170,437,000) in 1931. Conversions to dollars were made at average exchange rate of \$0.3185 for 1932 and \$0.3549 for 1931 (par value of peso, \$0.4985). The chief import items in 1932 were: Machinery, \$6,322,000; mineral oils and by-products (except asphalt), \$3,757,000; automobiles and chassis, \$3,066,000; lard and substitutes, \$2,200,000. The principal 1932 export items were: Silver, \$11,131,000; gold, \$10,677,000; lead, \$6,817,000; henequen, \$4,692,000; crude petroleum, \$4,630,000; fuel oil, \$4,390,000; copper, \$4,353,000; tomatoes, \$4,284,000; coffee, \$4,257,000.

The United States in 1932 took 65.3 per cent of Mexico's exports (61.2 in 1931); Germany, 6.6 (7.7); United Kingdom, 4.0 (11.9). Of the 1932 imports the United States supplied 63.8 per cent (66.8 in 1931); United Kingdom, 7.9 (7.2); Germany, 11.3 (9.0). United States trade statistics showed exports to Mexico in 1932 of \$31,899,714 (\$37,519,534 in 1933) and imports from Mexico of \$37,422,588 (\$30,715,914 in 1933). Total imports into Mexico (1933) were 244,495,000 pesos; exports, 364,967,000 pesos.

FINANCE. Early in 1933, Secretary of Finance Pani reported a budget surplus of approximately 500,000 pesos in 1932, with actual receipts totaling 201,288,000 pesos. Preliminary returns for the 1933 fiscal year indicated a surplus of between 2,000,000 and 3,000,000 pesos, with expenditures totaling about 233,000,000 pesos. The 1934 budget, as approved by Congress Dec. 23, 1933, called for revenues and expenditures balancing at 243,000,000 pesos. Expenditure appropriations included 61,118,189 pesos (25 per cent of the total) for the army and 40,669,180 pesos for service of the internal public debt (25,468,709 pesos in 1933). Education and highways received 31,235,183 pesos and 30,429,054 pesos, respectively. The public debt as of Dec. 31, 1932, stood at 1,051,802,000 pesos (external, 1,021,471,000; internal, 30,331,000). In December, 1931, the Mexican government arranged with the International Committee of Bankers for a moratorium on foreign debt payments, extending to Jan. 1, 1934.

COMMUNICATIONS. Mexico in 1932 had about 14,800 miles of railway lines, the principal system being that of the National Railways of Mexico. In 1931 the National Railways carried 5,910,000 metric tons of freight and earned gross receipts equivalent to \$36,759,000. There were some 62,137 miles of highway (380 miles surfaced). Road construction was being actively pushed to attract tourist traffic, particularly from the United States. The 770-mile highway from Laredo, Tex., to Mexico City was practically completed in 1933. Construction of a highway from Nogales to Hermosillo, Sonora, was under way. During 1932 planes of civil air lines flew 1,595,461 miles, carrying 23,447 passengers, 88,241 pounds of mail, and 966,316 pounds of express and baggage.

GOVERNMENT. The Constitution of 1917, as amended in 1929, vested executive power in the President, elected by direct popular vote for four years and ineligible for reelection. Legislative

power was vested in a Congress of two houses—the House of Deputies, of 185 members, elected for two years by popular suffrage, and the Senate, of 58 members, composed of two members from each state, elected in the same manner. Congress sits from September 1 to December 31, and during the remainder of the year delegates its powers to a permanent committee of 14 Senators and 15 Representatives appointed by the respective houses. President in 1933, Abelardo L. Rodríguez, elected by Congress Sept. 4, 1932, to complete the term of office ending Nov. 30, 1934, following the resignation of President Pascual Ortiz Rubio on Sept. 3, 1932. The Republic comprises 28 states (with large powers of autonomy), three territories, and the Federal District embracing the City of Mexico. The National Revolutionary party, organized by former President Plutarco Elias Calles in 1928, retained complete control of the government through 1933.

HISTORY

SIX-YEAR PLAN. At the instigation of former President Calles, Mexico's unofficial dictator, the predominant National Revolutionary party during 1933 definitely espoused socialism as its goal. A six-year plan, designed to hasten the socialization of Mexico without transgressing upon socially useful private enterprise, was adopted by the annual party convention at Querétaro in December. Before the end of the month, legislation was passed by Congress empowering President Rodríguez to put the plan into effect on Jan. 1, 1934.

General Calles' suggestion, first made in June, 1933, was that the state should intervene actively to remedy "the broken equation of unemployed men and unemployed national resources." He declared that Mexico lacked the moral and administrative preparation required for successful collective operation of economic enterprises and that for the time being she "must depend on private initiative, guided and sustained and channeled by the state, stimulating distributive justice and blazing the trail toward the socialistic state." His proposals were studied and elaborated by the government. As submitted to the party convention in published form, they called for "a coöperative economic system tending toward socialism." The specific aims of the Six-Year Plan were: (1) to improve the workers' standard of living, (2) to establish definite minimum wages, (3) to promote mass education, (4) to complete the agrarian and public-works programme, and (5) to improve Mexico's relations with foreign countries.

In accordance with the recommendations of the party convention, Congress on December 21 invested President Rodríguez with extraordinary powers for a period of nine months to enable him to put the plan into effect by decrees. He was authorized to amend and revise the mineral laws of 1926 and 1930; to reorganize the diplomatic and consular service; to reform the civil and criminal codes; to change the regulations for monopolies; to coördinate highway construction; and to decree new public health legislation.

Under the authority conferred upon him, President Rodríguez announced an extensive programme of public works and economic reconstruction for 1934. The public-works programme called for the expenditure of about 50,000,000 pesos on irrigation projects, municipal water and sanitation systems, parks, markets, housing for

workmen, highway construction, modernization of the national telegraph system, establishment of public health centres, and the erection of school houses. Other parts of the plan provided for a new agrarian department to expedite the distribution of communal lands to villages, and the extension of credit to small farmers by the National Bank of Agricultural Credit. The employment of foreign technical experts was to be restricted and industrial enterprises required to train Mexican technologists. Amendment of the mining laws to aid small Mexican companies was envisaged; also the establishment of a Federal electrical commission with broad authority over power and light companies, to extend and improve electricity service for small villages and communities.

The Six-Year Plan provided also for the direct intervention of the Federal government in foreign trade, by means of a commission to control imports and exports, a board of standards, a semi-official exporters' association, governmentally facilitated credit and insurance for exporters, and officially designated sales agents in foreign countries. The cooperative movement was to be encouraged. Trade by barter with Central America was to be studied.

AGRARIAN REFORM. The government's recovery plan was added to by the party convention in two particulars. The convention enthusiastically approved a proposal by the Vera Cruz delegation that the Constitution be amended to make "Socialist education . . . the basis for primary and higher education." This project was debated in Congress, but a final decision was reserved until the 1934 session. The other amendment adopted by the convention called for conversion of the National Agrarian Commission into an autonomous government department to facilitate land distribution to the peasants. On December 20 Congress carried out this recommendation by submitting to the state legislatures a proposal for a constitutional amendment. It authorized the President to expropriate lands and distribute them without hindrance from the courts. Compensation was to be made for expropriated lands through additional national bonds (some \$250,000,000 of agrarian bonds were already outstanding, with little prospect of redemption). The amendment had been ratified by 20 of the 29 Mexican states, or more than the required two-thirds, before the end of the year.

CÁRDENAS NOMINATED FOR PRESIDENT. Another important function of the National Revolutionary party convention was the nomination of a Presidential candidate to run in the July, 1934, election. By unanimous vote the nomination, which was practically equivalent to election, went to Gen. Lázaro Cárdenas, who had resigned as Minister of War on May 15 in order to legalize his candidacy. Only 38 years old, General Cárdenas had long been active in party circles and had served as Governor of Michoacán, president of the party, and minister in two cabinets. He was descended from the Tarascan Indians. Other leading contenders for the nomination, were Gen. Manuel Pérez Treviño, who resigned as president of the party May 12; Finance Minister Alberto Pani, who resigned September 28; and former Gov. Alberto Tejeda of Vera Cruz, head of the party's radical wing. Gen. Pérez Treviño abandoned his candidacy on June 7. On June 11 Colonel Tejeda announced his endorsement of the newly formed Radical party in Vera Cruz. It was considered likely that he would oppose General

Cárdenas in the 1934 elections, but with little chance for success. In accepting his party's nomination, General Cárdenas pledged strict enforcement of the anti-clerical laws, repatriation of Mexican émigrés, support for the greater participation of women in public affairs, and continuance of the army as "the stronghold of proletarian tendencies and the source of inspiration of our social evolution."

If elected, he would serve a six-year term, commencing Dec. 1, 1934. A constitutional amendment, ratified by two-thirds of the states and promulgated Mar. 20, 1933, increased the Presidential term from four to six years, but made the incumbent ineligible for reelection. By the same amendment, Senators and Deputies were to be chosen for six and three-year terms, respectively. Senators, deputies, mayors, and state legislators were barred from succeeding themselves, but might be reelected after the lapse of one term. The president and the state governors were restricted to one term. The object of the amendment was declared to be the prevention of the establishment of a dictatorship in any form or the control of the federal or state governments by a single individual or group for a long period. It was thus calculated to prevent revolutions and to develop new leaders.

SYMPTOMS OF UNREST. The possibility of an anti-government uprising by the radical agrarians in Vera Cruz had developed late in 1932 (see *INTERNATIONAL YEAR BOOK* for 1932). President Rodríguez met this threat against his government with firmness, sending some 17,000 Federal troops into the state. On Jan. 10, 1934, he ordered the disarming of all agrarian guards in Vera Cruz. These guards, numbering between 15,000 and 20,000, were said to have been used by Colonel Tejeda and other disgruntled local leaders to oppose the government's policies.

Thereafter the country was reported quiet, except for an abortive attempt by nine young army officers to oust their superiors after the fashion of the sergeants' revolt in Cuba. Arrested in October, they were released with a reprimand. A demonstration against the government and the National Revolutionary party by 7000 persons in Mexico City, led by Aurelio J. Manrique and Antonio I. Villareal, was broken up by the police November 19. The two leaders were released after a short detention.

STUDENT RIOTS. A somewhat more serious situation was presented by the student riots, which broke out in the university towns of Guadalajara and Durango on November 17. The students, demanding autonomy for their institutions and a government subsidy, clashed with local police. In Guadalajara 18 students were injured and more than 100 arrested. Shortly before 30 members of the law faculty of the National University in Mexico City had resigned, asserting that the students were more interested in politics than in their studies. On October 18, the Federal Chamber of Deputies approved a measure submitted by President Rodríguez which extended autonomy to the National Universities and an annual subsidy of 10,000,000 pesos.

THE CHURCH-STATE CONTROVERSY. The controversy between the government and the Roman Catholic Church, which verged on open conflict in 1932, was largely quiescent during 1933. The government, however, continued to display an attitude violently antagonistic to the Church. Vigorous denunciations of the clergy marked the

convention of the National Revolutionary party. General Calles charged the clergy with instigating the student riots, a charge denied by Archbishop Pascual Diaz. Additional anti-Catholic legislation was adopted by some of the States. The Guanajuato Legislature on March 1 ruled that all priests who professed allegiance to a foreign potentate would be declared foreigners. As the Pope was considered a foreign potentate and foreigners were prohibited by law from officiating as priests, the measure in effect outlawed all Roman Catholic priests of the state. In February it was reported that the state of Chiapas had suspended all Roman Catholic Church functions. The conflict with the state authorities of Vera Cruz appeared to be terminated by the capitulation of the Church. The Bishop of Vera Cruz announced June 12 that the two-year-old restrictive clerical law would henceforth be complied with. Hundreds of churches in the state had been closed following the Church's previous opposition to the law. The clergy now petitioned for their reopening.

THE ECONOMIC UPTURN. One important reason for the relative political peace of the country was the decided improvement in economic conditions. The business upswing commenced following the abandonment of the gold standard by the United States in May, 1933. The dollar price of silver increased as the dollar depreciated on the international exchange market, causing a widespread revival of silver mining, which previous to the depression had been one of the leading industries. President Roosevelt's gold policy had a similar effect on gold prices. The handsome profits realized in the mining industries were reflected in the reopening of smelters, the reduction of unemployment, and an increase in railway traffic, government revenues, and general business. The tourist trade showed a steady increase during 1933.

Mexico's financial structure was stabilized by the balancing of the budget and the establishment of the Bank of Mexico as a rediscount institution, with ample silver reserves backing the paper currency in circulation. Former President Calles, who succeeded Alberto J. Pani as Secretary of Finance on Sept. 29, 1933, resigned effective Jan. 1, 1934. According to a government announcement, his retirement was "due to the fact that Mexico's main economic problems, . . . have been solved satisfactorily, and all financial and fiscal questions have been arranged."

Partially offsetting the encouraging economic outlook was the wrecking of Tampico, Mexico's leading oil port, by a hurricane on September 25. Three-fourths of the city was destroyed, hundreds were killed, 20,000 families were made homeless, and property valued at from \$3,000,000 to \$3,500,000 was ruined.

RELATIONS WITH THE UNITED STATES. In addition to the beneficial effects in Mexico of President Roosevelt's economic policies, various political developments contributed to a marked strengthening of American-Mexican friendship during 1933. Mr. Roosevelt's non-intervention policy in Cuba, his consultation with the Mexican and other Latin-American governments concerning the Cuban situation, and the definite pledge of non-intervention given by the United States delegation to the Pan American Conference made a highly favorable impression in Mexico. The government organ, *El Nacional*, of Mexico City, stated editorially:

President Roosevelt has wiped out all unfavorable recollections on Mexico's part. The past is forgotten and we now, with love and trust, join our powerful northern sister, for we believe in her.

Comment in other leading newspapers was similar in tone. The appointment of Josephus Daniels as Ambassador to Mexico, succeeding J. Reuben Clark, aroused considerable hostility in Mexico, due to the fact that Mr. Daniels, as Secretary of the Navy in 1914, had ordered the landing of American forces in Vera Cruz. Following Mr. Daniels's arrival in Mexico City April 15, he quickly dissipated the unfriendliness of students and others by his tact and frankness. He soon became as popular as his two predecessors, Mr. Clark and Dwight Morrow. On Jan. 30, 1933, Señor Fernando González Roa, prominent Mexican lawyer and public figure, was named Ambassador to Washington.

On Feb. 1, 1933, the two governments signed a convention for the joint control of floods and of the course of the Rio Grande for a distance of 87 miles below El Paso and Juárez. The convention was ratified by the U. S. Senate April 25 and by the Mexican Senate September 16. It called for the expenditure of \$4,932,300, Mexico's share being \$591,876. On May 10, the United States government made a voluntary payment of \$30,000 as an indemnity to the heirs of Emilio Cortés Rubio and Manuel Gómez, the two Mexican students who were killed by deputy sheriffs at Ardmore, Okla., in June, 1931. Also see **ARBITRATION, INTERNATIONAL**, for U.S.-Mexican mixed claims.

RELATIONS WITH OTHER POWERS. The Mexican government strove to strengthen its bonds of amity with the other Latin-American nations during 1933. As stated by Foreign Minister José Miguel Puig Casauranc in Buenos Aires November 19, his government held that Ibero-American unity must be firmly established before Pan Americanism could be usefully developed. Mexico accordingly was one of the six original signers of the Argentine anti-war pact (see **ARGENTINA** and **BRAZIL** under *History*). Diplomatic relations between Mexico and Venezuela, severed for 20 years, was resumed on June 9. At the Pan American Conference (q.v.) Foreign Minister Puig Casauranc submitted a 15-point programme for the consideration of the steering committee. It included such controversial questions as a moratorium on inter-American public and private debts, an inter-American money and banking system, and joint steps to banish the economic depression.

An agreement for the settlement of all Spanish claims for damages arising out of the revolutionary disorders of 1910-20 was announced by the Mexican Foreign Office on Jan. 10, 1933. Mexico contracted to pay 2.19 per cent of the original Spanish claims of 184,100,156 pesos.

MIAMI UNIVERSITY. A coeducational institution at Oxford, Ohio, founded in 1809. The enrollment for the autumn of 1933 was 2280, distributed as follows: College of liberal arts, 801; school of education, 650 (four-year course), (two-year course), 171; business administration, 522; fine arts, 99; graduate students, 37. The enrollment in two summer sessions was 708. The faculty numbered 166. The income from the State of Ohio, fees, gifts, and income on investments for 1932-33 was approximately \$1,300,000. There were 119,000 bound volumes in the library. President, Alfred H. Upham, Ph.D.

MICHIGAN. POPULATION. The population of the State on Apr. 1, 1930, according to the Fifteenth Census, was 4,842,325; in 1933 (Federal estimate) it was 5,043,000. Detroit had (1930) 1,568,662 inhabitants; Lansing (capital) 78,397.

AGRICULTURE. The following table shows the acreage, production, and value of the principal crops for 1933 and 1932:

Crop	Year	Acreage	Prod. Bu.	Value
Hay (tame)	1933	2,491,000	3,059,000*	\$20,189,000
	1932	2,397,000	3,164,000*	17,402,000
Corn	1933	1,365,000	42,315,000	18,195,000
	1932	1,407,000	46,431,000	12,586,000
Oats	1933	1,121,000	23,541,000	7,769,000
	1932	1,335,000	36,045,000	6,128,000
Wheat	1933	818,000	13,457,000	9,689,000
	1932	702,000	16,771,000	6,216,000
Potatoes ...	1933	265,000	20,670,000	18,436,000
	1932	260,000	29,900,000	6,877,000
Dry beans .	1933	510,000	8,519,000*	7,566,000
	1932	495,000	4,455,000*	4,678,000
Sugar beets .	1933	154,000	1,236,000*	.....
	1932	122,000	1,215,000*	6,959,000
Barley	1933	250,000	3,250,000	1,658,000
	1932	317,000	6,340,000	1,775,000
Rye	1933	125,000	1,312,000	722,000
	1932	158,000	2,133,000	597,000
Apples	1933	.....	8,651,000	5,623,000
	1932	.....	5,800,000	3,770,000

* Tons. ♢ 100-lb. bags.

MINERAL PRODUCTION. The relatively small production of native coal increased sharply to 446,000 net tons (1932), from 359,403 (1931). The gain coincided with a year of interrupted production in Illinois and Ohio. The industries of the State continued to convert into coke many times the State's yearly output of coal. There were consumed in by-product coking ovens 3,091,775 net tons of coal (1932), from which were produced 2,165,109 net tons of coke, in value \$10,144,218.

Michigan was the only State in the Union to attain in 1932 its highest recorded production of petroleum. There were produced 6,729,000 barrels, as against 3,789,000 for 1931. The heavy increase for 1932 resulted chiefly from high production in the eastern extension of the Mount Pleasant field. The rejuvenation of old wells by the use of acid was practiced in the Muskegon field.

Natural gas, from 62 wells, was produced to the total of 1,405,880 M cu. ft. for 1932, as against 472,000 M for 1931, from a smaller number of wells.

There were mined, in 1932, 54,396,108 pounds of copper, or less than half the State's total quantity for 1931, which was 118,059,941.

The mining of iron ore diminished radically, to 968,789 gross tons (mines' shipments) for 1932, from 5,555,376 for 1931; by value, to \$2,703,900 (1932), from \$15,986,273 (1931). The average yearly earnings of the iron miners fell to \$377.89 (1932) from \$843.71 (1931). For 1933 there was no estimated rise in the yearly total of iron ore mined, but the shipments of ore were resumed on a substantial scale during the year and attained the estimated total for 1933, of 6,104,000 tons. The blast furnaces shipped 280,536 gross tons of pig iron (1932), as against 519,643 (1931); by value, \$4,269,528 (1932), and \$8,964,439 (1931).

FINANCE. State expenditures in the year ended June 30, 1933, as reported by the U. S. Department of Commerce, were: for maintaining and operating governmental departments \$71,760,613 (of which \$26,607,193 was for local education); for conducting public-service enterprises, \$198,856; for interest on debt, \$4,482,927; for permanent improvements, \$25,745,417; total, \$102,187,

513 (of which \$31,642,721 was for highways, \$9,525,919 being for maintenance and \$22,116,802 for construction). Revenues were \$102,262,634. Of these, property and special taxes furnished 41.1 per cent; departmental earnings and compensation to the State for officers' services, 6.5; sale of licenses, 34.0 (in which was included a gasoline sale tax that produced \$12,525,649). Funded debt outstanding on June 30, 1932, totaled \$89,945,984, of which \$50,000,000 was for highways. Net of sinking-fund assets, the debt was \$56,487,476. On an assessed valuation of \$8,261,839,200 the State levied in the year ad valorem taxes of \$42,213,638.

EDUCATION. The financial state of the public schools in the early part of the academic year 1933-34 was adverse. The school year opened with some \$30,000,000 less of cash resources available than the total of a year before; whereas in the previous academic year the schools had been conducted on \$23,000,000 less than for three years earlier. It was estimated in the *Journal* of the National Education Association that not over one-tenth of the school districts were in condition to complete the current academic year; further, that 12,000 teachers lacked employment. The education of adults was restricted, but provision was made for employing teachers in this field with means provided by the Federal Emergency Relief Administration.

The number of persons of school age in the State on May 31, 1932, was reported as 1,382,630 (ages from 5 to 19). There were enrolled in the public schools in 1931-32 (the latest year of available figures) 996,825 pupils. Of these, 809,091 were in common schools or elementary grades, according to figures partly estimated, and 186,734 in high schools. The expenditures of that year for public-school education in the State totaled \$90,819,707, exclusive of debt service. The salaries of teachers averaged, by the year, \$1645.

CHARITIES AND CORRECTIONS. The State's functions of central control and administration with regard to institutions for the care and custody of persons were distributed among several commissions, under a system created in 1923 and still in force in 1933. These commissions, in turn, formed parts of the State's Welfare Department, headed by a director (Evelyn S. Mershon). The bodies within this department were: the State Welfare Commission, State Prison Commission, State Hospital Commission, State Corrections Commission, and State Institute Commission. Each was composed of five members, serving by the Governor's appointment and at his pleasure, except the Hospital Commission, which had seven members. The department handled work under special provisions for the relief of the destitute, on account of the industrial depression.

The 17 institutions maintained by the State had in November, 1933, 24,321 inmates. These institutions were: State hospitals for the mentally afflicted, at Kalamazoo (2749 inmates), Pontiac (1755), Traverse City (2293), Newberry (1188), Ionia (821), Ypsilanti (1480); Farm Colony for Epileptics (961); Michigan Home and Training School (feeble-minded, 3659); State Prison, Jackson (5218); Michigan Reformatory, Ionia (1486); Branch Prison, Marquette (783); Boys' Vocational School (465); Girls' Training School (242); State Public School (462); School for the Deaf (502); School for the Blind (194); Employment Institute for the Blind (63).

LEGISLATION. The regular session of the Legislature, convened on January 4, was occupied in great part by measures required to meet the emergencies due to the banking collapse of February and March and to the financial difficulties of Detroit. Measures were passed to regulate the reopening of closed State banks, to reopen the budget of Detroit, to enable that city to take steps toward scaling down its debt charges and to make temporary issues of scrip with which to meet certain expenditures.

The Legislature took the lead, among the States, with regard to action on Federal prohibition, by creating a State convention of 100 delegates, to be chosen by popular election on April 3, who should act for the State with regard to the proposed repeal of the Eighteenth Amendment. An act was passed to render it lawful immediately to sell beer of an alcoholic content of 3.2 per cent. Another act removed the State's particular restrictions on the prescribing of liquor by physicians and made the State's restrictions coincide with the Federal ones. The Legislature gave the State's ratification to the proposed Federal constitutional amendment to prohibit child labor.

A general sales tax of 3 per cent, applicable to sales of tangible property to ultimate consumers, was enacted; a separate yearly tax on chain stores, at graduated rates, from \$10 each for two establishments under one ownership to \$250 each for 25 establishments or more, was enacted over the Governor's veto. A system of old-age pensions was created, with provision for payments up to a maximum rate of \$1 a day for indigent persons 70 years old and over; an annual head tax of \$2 on all residents of the State between the ages of 21 and 70 was included in the measure, to provide the means for the payment of the pensions. A bill to create a State milk commission with power over prices for milk was vetoed. A legislative council was created, similar to that of Kansas, to help prepare legislation in advance of sessions.

The Legislature was convened in special session on November 22 to pass laws regulating the liquor traffic and to advance the financing of public works.

POLITICAL AND OTHER EVENTS. At an election on April 3 the voters chose, by districts as established for the election of State representatives, delegates to a State convention. Of 100 so chosen, all but one favored the repeal of the Federal Eighteenth Amendment; and the popular vote was cast for repeal in the approximate proportion of 3 to 1. The delegates met in convention on April 10 and voted the State's adoption of repeal through the superseding Federal Constitutional amendment proposed by Congress. The State was the first to elect a convention to deal with Federal repeal and its convention was the first to ratify repeal. Governor Comstock ordered on April 12 that all prisoners of the State against whom stood no record of crime other than against prohibition laws be released on parole.

Detroit was the point from which, in February, the nation-wide banking panic made its sudden and sweeping spread. The Guardian Detroit Union Group, a holding concern with a chain of banks having an aggregate of some \$290,000,000 in deposits, and the Detroit Bankers' Company, a holding company of which the banks held deposits of some \$485,000,000, controlled the chief banking institutions of the State. Banks in these

chains had an overburden of mortgages and other unliquid assets. An effort was made early in February to have wealthy Detroit interests help the Union Guardian Trust Company, a member of the first-named chain. This failed; thereupon Governor Comstock proclaimed an 8-day moratorium or banking holiday on February 14, with a view to giving the bank time to find the means to meet withdrawals. At the same time he issued a public statement asserting that Henry Ford had refused to join two other chief depositors, great motor-manufacturing companies, in subordinating claims as depositors so that the generality of depositors might more readily be paid. This statement, though withdrawn by the Governor on the following day, increased the alarm due to the sensation caused by the halt of withdrawals. About \$1,500,000,000 in deposits, including public and manufacturing payrolls, was tied up. A shortage of cash ensued. Withdrawals on the part of Michigan interests having deposits outside the State became heavy. Depositors elsewhere became prone to draw money, and banks encountered difficulty in State after State as the trouble spread. It was impossible to reopen Michigan institutions on a regular basis after the expiry of the original moratorium, though 5 per cent of deposits had meanwhile been released.

When Federal measures had been taken for resuming banking after the complete closure following the inauguration, Secretary of the Treasury Woodin put the National banks in the two great Michigan chains under conservators and supported a plan for opening in Detroit a new National bank that would take over an entirely sound 40 per cent of the resources of the chains' two chief National institutions, the First National and the Guardian National. This was bitterly opposed by the interests formerly dominant through the holding companies. A popular campaign through the press and otherwise was carried on against it. Father Charles E. Coughlin, a Catholic priest widely known because of his radio addresses on public topics, attacked the local banking practices in severe terms on March 26; on the night of the 29th his residence was bombed, but he was not harmed. The National Bank of Detroit opened on March 24 with common stock subscribed chiefly by large local automobile concerns and with preferred stock subscribed by the Reconstruction Finance Corporation; it took over the better assets of the two chief suspended National banks, as designed by Secretary Woodin, and allowed depositors in the latter banks proportionate deposit credits on its books, with full privilege of withdrawal. There remained in the State at the end of April some 200 State banking institutions unable to reopen on terms that the Federal administration would admit as qualifying them for Federal Reserve membership.

A judicial investigation of the affairs of the First National and Guardian National banks was held by Judge H. B. Keidan in Detroit. The chairman of the former bank accused Senator Couzens of having occasioned the crisis by refusal to sanction a loan to the Guardian National from the Reconstruction Finance Corporation; he also testified that Henry Ford had refused to take part in a reorganization of the First National save if Ford and his son were to underwrite all the stock.

Other State Affairs. The State Supreme Court

declared in a decision of October 19 that the act of 1931 rendering known evildoers punishable on conviction as "public enemies" was unconstitutional in that it deprived defendants of rights of trial. Provision was made to put the goods manufactured by State prisoners to use for welfare work through the State welfare department. The State administrative board took on April 13 the radical step of cutting the salaries of State employees 50 per cent, subject to later adjustment as the condition of State revenue might indicate. The public service commission ordered the Detroit Edison Company in September to reduce its commercial lighting rates by 3 per cent.

Affairs of Detroit. Mayor Murphy having resigned to become Governor General of the Philippines, Frank Couzens, president of the city council, succeeded to the office as acting mayor on May 10. The city was forced by lack of cash in April to attempt the sale to the public of its scrip to obtain money with which to pay employees. Acting Mayor Couzens offered to the holders of \$139,000,000 of the city's debt in May a refunding plan that involved replacing existing issues with 30-year bonds bearing at first only 3 per cent of interest a year, but rising later to 4½ per cent. The plan was ratified later by a part of the city's creditors.

A strike among makers of tools and dies for the automobile factories at Detroit, late in October, was accompanied by a raid upon seven Detroit factories, made on October 30 by men in about 300 automobiles, who swept through destroying window glass, equipment, blue prints, and the like. Frank Couzens, acting mayor of Detroit, was elected mayor on November 7; a plan of port development was adopted by the vote of Detroit and of the rest of Wayne County, and a project for a city subway system in Detroit, to be built with Federal aid, was approved.

OFFICERS. The chief officers of the State, serving in 1933, were: Governor, William A. Cockett; Lieutenant-Governor, Allen E. Stebbins; Secretary of State, Frank D. Fitzgerald; Treasurer, Theodore I. Fry; Auditor, John K. Stack, Jr.; Attorney General, Patrick H. O'Brien; Superintendent of Public Instruction, Dr. Paul Voelker.

Judiciary. Supreme Court: Chief Justice, John S. McDonald; Assistant Justices, Henry M. Butzel, William W. Potter, Nelson Sharpe, Walter H. North, Louis H. Fead, Howard Wiest, George M. Clark.

MICHIGAN, UNIVERSITY OF. A State institution for the higher education of men and women at Ann Arbor, founded in 1817. In 1932-33 the enrollment was 13,257. The registration in the 1933 summer session was 2959. The teaching staff was composed of 828 members, including 50 of the summer session staff not at the university during the regular year. For current expenses the State appropriated \$4,182,000, while approximately \$4,392,000 was derived from other sources.

In September, 1933, Hutchins Hall, the new law school building and the latest addition to the law quadrangle presented to the university by the late William W. Cook of New York City, was occupied by the law school as its classroom and office building. The building, exclusive of equipment, is valued at more than \$1,000,000. Gifts totaling in value more than \$230,000 were received during the year. The university libraries contained 874,866 bound volumes. President, Alexander Grant Ruthven, Ph.D.

MIDDLEBURY COLLEGE. A coeducational, nonsectarian college at Middlebury, Vt., founded in 1800. For the autumn term of 1933, 610 students were registered as undergraduates and 18 as graduates; of these 320 were men and 308 women. The enrollment in the special summer schools of French, Spanish, German, and English, conducted by the college, amounted to 389. There were 74 members on the faculty, including administrative officers and those on leave of absence. The productive funds of the college in 1932-33 amounted to \$4,210,599, and the income for the year was \$368,035. Gifts to the college amounted to \$193,517. The library contained 60,000 volumes. President, Paul Dwight Moody, D.D.

MIDDLE CONGO. See FRENCH EQUATORIAL AFRICA.

MID TOWN TUNNEL. See TUNNELS.

MILITARY PROGRESS. **GENERAL.** The withdrawal of Germany from the League of Nations and the Geneva Disarmament Conference in October, 1933, does not by any means indicate that the world is facing another military struggle. The Hitlerite government wants absolute revision of the Versailles Treaty and the absorption of Austria in the Third Reich. Both of these are opposed by France.

Germany's withdrawal from Geneva has resulted in almost feverish diplomatic activity. Germany has made certain proposals to France for the practical realization of her military equality; France has made counter-proposals. In brief Germany has demanded a short-service army of 300,000 men and "defensive" armaments to a quarter of the total combined strength in these armaments of France, Poland, and Czechoslovakia. She will forego "offensive" weapons, is willing to accept reciprocal, automatic, and periodical control of her armaments and of the storm detachments.

France replies that she can only consider a comprehensive scheme leading to disarmament, not one leading to rearmament. Any convention must provide for the security of its signatories through effective control of armaments and a collective guarantee of the contracting parties. There must be 200,000 only, and Germany must not have the longed-for "defensive" weapon until the transformation of the twelve-year army into a short-term service one has been completed. This is one of the main points of disagreement. See DISARMAMENT.

Threats of war appear in the East along the Amur. Strategic railroads are being built so that soon Japanese troops can reach Soviet borders in 3 days or less—as against 10 days from Moscow to the same point. Japan probably has an eye on the Russian port of Vladivostok, as well as the southern portion of Sakhalin Island, the latter for its petroleum and fisheries. There is no oil in Manchuria.

There will not be a war very soon or within a stated time, the recognition of Russia by the United States undoubtedly being the very thing to prevent war. Without doubt it has strengthened Russia very much. (*New Republic*, Oct. 25, 1933.)

There will be no "preventive war" either by France or the Allied governments it is believed for the coming year at least.

If the four-power pact can bring about a common policy among the Big Four assuredly great benefit will result. Anything removing friction and the danger of open opposition of those coun-

tries will help the maintenance of peace. Whether they can agree among themselves remains to be seen. If they can then they can run Europe to suit themselves, the Little Entente and Poland to the contrary notwithstanding.

The Disarmament Conference after the withdrawal of Germany adjourned until early in the new year, to sometime in January, with probability of a further adjournment.

As the year closed German intentions toward Austria were crystallizing and the fate of that small but highly important country hung in the balance.

In the consideration of mechanical devices supplementing man power the tank, submarine, and the airplane hold the attention of military experts. These are now capable of speed not dreamed of at the end of the World War. And each is equipped with implements of attack and defense far more repellent, more penetrating, more annihilating than any of the lethal devices in use on the western front in 1918.

"When we consider that present day peace-time army aircraft mounts five machine guns and travel at nearly three times the speed possible in the last war we can visualize the havoc that could be created in communities far behind the fighting line." (Lieut. George S. Brady in *Army Ordnance*, recent issue.)

FRANCE. M. Jules Sauerwein, of *Le Soir*, Paris, Dec. 1, 1933 gives a picture of the solid system of fortifications near completion guarding the Rhine and the main corridor of invasions from the north and east across Lorraine. These forts would hold in case of trouble and France would feel perfectly safe were it not for her side entrances—Belgium and Switzerland.

The rapid succession of events of the past few months has turned attention of populations and statesmen to the traditional routes of invasion of Europe. The experience of the last war has not reassured Belgium and Switzerland as to what might happen in another war. Both are engaged seriously in measures to protect their territory serving either as a battle ground or as an easy mode of access to military objectives.

On the Swiss side the corridor of Belfort is the way of approach; from the Lake of Neuchâtel between Jura and the Vosges Mountains, across the Rhine from Basle.

On the Belgium side—the main route of attack follows the general line of the Meuse River through Liège and Namur and Charleroi—then to Paris through the valley of the Oise River. This too is a corridor and its control early in hostilities would be vital in any conflict through Belgium between France and Germany. This narrow passage—between the Sambre et Meuse and the Ardennes at Chimay has been flanked by France with heavy fortifications at Mirson and Meurbruge, but its defense would fall to Belgium.

The new system of forts along the terrain from Dunkirk to Humingue; and from Mont Blanc to Nice strengthens the old chain of defenses. This great plan is almost completed at a cost of \$132,000,000 in gold. As of old the region about Dunkirk is protected by the opening of flood gates and inundating the surrounding country. The Belgium border is lightly fortified by small shelters at wide intervals supplemented by mobile units called "flying fortifications." The most heavily fortified region is the wide slightly elevated plateau known as the "Highway of Lorraine"—the direct contact with Germany.

South and east are the Vosges Mountains—a good natural barrier covered with forests—protected by preparations made to destroy routes by mines, protecting the passes with light defenses and a scattered pill-box line of fortifications. Then the Rhine along Alsace's eastern border—a great natural barrier where the construction of concrete pill-boxes every mile or two is considered sufficient protection. The Swiss border has the great natural protection of the Alps—needing no fortifications.

Between Switzerland and the Mediterranean the Alps continue to act as a natural defense and it is considered necessary only to fortify six of the ten passes with mine containers to permit rapid destruction of bridges and roads. The other four passes leading straight to Nice will be strongly barred by a network of trenches, pill-boxes, and gun emplacements. The pill-boxes forming the backbone of the whole system vary greatly in size and shape. On the average they will be concrete rooms, about 30 by 36 feet, 6 feet below the ground, with places for 12 men, a tower for a lookout and a machine gunner.

As a general principle the attacking enemy will first encounter scattered groups of small machine-gun units, placed in the front line to delay approaching infantry. Then the line of small pill-boxes to hold back infantry and field artillery combined. Finally come the great ones, built to withstand the highest powered artillery.

The "mobile park" or "fortifications on wheels" contain large stocks of materials for digging trenches, constructing shelters and machine gun emplacements and equipment for quickly installing large systems of barbed wire entanglements. Situated near a railway or road, it can immediately supply material to bolster any particular point, or to make a new defense. It is estimated that it can double the strength of any terrain in two or three days. (Herbert Matthews, Paris correspondent, *New York Times*, August 20.)

The French Chamber of Deputies on December 19 passed the army service bill designed to spread out the military service age in such a manner as to assure during the "lean" years of 1936 and after, the army strength will be maintained at 200,000 men. The bill permits France to avoid increasing the length of service with the dangerous consequences. This would entail yet maintain a sense of security by guaranteeing that the military force will be as strong in 1936-37-38 as it is now. The conscription age at the beginning of this period will be advanced from 21 years to 21 years and 4 months. Later on the recruiting age will be put back by stages from 21 to 20 years. The armed strength will be about 10,000 less than normal, as far as conscription is concerned, but the shortage will be made up by transferring several African battalions from Morocco and increasing the term of service of a certain number of regular soldiers. (*New York Times*, Dec. 19, 1933.)

ITALY. Early in the year the Under-Secretary of Education announced steps to build up a force of 10,000 officers to supervise the military and moral training of 2,000,000 boys, members of the Fascist organizations. The purpose is to give the youthful black shirts strict training required to fulfill Fascist interests and for "preparation of the new generation for possible emergencies."

On December 19, war, air, and navy budgets for the fiscal year 1934-35 totaling \$367,899,000 were submitted to the Chamber of Deputies. This was

a reduction of \$21,867,000 for the same departments under the current budget.

The Minister of War had decreed changes in the Italian uniform for Italian officers, adopting the British turn-down collar, with ties to be always worn. The gray-green color is still maintained; for summer wear white drill uniforms with black ties. An entirely new black uniform, optional save for social events and off-duty functions, double breasted tunic of black broadcloth and black trousers, was decreed. It is to have the high collar and traditional facings and stripes to denote different regiments.

SPAIN. The Republic begins to realize that it must be prepared to defend itself. While the old Army was badly handled by the new government, it is now creating a new one and one more efficient. The last budget included 423,000,000 pesetas for war, 158,800,000 for military action in Morocco, 868,900,000 for public works, including fortifications, national dredging and other military enterprises. The fortifications on the Island of Minorca are important as it commands the Mediterranean from Gibraltar to Malta.

GERMANY. On Aug. 14, 1933, Aviation Minister Goering issued a decree prohibiting the taking of photographs from airplanes flying over Germany. During flights cameras will be taken from passengers and placed under lock and key.

To remind the population of the necessity of air-craft defenses National Socialist organizations will unveil in Berlin a monument in the shape of an aircraft bomb.

The auxiliary police force in Prussia, made up of Nazi storm troops and steel helmets, was abolished by Premier Goering effective August 15. It was organized before the March, 1933, election for the alleged purpose of saving the country from the dangers of a communist uprising.

In the High Schools of Germany have been instituted chairs of military science, filled by men trained in the theory of war and its practice. The new book of Prof. Ewald Bause of the Brunswick Technical High School makes strong statements, quite in contrast to the peaceable intentions expressed by the chief officials of the government.

"War to-day, is no longer a frolicsome campaign with regimental music and a cornucopia of decorations. It is a bloody battle and in particular a contest of material. It is gas and plague. It is hunger and poverty. It is baseness and falsehood. It is desperation and sacrifice. Only a nation can endure it where every member has known for years that his life belongs to the state and only to the state, which is the guardian of Nationhood and mother tongue and culture. Let no one raise moral objections. When a nation disarmed, deprived of its just dues and driven to destruction, fights for its existence, there can be but one law! To fight for its liberty and regain its sovereignty. And for attaining that any means is just."

According to the author of the book, lack of arms need not be a barrier to determined militants. For a disarmed and defenseless people "biological war is a given" weapon. Water poisoned by typhoid microbes; pestilence introduced by fleas and artificially infected rats; airplanes to carry disease germs into enemy country—is a sample of the daily intellectual fare of the youth of the entire country.

Although the German government has withdrawn the book from use in high schools and Universities it was an official publication, produced under government auspices and no doubt ac-

curately represents the attitude of Germany's rulers.

Outside of the schools, the lads of the Nazi storm troops have it persistently drummed into them that they are soldiers. Their weekly newspaper keeps war constantly before their eyes with pictures and articles on fighting strategy, and tactics, diagrammed instruction in the art of machine guns, etc. Streams of children and youths are constantly passing through war exhibits, studying modes of trench warfare.

Concrete evidence of the rapid increase of German war equipment was published in the *Journal de Paris*, July 26, 1933, reprinted in the *Neue Weltbühne* of Prague and the *Living Age* in the United States, giving the list of German factories manufacturing arms and equipment. It has not been satisfactorily answered by the German authorities.

AUSTRIA. Permission given Austria to enlist 8000 men in addition to her regular army which is below treaty strength was temporary and conditional, intended as it was by the British, French, and Italian governments to help the Austrian government to defend itself against acts of violence and intimidation of Austrian Nazis. The duration of the concession was limited to one year. In no way was it a permanent national militia recruited by conscription—nor in addition to the 30,000 long-service army provided by the Treaty of St. Germain.

The decree published by the Austrian government in September stated that the Army will in future consist of the present permanent force and a new auxiliary corps to be created. . . . The members of the new corps will be subject to military law and discipline, but will serve only six months in the field and remain for a year in the reserve. Recruiting will be voluntary.

SWITZERLAND. The war fear referred to above is exemplified by the actions of Switzerland, Belgium, and the Netherlands, three states that seldom before thought of themselves as subject to possible invasion.

On December 14, the Swiss Federal Council approved of a complete overhauling of the illuminating system of the army in the Alpine passes. The appropriation of 82,000,000 francs (\$24,600,000) followed the recent decision of the government to renovate the fighting equipment and put their defenses in first class condition. See *SWITZERLAND, BELGIUM, and THE NETHERLANDS under History*.

RUSSIA (U.S.S.R.). Is Trotsky right in his warning early in May that Fascism in Germany "can bring in its trail nothing less than the mobilization of the Red army"?

The Soviet's Far Eastern frontier is not free from trouble—what with Japan's aggressive military activity in that vicinity. One's attention is drawn to the Red army, and when one thinks of this army he must perforce gauge its worth by its leader, K. E. Voroshilov. His career has been devoted to military strategy and organization. Beginning with secret military companies consisting of workers, he engaged in the civil war following the wake of Lenin and Trotsky. That civil war found him in its midst and working with Stalin successfully defending Tsaritsyn against the superior German army in 1918. He fought the armies of General Denikin in 1919 and took part in the Russian-Polish war in 1920, as well as the campaigns against Makshno and Wrangel. He commanded the Fifth Ukrainian army and later

became head of the Fourteenth Soviet army and finally the forces of Northern Caucasia, and the garrison of the Moscow region. At the age of 44 years he was named War Commissar.

Since that time the guiding principle of his office has been the freeing of the Soviet war machinery from dependence upon foreign countries.

The changes made may be grouped under three basic heads—first, the complete technological modernization of the army, navy, air forces, including the raising of new scientific and engineering personnel among the military; second, the reorganization of those forces on a rigidly domestic basis, using none but Soviet-made ammunition, tanks, motors, and artillery; third, the simultaneous conversion of the Soviet machine, with most of its personnel and many of its institutions, especially those of an educational character, into a social agency for the permanent fixation of communism as the sole economical, political, and ethical order of the country.

The Soviet manufactures its own ammunition, in Soviet plants and from native raw materials. It manufactures its own tanks, airplanes, and artillery, its own gases. New war bases have been established in Siberia and new railroads and military roads have been added at strategic points. Under his direction, the Red army officer and soldier is trained in public work and public office in the commune, in his village, in his city on the expiration of his military service. It is this latter phase of army training that directly links this war commissar with the Soviet masses and makes him defender of 100,000,000 peasants. (Elias Tobenkin, *New York Times*, May 7, 1933.)

The 16th anniversary of the October Revolution opened with a 101-gun salute in Moscow's Red Square and for 2½ hours soldiers marched past the tribune of Lenin's mausoleum. One unit was made up entirely of women. Tanks, anti-aircraft guns and radio cars revealed to the spectators the technical advance of the Red army (*New York Times*, Special Correspondent, Moscow, Nov. 7, 1933).

JAPAN. Japan's undeclared war on China has made drastic changes in the world balance of power. She has carved out a new empire. Since Sept. 18, 1931, Japan has seized and consolidated almost 500,000 square miles of Chinese territory, including Manchuria with Jehol, part of Inner Mongolia and the so-called demilitarized zones within the Great Wall. The territory seized contains one-thirteenth of the total population of China.

Under date of July 27, 1933, the *New York Times* correspondent in Harbin, Manchuria, verified the construction of Japan's new strategic railway. It is being built to run northward from the Harbin-Hailun branch of the Chinese Eastern railway from Hailun to Heiho just across the Amur River from the Russian city of Blagoveshchensk south of the important division point of the Trans-Siberian railway. It will leave the Russian maritime province, with the great port of Vladivostok, at the mercy of the Japanese by putting them in a position to sever the only great traffic artery across Siberia.

The newly opened important railway link in Manchuria, connecting Changchun with the newly developed ice-free port of Rashin, northern Korea, gives Japan easy access to the new strategic railway spoken of above.

The Japanese military authorities on September 21 decided to get approval of the establish-

ment of 4 Army Divisions that were eliminated in 1925, to make a total of 21 divisions.

UNITED STATES. In the struggle of the government to fight the economic depression, sharp reductions have been made in the sums normally appropriated for the maintenance of the Army, reported the Chief of Staff in his annual report for the fiscal year ending June 30, 1933.

The Commander-in-Chief has assigned the Army unique responsibilities in his coordinated campaign for economic rehabilitation. The Army assumed on April 10 under the general supervision of the Director of Civilian Conservation Corps, complete and permanent control of the C.C.C. project. There were 1450 camps eventually established and administered, with a total of 3109 officers of the regular army, 532 of the Navy and Marine Corps and 300,000 civilians.

"To epitomize the military lessons of the 1933 mobilization it has given renewed evidence of the value of systematic preparation for emergency, including the maintenance of trained personnel and suitable supplies and the development of plans and policies applicable to a mobilization.

"The four-Army plan provides for the assignment of every existing unit to a definite place in a larger tactical organization, and each is provided with a commander and the principal elements of his staff. This process applies to all elements from the lowest to the highest, and establishes a direct chain of tactical control from the smallest unit to the Commander-in-Chief himself. It provides opportunity for efficient training in higher command and staff."

He ends up his report with the following significant statement which under present world wide conditions is rather ominous—

"It is my conviction that at the moment the Army's strength in personnel and material and its readiness for employment are below the danger line."

According to Miss Clara Dutton Noyes, Washington, D. C., National Director of Red Cross Nursing Service, there are 35,000 trained nurses in the United States ready for mobilization in the event of war.

At a meeting of the Association of Military Surgeons in Chicago, Sept. 25, 1933 the *Associated Press* reported Dr. Louis B. Wilson of the University of Minnesota as saying that the velocity of rifle bullets has increased so tremendously since the world war that problems of surgery in the next war will be greater. "The new rifle has a muzzle velocity of 5000 feet a second as against the present velocity of 2700 feet. Wounds from bullets fired from this gun will shock and destroy three times as much tissue as the old style bullets. Hence Army surgeons must make extensive studies of the wound factors of the next war," he said.

The National Defense Act of 1920—which the War Department calls "the first real military policy the United States ever had"—in reality does not lay down a military policy of any kind.

The mobilization plan of the General Staff is nowhere prescribed in the National Defense Act. The War Department through its war plans division of the General Staff has been engaged on its mobilization plan for the past thirteen years. It is based upon two premises—first, that immediately upon the outbreak of war the President will be given ample statutory powers to mobilize promptly and use effectively the manpower and material resources of the nation; sec-

ond, that Congress will pass a universal draft law on or before mobilization's first day.

Based on this the war plans division estimates 11 million men between 21 and 30 immediately available; 4 million to be drawn for the first 12 months' requirements. Also the rapid manufacture of thousands of the essential articles needed to arm and equip four field armies.

From the purely military view the War Department is left to carry out a general mobilization scheme without a trained reserve and no effective means of training such a reserve. If we really want to be prepared for the next war the National Defense Act must be overhauled.

A great feat was performed on Feb. 18, 1933, when ten huge bombing planes carrying an entire battalion of Field Artillery escorted by 21 pursuit planes and 29 observation planes flying 100 miles an hour, transported the battalion from Bejuco, Panama, to Chorrera, 25 miles from the Panama Canal. Less than half an hour was required to load and unload the 3-inch mountain howitzers. The entire battery with gun crews, officers, and ammunition was rushed by air to repel surprise attacks.

The Chief of Engineers expended on the maintenance and improvement of rivers and harbors works for the year the sum of \$69,589,208.04; on flood control \$3,957,684.90; on the operation and care of canals, removal of wrecks, etc. \$7,199,283.25; a total of \$116,586,396.51.

A corporal of the United States army in the Canal Zone, has been found guilty of violating the Espionage Act and sentenced to two years hard labor and fined \$10,000, with dishonorable discharge. The Act was aimed at the obtaining of information on the national defense with the intention of using it to the injury of the United States for the benefit of foreign nations. He was charged with attempting to transfer certain secret military documents to a citizen in the United States.

In 1926 the army Air Corps consisted of 32 squadrons equipped with planes which included a large portion of obsolete war-time ships. To-day with the 5 new pursuit squadrons approved March 1, the Air organization will consist of 51 squadrons of modern military aircraft; i.e. 21 pursuit squadrons; 12 bombardment squadrons; 4 attack squadrons; 14 observation squadrons.

Three of the new squadrons were created on April 1, one for Barksdale Field, Shreveport, La., as part of the first attack wing; two for Albrook Field, Panama. On June 30, another squadron was organized for Selfridge Field, Mich. and the last on September 1 at Langley Field, Va. for duty in Hawaii.

The distribution will be as follows—two bombardment wings, each consisting of one bombardment and one pursuit group of three squadrons each. One wing at March Field, Riverside, Calif. and one at Langley Field, Va. Construction is progressing on the new bombardment field and base near San Francisco.

An attack group, of three squadrons, at Galveston, Tex., and one pursuit group of three squadrons at Shreveport, La. These will constitute the third attack wing. There will be one pursuit group of three squadrons at Selfridge Field. There will be nine observation squadrons in the various corps areas.

The ultimate distribution of Army Air strength will be as follows: Hawaii—one bombardment and one pursuit group, consisting of 4 squadrons each, together with two observation and one at-

tack squadron; Panama—one composite group of one bombardment squadron and two observation squadrons and one pursuit group of four squadrons; Philippine Islands—one squadron each of bombardment, pursuit and observation. (Report of Sec., F. T. Davison, March, 1933.)

Recent bombing tests at Wright Field showed bombers capable of a top speed of more than 200 miles an hour and of a range without a bomb load such that they might reach the Canal Zone in 12 hours or even six or seven from Kelly Field, Tex., or Miami; and reach Hawaii in 15 hours carrying gasoline for armament.

Notwithstanding Army and Navy Air Forces are below that recommended by the Morrow Board, our total air force in training and general equipment ranks well up with that of other world powers. The United States is the only nation in the world equipped for building military airships of the Macon type.

Anti-aircraft efficiency seems to be gaining if the recent order for 104 60-inch, 80,000,000 beam candle power searchlights by army engineers indicates anything. These lights can pick up aircraft under good air conditions at 15,000 feet elevation and their rays can be seen from a distance of 100 miles. There are to be 61 portable, carried in trucks, and 43 mobile lights, drawn or tractor types, costing \$2,015,900. The operator of the light is 20 feet away and searches the sky by remote control. They are to be equipped with shutters for signaling purposes and to be built of aluminum. Both artillery and defensive aircraft are blind and helpless unless supplemented by efficient equipment for detecting and illuminating attacking planes.

Offensive and defensive weapons in aerial attack depend upon searchlight organization—the essence of which is time.

Assuming that the listening devices or sound detectors or locators are capable of detecting attacking aircraft at a range of 10 miles, the time availing before the oncoming aerial forces reach the boundary of the objectives is a maximum of six minutes. During this time the sound locators must give the searchlights the approximate azimuth and elevation of the aerial enemy, the searchlights must find and illuminate them, the guns or combat planes of the defending forces must get "on" and their fire must become sufficiently effective to force the abandonment of the attack. So the maximum possible range in both searchlight and locator is sought.

The range of the searchlight, an engineer of the Sperry company said, is the maximum distance at which an object in its beam is visible. The visibility of the object does not depend on its actual illumination, but upon the contrast between its illumination and that of the surrounding field. This contrast depends upon the apparent size of the object; that is, upon the angle which subtends at the eye of the observer and the area presented toward him. The most obvious way of improving the contrast between the illuminated aircraft target and the searchlight beam is to move the controlling observer away from the searchlight and thus decrease the depth of the illuminated atmospheric particles through which he sees the target. This is the reason for the remote control provisions in the new 60-inch light. (New York Times, November 20.)

On June 26 contracts totalling \$3,880,001.53 for 174 new airplanes and equipment, including engine and spare parts, were awarded as follows:

—111 P-26 airplanes of the single seater type, low wing pursuit monoplane powered with a supercharged radial air-cooled engine of 525 horse power; for Boeing 14 YB—10 bombardment planes and spare parts, \$1,201,117.50; for YB0—13 planes and spare parts, \$782,729.95; mid-wing monoplane bombers powered with two radial air-cooled engines of 550 horse power, each fuselage deep bellied so bombs may be carried internally—planes from their shape called “flying-fish,” \$644,018.28; 10 single-engined cargo transport of the C-27 type, high-wing monoplane transports with deep struts, similar to the commercial “air bus” and spare parts, \$275,651; 15 O-38E observation planes with spare parts for use by the National Guard, \$174,613.40; this type has round-sectional fuselage with pilot's and observer's cockpits enclosed and stream-lined above the engine; 28 Y-1R—1690 D (Hornet) radial air-cooled engines and spare parts for use with O-38E airplanes, \$157,729.12.

National Guard. On June 30, 1933, the strength of the National Guard stood at 185,925 of all ranks. Under the present plan of National Guard development 839 headquarters and 3186 units are organized or authorized for organization; 58 headquarters and 400 units are inactive, classed as non-essential for peace-training; and 135 headquarters and 436 units remain to be organized. This gives a total of 1032 headquarters and 4022 units in the Guard allotment.

The attendance for armory training during the fiscal year 1933 continued high. The average was 81 per cent as against 77 per cent of the year previous.

The start in motorization of the National Guard had a decided impetus during the year, and General Leach reports that sufficient new motor vehicles were procured to equip 20 regiments of light field artillery. The old motor equipment, as a whole, is in satisfactory condition. Every effort has been made to keep in repair and maintenance much of this war-time equipment.

The appropriations for the National Guard for the fiscal year were \$35,484,864.

The Air Corps equipment of the 19 squadrons indicates the progressive policy of the Chief of the Bureau, and has resulted in a definite and final change which revised existing allocations of airplanes. This revision now allocates eight standard observation planes to each unit, and plans and estimates for the fiscal year 1934 indicate the fulfillment of the policy. The matter of communications continues to be of much concern mainly because of the rapid changes occurring in radio-equipped planes, and if plans can be made effective all service-equipped planes in the Guard will be two-way radio equipped.

Despite the rapid motorization of the National Guard units it still has 8613 horses, of which 2293 are State or organization owned.

The programme for replacement of the 75 mm gun by the 3-inch anti-aircraft gun, M-1918, in anti-aircraft regiments and anti-aircraft batteries assigned to the Coast Artillery, harbor defense regiments was completed this fiscal year. It is not the latest equipment but should prove beneficial in the training of anti-aircraft batteries.

Additional mounts, wheeled, M. G. MI, were procured and with those under order the programme for issue of 4 of these mounts to each machine gun company of infantry will be completed. Each squadron has 5 radio-equipped planes.

During the year ending June 30, there were 239

officers and 108 enlisted men of the National Guard authorized to attend special courses at the various service schools.

The new name, made effective by legislative enactment and approved by the President June 15, 1933, of the Militia Bureau is—The National Guard Bureau, War Department.

Recent changes in the National Defense Act have made the National Guard more readily available in its organized form to the Federal government and established it on a basis in keeping with the desires of the guardsmen themselves.

The Appropriation Act for 1934 required that members of the National Guard, except State Adjutant Generals, either give up retirement, disability compensation, pension or disability allowances from the Federal government, or sever their connections with the National Guard. That resulted in many changes.

At the close of the fiscal year there were 14,421 positions authorized in the National Guard leaving 849 vacancies for officers and 2 for warrant of officers. On June 30, 1933 there were 17 Major Generals; 76 Brigadier Generals; 229 Colonels; 523 Lieutenant-Colonels; 1213 Majors; 4410 Captains; 3570 First Lieutenants; 3326 Second Lieutenants; or a total of 13,364 commissioned officers.

MILK. See DAIRYING.

MILK STRIKES. See AGRICULTURE.

MILLS COLLEGE. A college for women in Oakland, Calif., founded in 1852. The enrollment in the autumn of 1933 was 376, while that for the summer session was 148. The summer session included courses in art, music, French, and physical education. The faculty numbered 70 members, plus 19 assistants below the rank of instructor. Preceptorial aid was furnished by 10 tutors who were in residence with the students. The total productive funds amounted to \$1,579,785, and the total assets to \$4,330,757, while the gross income for the year ending June 30, 1933, was \$590,088. The library contained 60,000 volumes. President, Aurelia Henry Reinhardt, B.L., Ph.D., LL.D., Litt.D., L.H.D.

MINERALOGY. Among the important books of the year in the field of petrography is Alfred Harker's *Metamorphism. A Study of the Transformations of Rock-Masses*. (London, Methuen & Company.) It would hardly be an exaggeration to place this work by an eminent petrographer beside Bowen's *The Evolution of the Igneous Rocks*, that appeared five years ago. The author's examples, as might be expected, are drawn mainly from the rocks of the British Isles, a fact that does not, however, prevent his work from being broad in scope and far reaching in conclusions.

In the field of gem minerals, a work of primary importance is the 3d edition of Max Bauer's *Edelsteinkunde* (Leipzig, Bernhart Tauchnitz), edited and rewritten by Karl Schlossmacher, who began the preparation of this great reëdition in 1928. The tradition which has for nearly forty years made the *Edelsteinkunde* the standard work on gems throughout the world has been faithfully followed by Dr. Schlossmacher, who in bringing Bauer's text up to date, has now established another standard. The volume, which has been issued in thirteen parts, contains 871 pages, and is amply illustrated in colored and monochrome plates, and in line text-figures.

The year 1933 has also marked the completion of a classic text in the field of mineralogy. This is the *Handbuch der Mineralogie* begun in 1889

by the late Carl Hintze, who had finished three volumes at the time of his death in 1916. Subsequently the work has been ably continued by G. Linck with the aid of several collaborators, and the resulting vast work of reference now comprises six large volumes with 7903 pages and 2472 text-figures.

The new mineral species announced during the year come mainly from localities that have been productive of new species in the past.

A new hydrated oxide of calcium has been found at Scawt Hill, County Antrim, Ireland, a locality that has yielded several new species (see larnite, *NEW INTERNATIONAL YEAR BOOK*, 1929, page 518; and scawtite, *ibid.*, 1930, p. 490). Because an artificial calcium hydroxide has long been known and studied in Portland cement, the new mineral has been named *portlandite*. It occurs in pearly hexagonal plates somewhat resembling the closely related mineral brucite.

Letovice in Moravia, a locality from which rosickyite (*NEW INTERNATIONAL YEAR BOOK*, 1932, p. 514) was obtained, has produced the new mineral *letovicite*, an acid sulphate of ammonia. Letovicite occurs in minute colorless pseudo-hexagonal crystalline plates associated with gypsum, and results from the decomposition of pyrite in Cretaceous coal beds and carbonaceous shale.

Two new uranium minerals have been found in the Belgian Congo. *Vandenbrandeite* from Kalongwe in Upper Katanga has been so named in honor of P. Van den Brand, who is credited with the discovery of it. It is a hydrous uranate of copper occurring in deep green crystalline masses and minute triclinic crystals. Also from the Belgian Congo comes a new hydrous uranium-magnesium phosphate, occurring in small square yellow plates at Skinkolowe, in Katanga. It has been named *saleite*.

An X-ray study of the platinum concentrates from Rustenburg and Potgietersrust, Transvaal, has resulted in the discovery of a new sulphide of platinum and palladium, tetragonal in crystallization, but differing from cooperite (*NEW INTERNATIONAL YEAR BOOKS*, 1929 and 1931) in cell dimension. Since this is the first new mineral to be discovered by X-ray methods, it has been very appropriately named *braggite*, in honor of Sir William H. Bragg and Prof. W. L. Bragg, pioneers in this method of crystal-structure investigation.

A new silicate of aluminum and calcium, closely related to vesuvianite, has been found in the rocks of Azegour, Morocco, and named *duparoite*, in honor of Professor Duparc. It occurs in greenish-gray tetragonal crystals of prismatic habit.

A lime-soda zeolite from Narsarsuk, Greenland, which was formerly regarded as a variety of thomsonite (kalithomsonite) has now been established as a separate species and named *ashcroftite*, in honor of Dr. Frederick N. Ashcroft, the noted specialist on zeolites.

The intensive study of the minerals of Western Australia, which has in recent years added several new species to science, has revealed a new hydrous phosphate of potash iron and alumina from Ningamboun Hills, South West Division, W. Australia. This has been named *leucophosphate*. It occurs in white chalk-like masses, and is assumed to owe its origin to the action of bird guano upon serpentine, chlorite, and other silicates. From the same division (S.W.) of West

Australia has been noted *minyulite*, a new hydrated alumina-potash phosphate found near Minyulo Wells, Dandaragan. The mineral occurs in radiating groups of white needles.

Brickerite, a new zinc-calcium arsenate, occurring in white crusts of radiating fibres, has been found in the Lomitos mine, near Chijmuni, Bolivia. The phosphatized residual clays overlying diabase at Maranhas, Northern Brazil have yielded small, white to brown spherulitic aggregates composed of a new hydrous phosphate of aluminum, differing from wavellite in the amount of the water content. This new mineral has been named *hardbortite*.

A new calcium, magnesium, and aluminum hydrous silicate from Iron Hill, Colorado occurs in sheaves of white crystalline fibres (probably orthorhombic). This has been named *juanite*. Two new substances of somewhat uncertain chemical formula have been noted from the carnotite region covering parts of Utah and Colorado. The names *corvusite* and *rilandite* have been proposed for these somewhat doubtful species. *Corvusite* (from Latin *corvus*, a raven) is a black hydrous compound apparently involving two vanadium oxides, V_2O_5 and V_2O_4 . *Rilandite* is named in honor of J. L. Riland, on whose carnotite claim it was found. It is a massive pitch-like material, giving an analysis that indicates a hydrous chromium silicate.

MINERAL PRODUCTION IN THE UNITED STATES. Viewing the mineral industry as a whole, the general effect in 1933 indicated a slight improvement over 1932, though some lines of production, such as the output of lead, sank to lower figures than had been recorded for many years. Articles on individual minerals, metallic and non-metallic, present production data for the year 1933, while the following paragraphs, based on the *Minerals Yearbook* of the U. S. Bureau of Mines, indicate the recession in production that had about reached its nadir at the conclusion of the preceding year.

INDEX NUMBERS COMPARING TRENDS OF QUANTITY PRODUCTION OF SOME IMPORTANT MINERAL COMMODITIES DURING RECENT YEARS IN THE UNITED STATES WITH THOSE OF THE REST OF THE WORLD

[Index numbers based on 1925-29 average = 100]

Commodity	1930		1931		1932 *	
	United States	Rest of world	United States	Rest of world	United States	Rest of world
Copper . . .	78	120	58	115	30	84
Lead	87	109	59	97	39	86
Zinc	83	124	50	96	85	80
Gold	100	108	105	116	108	125
Silver	82	103	50	84	39	71
Aluminum . .	130	115	101	102	59	72
Pig iron . .	79	106	47	81	22	64
Coal and lignite	89	103	73	95	59	87
Petroleum . .	103	136	98	138	90	138

* Subject to revision.

Whereas the average annual value of the mineral production of the United States during the five-year period 1925-29 was approximately 5.7 billion dollars, the total had fallen in 1931 to 3.2 billion dollars, a decline of 45 per cent. In 1932 the total value of all minerals dropped to about 2.4 billion dollars, a decrease of around 57 per cent below the previous five-year average. This recession was greatest in the output of metals which as a group dropped to about 31 per cent in quantity and 21 per cent in value of the figures for the 1925-29 averages. The group of non-metals was

MINERAL PRODUCTS OF THE UNITED STATES, 1931-32 *

Product	1931		1932	
	Quantity	Value	Quantity	Value
METALLIC				
Aluminum pounds..	177,544,000	\$ 37,284,000	104,885,000	\$ 20,453,000
Antimonial lead short tons (2,000 pounds)	21,842 ^b	(^b)	21,024 ^b	(^b)
Antimony:				
Metal do.	(^c)	(^c)	1,776 ^c	(^c)
Ore do. ....	.....	.....	900	(^c)
Bauxite long tons (2,240 pounds)	195,895	1,140,629	96,849	548,168
Cadmium pounds	1,050,529	409,708	799,501	(^f)
Chromite long tons	268	3,509	155	2,160
Copper, ^g sales value pounds	1,042,711,178	94,887,000	554,009,948	34,273,000
Copper-alloys long tons	893,295	30,764,549	218,646	14,003,672
Gold ^h troy ounces..	2,395,878	49,527,200	2,449,032	50,626,000 ⁱ
Iron:				
Ore ^k long tons..	28,516,032	74,123,910 ^k	5,331,201	12,898,011 ^k
Pig do.	17,812,579	285,147,156	5,518,400	126,032,714
Lead (refined), ^g sales value short tons..	390,260	28,879,000	255,337	15,320,000
Manganese ore (85 per cent or more Mn) long tons..	39,242	699,121	17,777	377,222
Manganiferous ore (5 to 35 per cent Mn) do.	281,414	976,549	25,434	92,135
Mercury:				
Metal flasks (76 pounds net)	24,947	2,179,145	12,622	731,129
Ore short tons..	(^f)	(^h)	(^f)	(^h)
Nickel do.	373	202,406	195	88,515
Ores (crude), old tailings, etc.:				
Copper do.	34,049,000	(^k)	(ⁱ)	(^h)
Copper-lead and copper-lead zinc do.	213,000	(^k)	(ⁱ)	(^h)
Dry and siliceous (gold and silver) do.	8,329,000	(^k)	(ⁱ)	(^h)
Lead do.	6,043,000	(^k)	(ⁱ)	(^h)
Lead-zinc do.	5,427,000	(^k)	(ⁱ)	(^h)
Zinc do.	4,500,000	(^k)	(ⁱ)	(^h)
Platinum and allied metals (value at New York City) troy ounces..	36,205	1,274,029	17,616	591,849
Silver do.	30,932,050	8,970,294	23,980,773	6,762,578
Tin (metallic equivalent) short tons..	4	2,050	(^m)	220
Titanium ore:				
Ilmenite short tons	(^f)	(^f)	(^f)	(^f)
Rutile do.	(^f)	(^f)	(^f)	(^f)
Tungsten ore (60 per cent concentrates) do.	1,404	928,000	396	218,394
Uranium and vanadium ores do.	(^f)	(^f)	(^f)	(^f)
Zinc, ^g sales value do.	291,996	22,192,000	207,148	12,429,000
Total value of metallic products (approximate)		\$567,200,000		\$283,700,000
NON-METALLIC				
Arsenious oxide short tons..	13,777	796,744	12,483	650,902
Asbestos do.	3,228	118,967	3,559	105,292
Asphalt:				
Native do.	503,383	2,930,451	340,019	1,942,943
Oil (including road oil) ^k do.	2,206,568	16,614,594 ^k	2,308,785	14,898,492 ^k
Barite (crude) do.	174,520	994,655	129,854	745,955
Borates (naturally occurring sodium borates) short tons..	178,550	4,931,295	181,915	3,023,844
Bromine pounds	8,935,330	1,854,650	5,727,561	1,182,569
Calcium-magnesium chloride short tons..	86,156	1,687,166	66,286	1,163,385
Cement barrels (376 pounds net)	128,377,384	142,579,826	81,130,000	81,500,000
Clay:				
Products ⁿ do. ....	.....	177,562,025	.....	(ⁿ)
Raw ^o short tons..	2,519,495	8,352,185 ^k	1,618,380	5,636,802 ^k
Coal:				
Bituminous ^p do.	382,089,396	588,895,000	305,667,000	416,000,000
Pennsylvania anthracite do.	59,645,652	296,354,586	49,900,000	222,000,000
Coke ^q do.	33,483,886	161,608,724 ^k	21,912,511	105,786,666 ^k
Diatomite and tripoli ^r do.	26,682	310,131	14,775	232,700
Emery do.	512	5,557	250	2,781
Feldspar (crude) long tons	147,119	861,059	104,715	539,641
Fluorspar short tons..	53,484	931,275	25,251	392,499
Fuller's earth do.	288,400	3,055,570	252,902	2,440,736
Garnet for abrasive purposes do.	2,946	193,015	1,950	147,850
Gems and precious stones do. ....	.....	(^e)	.....	(^e)
Graphite:				
Amorphous short tons..	(^r)	(^r)	(^r)	(^r)
Crystalline pounds	(^r)	(^r)	.....	.....
Grindstones and pulpstones short tons..	8,724	342,149	7,668	247,440
Gypsum do.	2,559,017	20,801,357	1,855,219	12,407,619
Lime do.	2,707,614	18,674,913	1,956,000	12,108,000
Magnesite (crude) do.	73,602	499,239	38,462	283,304
Mica:				
Scrap short tons..	6,621	99,415	7,183	78,648
Sheet pounds..	962,953	111,830	303,504	40,158
Millstones do. ....	.....	5,330	.....	4,450
Mineral paints:				
Natural pigments ^s short tons..	(^t)	(^t)	(^t)	(^t)
Zinc and lead pigments ^t do.	123,963	15,225,300	92,812	9,821,267
Mineral waters gallons sold..	(^v)	(^v)	(^v)	(^v)
Natural gas M cubic feet..	1,686,436,000	392,816,000	1,518,000,000	857,000,000
Natural gasoline gallons..	1,831,918,000	63,732,000	1,502,400,000	47,620,000
Oilstones, etc. short tons..	370	81,951	331	63,960
Peat do.	(^v)	(^v)	(^v)	(^v)
Petroleum barrels (42 gallons)	851,081,000	550,680,000	781,845,000	680,000,000
Phosphate rock long tons..	2,534,959	9,268,486	1,700,568	5,504,996
Potassium salts short tons..	68,770 ^u	3,086,955	55,620 ^u	2,102,590

MINERAL PRODUCTS OF THE UNITED STATES, 1931-32—(Continued)

Product	Quantity 1931	Value	Quantity 1932	Value
Pumice .....do....	68,819	388,586	53,214	235,204
Pyrites .....long tons..	830,848	974,820	186,485	492,043
Salt .....short tons..	7,358,070	21,541,012	6,447,351	19,468,096
Sand:				
Glass .....short tons..	1,677,882	2,779,245		
Molding, building, etc., and gravel .....do....	151,801,162	83,501,075	89,000,000	46,280,000
Sand-lime brick *thousands..	143,673	1,236,825	52,853	433,118
Silica (quartz) .....short tons..	7,851	69,103	7,487	59,158
Slate .....do....	868,420	5,498,336	272,400	2,990,000
Stone .....do....	97,933,180	135,085,627	66,283,600	84,050,000
Sulphur .....long tons..	1,376,526	24,800,000	1,108,852	20,000,000
Sulphuric acid (60° Baumé) from cop- per and zinc smelters .....short tons..	862,729	6,491,515	600,334	4,028,738
Talc and soapstone *do....	168,752	1,852,472	123,221	1,361,683
Total value of nonmetallic prod- ucts (approximate)		\$2,592,100,000		\$2,153,300,000
SUMMARY				
Total value of metallic products		\$ 567,200,000		\$ 283,700,000
Total value of nonmetallic products (ex- clusive of mineral fuels)		699,700,000		430,700,000
Total value of mineral fuels		1,892,400,000		1,722,600,000
Total value of "unspecified" (metallic and nonmetallic) products (partly esti- mated) *		7,300,000		6,000,000 *
Grand total approximate value of mineral products		\$3,166,600,000		\$2,443,000,000

* In this general statement certain of the figures represent shipments rather than quantity mined, and some of the figures for 1932 are estimates.

* Figures represent antimonial lead produced at primary refineries from both domestic and foreign primary and secondary sources; no figures for value of antimonial lead available. Estimate of value of primary antimony and lead contents of antimonial lead from domestic sources included in total value of metallic products.

* All from foreign ore; Bureau of Mines not at liberty to publish figures for 1931 and value for 1932.

* Value not included in total value.

* Bureau of Mines not at liberty to publish figures. Value excluded from metallic total as duplicated in content of antimonial lead.

* Value included in total value of metallic products; Bureau of Mines not at liberty to publish figures.

* Product from domestic ores only.

* Value, \$20.671834625323 an ounce.

* Difference between total gold given here and total mine output (\$52,113,780) given in chapter on Gold and Silver is accounted for by fact that there was a large hold-over at a smelter, which did not reach the refinery before the end of 1932.

* Figures not available.

* Figures showing values not available.

* Figures for 1932 not yet available.

* 1,000 pounds.

* Figures obtained through cooperation with Bureau of the Census. Figures for 1932 not yet available; estimate of value included in total value of nonmetallic products.

* Includes brown coal and lignite, and anthracite mined elsewhere than in Pennsylvania.

* Figures represent tripoli only. Value of diatomite is included in total value of nonmetallic products; Bureau of Mines not at liberty to publish figures.

* No canvass. Estimate of value included in total value of nonmetallic products.

* Value included in total value of nonmetallic products; Bureau of Mines not at liberty to publish figures.

* Canvass discontinued after 1915. Value of iron ore sold for paint included under last item ("Unspecified").

* Sublimed blue lead, sublimed white lead, leaded zinc oxide, and zinc oxide.

* Equivalent as K_2O .

* According to Bureau of the Census.

* Figures represent talc only. Value of soapstone is included in total value of nonmetallic products; Bureau of Mines not at liberty to publish figures.

* Includes for 1932 the value of bismuth, cadmium compounds, chats, columbite (\$234), flint lining for tube mills and pebbles for grinding (\$18,070), optical fluorspar (\$59), iodine, iron ore sold for magnets, iron ore sold for paint (\$10,770), lithium minerals, new ingot magnesium (\$228,653), natural magnesium salts (\$896,085), calcareous marl (\$26,442), greensand marl (\$201,173), micaceous minerals (\$30,000), molybdenum (\$1,186,000), selenium, silica sand and sandstone (finely ground) (\$875,749), sodium salts (carbonates and sulphates) from natural sources (\$1,098,394), sulphur ore, tellurium, and an estimate of the value of miscellaneous mineral products, statistics for which are not collected annually by the Bureau of Mines.

less affected, shrinking to 47 per cent in quantity and 35 per cent in value of the 1925-29 averages. Mineral fuels, though least affected, suffered a great recession; the output dropped to 77 per cent of the 1925-29 average, the value to 55 per cent.

Among the principal mineral commodities, the production of gold, as in 1931, continued to rise above the index figures of 1925-29, increasing to 8 per cent above the index. Aluminum, still at 1 per cent above the index in 1931, dropped to 59. Silver and lead each dropped to an index of 39, as against 59 and 50 in 1931. Zinc dropped to 35; copper to 30, and pig iron to 22. In the group of non-metals, the greatest decline between the years 1931 and 1932 was in the production of sulphur which dropped from an index, based on the 1925-

29 figures, of 109 to 46. Other similar index figures for 1932 are: salt, 83; crushed stone, 54; sand and gravel, 45; Portland cement, 46; lime, 44; slate, 39; building stone, 48, and gypsum, 25. Fuel production, other than coal, maintained much higher figures. On the indexes of 1925-29, natural gas dropped from an index of 113 in 1931 to 102 in 1932; petroleum, from 98 to 90; anthracite from 79 to 66, and bituminous coal from 72 to 58.

These decreases may be indicated more comprehensively by a few comparisons. The output of pig iron in 1932 was the lowest since 1896. With the exception of the post-war depression year of 1921, the yield of copper had not been so low since 1898, of lead since 1899, and of zinc since 1905. The production of silver was the least since 1875. Bitumi-

nous coal and anthracite production approximated the levels of 1905 and 1890 respectively.

A review of the quantity-production records of some mineral commodities reveals pronounced diversities between the trends of output in the United States and elsewhere. The extent to which the burden of recent curtailment has fallen on America is illustrated in the table on page 500.

MINIMUM WAGE. An extraordinary impetus was given to this reform as a result of the writing of minimum wage provisions into the industrial codes prepared under theegis of the National Recovery Administration. The range of minimum wages in the industrial codes is discussed elsewhere in this volume. In this article we shall concern ourselves only with the enactment of legislation in the various States setting up minimum wage standards for women and minors. Before 1933 minimum wage legislation had been passed in nine States, namely: California, Colorado, Massachusetts, Minnesota, North Dakota, Oregon, South Dakota, Washington, and Wisconsin, the first such law having been enacted in Massachusetts in 1912.

During 1933 new minimum wage laws were passed by the legislatures in New Hampshire, New Jersey, New York, Utah, Connecticut, Ohio, and Illinois. In New Hampshire, New Jersey, and New York laws were passed upon a standard minimum wage bill sponsored by the National Consumers' League, which measure does not attempt to regulate wages, generally. This law has sought to meet the constitutional objection to such legislation which was raised by the United States Supreme Court in the case of *Adkins v. Children's Hospital* in 1923 (261 U. S. 525). The new standard law does not attempt to fix a living wage. However, whenever a substantial number of women and minors in any occupation are receiving less than a subsistence wage, the industrial commission of the State may conduct an investigation to determine whether the wages are "fairly and reasonably commensurate with the value of the service or class of service rendered." The law further defines an unreasonable wage as one that is "less than the fair and reasonable value of the services rendered and less than sufficient to meet the minimum cost of living necessary for health." Power is then granted to the labor commissioner, after a minimum wage order has been in effect for a period of time—five months in New Hampshire and nine months in New Jersey and New York—to make such wage orders mandatory, if he is of the opinion that "the persistent non-observance of such order by one or more employers is a threat to the maintenance of fair minimum-wage standards." Employers who fail to observe the provisions of the law and the orders of the labor commissioner are liable to fine and imprisonment.

The Utah law, which is similar to the California statute, empowers the industrial commissioner of the State to ascertain the wages paid, the hours, and the conditions of labor in the various occupations. Upon investigation if it is found that the wages paid "are inadequate to supply the cost of proper living," the commissioner is ordered to call a "wage board" into conference. After a public hearing the commission is empowered to fix a minimum wage, maximum number of hours, and standard living conditions. A mandatory order may be subsequently issued, setting forth the minimum wage and the maximum hours.

The laws of Connecticut and Ohio were very similar to the New Hampshire, New Jersey, and New York laws. In Connecticut, nine months after and in Ohio three months after a minimum wage order has been in effect, the responsible enforcing officer is empowered to make the order mandatory. The Illinois law contains the same general provisions as the laws cited above, except that there is a provision whereby the act remains in effect only until July 1, 1935.

The *Monthly Labor Review* for December, 1933 (vol. xxxvii, p. 1347-54) contains a valuable summary of the principal provisions of the minimum wage laws in effect in 1933.

MINING AND METALLURGICAL ENGINEERS, AMERICAN INSTITUTE OF. An organization founded in 1871 and incorporated under the laws of New York State in 1905 "to promote the arts and sciences connected with the economic production of the useful minerals and metals and the welfare of those employed in these industries." It is made up of 27 local sections and has 47 affiliated societies in American colleges. On Nov. 15, 1933, there were 7817 members, distributed as follows: Honorary, 15; members, 5847; junior members, 439; associates, 742; student associates, 448; Rocky Mountain members, 122; and junior associates, 204.

In addition to the monthly meetings of the local sections and regional meetings held in various important mining or metallurgical centres, an annual meeting, or four-day convention beginning on the third Tuesday in February, is held in New York City. The medals and prizes awarded by the society during 1933 for notable work in the field of mining and metallurgy were: The James Douglas Medal to James O. Elton; William Lawrence Saunders Gold Medal to Walter Hull Aldridge; Robert W. Hunt Prize to Clarence E. Sims and Gustaf A. Lillieqvist; and the J. E. Johnson, Jr. Award to Hjalmar W. Johnson.

The Institute publishes *Transactions*, an annual in several volumes containing the best papers of the year on mining and metallurgical subjects; *Mining and Metallurgy*, a monthly magazine; the *Directory*, which constitutes a "Who's Who" in the profession; a series of individual technical pamphlets; and special volumes from time to time. In connection with three other societies it maintains the engineering societies library and an employment bureau. The officers elected at the 1933 convention were: President, Frederick M. Becket; vice-presidents, Henry Krumb and Edgar Rickard; secretary, A. B. Parsons; and treasurer, Karl Eilers. Headquarters are in the Engineering Societies Building, 29 West 39th Street, New York City.

MINNESOTA. POPULATION. The population of the State on Apr. 1, 1930, according to the Fifteenth Census, was 2,563,953, as against 2,387,125 in 1920. Minneapolis, the most populous city, had (1930) 464,356 inhabitants; St. Paul, the capital, 271,606.

AGRICULTURE. The table on page 504 shows the acreage, production, and value of the principal crops for 1933 and 1932.

MINERAL PRODUCTION. The iron mines, producing normally nearly nine-tenths of the revenue of the State's mineral industries, almost halted their production in 1932. The quantity of iron ore shipped from the mines fell to 2,248,727 gross tons (1932), from the already exceedingly low total of 17,063,591 (1931), or by more than six-sevenths; and the value of the shipments dwined

Crop	Year	Acres	Prod. Bu.	Value
Corn	1933	4,846,000	142,957,000	\$44,817,000
	1932	4,945,000	180,492,000	27,074,000
Oats	1933	4,484,000	96,406,000	25,066,000
	1932	4,575,000	164,700,000	18,117,000
Hay (tame)	1933	2,706,000	8,180,000*	21,910,000
	1932	2,566,000	8,672,000*	22,899,000
Barley	1933	1,850,000	28,675,000	11,757,000
	1932	1,968,000	47,232,000	8,974,000
Wheat	1933	1,629,000	16,665,000	11,583,000
	1932	1,462,000	20,839,000	7,223,000
Potatoes	1933	384,000	22,712,000	9,312,000
	1932	879,000	29,562,000	5,912,000
Flaxseed	1933	682,000	4,365,000	6,766,000
	1932	689,000	6,339,000	5,642,000
Rye	1933	291,000	3,638,000	1,788,000
	1932	310,000	4,960,000	992,000

* Tons.

dled to \$6,263,181, from \$46,020,269. Small as was the total of shipments for 1932, the stock of ore at points on Lake Erie when the closed season for navigation ended in May, 1933, was 4,969,303 tons, or somewhat less than twice the shipments of both Michigan and Minnesota for 1932. The quantity of ore mined in Minnesota considerably exceeded the shipments of 1932, attaining 5,154,291 tons; but this represented a decrease of 70 per cent from 1931. Blast furnaces for the production of pig iron did not operate in 1932.

Iron-mining conditions were favorably reversed in 1933. The mining of ore more than doubled, attaining an estimated 11,980,000 tons for the year. The shipments of ore, much below the mined total for 1932, were 14,794,000 tons for 1933: a total some six times that for the year before and well in excess of the quantity mined in 1933 itself.

FINANCE. State expenditures in the year ended June 30, 1932, as reported by the U. S. Department of Commerce, were: for maintaining and operating governmental departments, \$40,586,115 (of which \$10,812,954 was for local education); for interest on debt, \$4,049,986; for permanent improvements, \$30,356,656; total, \$74,992,757 (of which \$30,991,020 was for highways, \$5,506,872 being for maintenance and \$25,484,148 for construction). Revenues were \$60,577,792. Of these, property and special taxes furnished 19.2 per cent; departmental earnings and compensation to the State for officers' services, 9.5; sale of licenses, 48.4 (in which was included a gasoline sale tax that produced \$8,507,322). Funded debt outstanding on June 30, 1932, totaled \$94,951,310, of which \$29,000,000 was for highways; much of the remainder was incurred to provide rural credits. Net of sinking-fund assets, the debt was \$37,003,343. On an assessed valuation of \$2,303,227,139 the State levied in the year ad valorem taxes of \$15,028,707.

EDUCATION. Attention was given during the year to organizing on a Statewide scale the facilities for the further education of unemployed graduates of the public high schools. Use was made of Federal relief funds to pay unemployed and needy teachers to give schooling to adults.

There were enrolled in the public schools of the State, in the academic year 1932-33, 559,150 pupils. Of these, 430,035 were in common schools or elementary grades, 8170 in special classes for defectives, 118,051 in high schools, and 2894 in special courses. The year's expenditures for public-school education totaled \$52,208,998. Salaries of teachers, by the month, averaged \$162.45 for men; for women, \$100.57.

CHARITIES AND CORRECTIONS. The State's chief central administrative powers over institutions

having persons in their care or custody rested in 1933 in the State Board of Control. It was composed of three six-year appointees, of whom one at least was required to be a woman. It exercised general supervision over 18 State institutions, advisory supervision over 14 district sanatoria, and administration of laws relative to special groups to which the State accorded particular care. Its administrative divisions were: Children's Bureau, Division of the Blind, Division of Soldiers' Welfare, Division of Tuberculosis, Division of Research, Division of Inspection, Division of Prevention of Cruelty, Division of the Insane, Division of Purchase, Division of Accounting, Division of Registration, Supervisor of Institution Libraries, Director of Dietetics.

State institutions under the board's authority, with their populations of Dec. 1, 1933, were: State asylums at Anoka (1090), Hastings (1056), Willmar (1260), State hospitals at Rochester (1714), Fergus Falls (1934), St. Peter (1924), School for the Feeble-Minded, Faribault (2255), Colony for Epileptics, Cambridge (677), School for the Blind, Faribault (108), School for the Deaf, Faribault (248), State Public School, Owatonna (479), State Training School for Boys, Red Wing (334), Home for Girls, Sauk Center (304), State Reformatory for Women, Shakopee (59), State Reformatory for Men, St. Cloud (1117), State Prison, Stillwater (1408), State Sanatorium for Consumptives, Ah-gwah-ching (284), Gillette State Hospital for Crippled Children, St. Paul (234). The institutional inmates totaled 16,485.

LEGISLATION. A regular session of the Legislature convened on January 3 and adjourned on April 18. It was pressed by Governor Olson to take bold measures to relieve economic distress among the inhabitants. To this end it passed a law granting a moratorium of two years on foreclosure of mortgage debts (see *Events*, below), provided for a reduction of State direct taxes on property, enacted an income tax on individuals, ranging up to 5 per cent of income over \$10,000, to supply revenue lost from the property tax, and authorized the addition of 4000 miles of roads to the State's highway system so as to provide more public work.

Provision was made for the more rapid reorganization of State banks that had collapsed early in the year; to this end sweeping powers were granted the banking commissioner; he was empowered to suspend State banks for 15 days, and it was made lawful for banks to remain closed for as long as 90 days, if they chose, with a view to effecting reorganization. Special powers were given the commissioner of insurance to regulate insurance companies' loans on policies until March, 1935. A special tax was placed on chain stores, with design to produce a yearly \$1,300,000 for State aid to public-school districts. As in a number of other agricultural States, a preventively high tax (10 cents a pound) was imposed on oleomargarine sold in the State. The appropriations for State expenses during the ensuing two years were reduced to an anticipated extent of some 20 per cent. A State convention of 21 elected delegates was created to deal with Federal repeal of the Eighteenth Amendment.

POLITICAL AND OTHER EVENTS. There were elected by popular vote, on September 12, 21 delegates to a State convention to act for the State on the proposal to repeal the Eighteenth Amend-

ment to the Federal Constitution. The popular vote ran in favor of delegates advocating repeal, by nearly 2 to 1. Governor Olson appointed in September a liquor-control commission to prepare a system of controlling the liquor traffic in the event that it should again become lawful.

State action with regard to debtors and the needy was largely responsive to widespread agitation. A group of farmers and business men declared to Governor Olson in January that taxpayers should refrain from payment unless the expenditures of the State were reduced by one-fourth. Farmers assembled early in the year at scheduled sales of farms in foreclosure and prevented the sales at the advertised places by threats or violence. The Governor issued on February 24 a proclamation forbidding the foreclosure of farmers and home-owners until May 1, which was superseded by the Legislature's provision for a moratorium on mortgages, extending for two years, to May 1, 1935. The validity of this act was contested; the lower courts sustained it, and the litigation was carried to the United States Supreme Court.

On May 8 the Minnesota Farm Holiday Association declared for a farmers' strike, calling on its members to buy nothing and sell nothing. The strike was postponed, but in October was again called in connection with the effort of several Northwestern States to put pressure on the Federal Administration to apply more radical measures for agricultural relief.

OFFICERS. The chief officers of the State, serving in 1933, were: Governor, Floyd B. Olson; Lieutenant-Governor, K. K. Solberg; Secretary of State, Mike Holm; Treasurer, Julius A. Schmahl; Auditor, Stafford King; Attorney General, Harry H. Peterson; Commissioner of Education, E. M. Phillips.

Judiciary. Supreme Court: Chief Justice, John P. Devaney; Associate Justices, Homer B. Dibell, Andrew Holt, Clifford L. Hilton, Royal A. Stone, I. M. Olsen, and Charles Loring.

MINNESOTA, UNIVERSITY OF. A coeducational State institution for higher learning in Minneapolis, founded in 1851. The 1933 autumn registration was 11,292, while the summer session enrollment for the same year was 3678. The university staff on a full-time basis, including professors, associate professors, assistant professors, and instructors, numbered 580. The income for the year ending June 30, 1933, amounted to \$8,967,280. The permanent university fund was increased by \$125,099.

Gifts received during the year included \$38,763 from the Carnegie Corporation of New York and \$76,555 from the Rockefeller Foundation, for an economic and social study of unemployment and a study of the reeducation of the unemployed; \$60,000 from the Rockefeller Foundation to be used for a Fluid Research Fund; \$80,000 from the Rockefeller Foundation for the Institute of Child Welfare; \$10,000 from the American Association for Adult Education for the study of university extension class students under the special supervision of a special subcommittee of the Committee on Educational Research. The new home for nurses was completed at a cost of \$324,936. The library contained 734,039 volumes. Chancellor, Lotus Delta Coffman, Ph.D., LL.D.

MINORITIES. See **LEAGUE OF NATIONS**; **GERMANY**, **BULGARIA**, **YUGOSLAVIA**, **CZECHOSLOVAKIA**, **BELGIUM**, and **SPAIN** under **History**; **JEWS**.

MISSISSIPPI. POPULATION. The population of the State on Apr. 1, 1930, according to the Fifteenth Census, was 2,009,821, as against 1,790,618 in 1920. Jackson, the capital, had (1930) 48,282 inhabitants.

AGRICULTURE. The following table shows the acreage, production, and value of the principal crops for 1933 and 1932:

Crop	Year	Acreage	Prod. Bu.	Value
Cotton	1933	2,964,000	1,180,000*	\$57,820,000
	1932	3,839,000	1,180,000*	35,990,000
Corn	1933	2,890,000	35,850,000	20,434,000
	1932	2,414,000	32,589,000	11,406,000
Hay (tame)	1933	315,000	363,000*	3,267,000
	1932	318,000	369,000*	2,694,000
Sweet potatoes	1933	63,000	5,670,000	8,118,000
	1932	79,000	7,900,000	2,607,000

* Bales. † Tons.

MINERAL PRODUCTION. The development of the Jackson natural-gas field, starting in 1930, brought the State its first substantially remunerative mineral industry. The production of natural gas jumped to 6,048,000 M cu. ft. for 1931 and to 9,847,907 M for 1932. All but about 2 per cent of the latter total came from the Jackson field, being delivered by 97 producing wells. The greater part of the product of this field went by pipe line eastward as far as Pensacola, and into Louisiana, for urban distribution.

EDUCATION. The public schools, in spite of the financial difficulties of the time, were kept open during the year, though the level of teachers' salaries were low. The State's public-school system included elementary and high schools and junior-college grades. Twenty-five county agricultural high schools for whites and one for Negroes were in operation. There were enrolled in the public schools, in 1932, 587,831 pupils, and the daily attendance was 438,137. The teachers numbered 15,424.

POLITICAL AND OTHER EVENTS. Governor Conner requested the members of the Legislature individually, in September, to agree to a special session, pledging themselves to provide for a new State constitution. He was reported to design the creation of a constitution that would simplify the governmental organization of the subdivisions of the State in order to do away with numerous salaried public positions.

A flood of the Mississippi River early in April caused a break in the levee and raised the peril of inundation for some of the towns near the river. Individuals fearing that their own localities would suffer overpowered armed guards and dynamited a levee near Tippon on April 8, with a view to diverting the water elsewhere.

OFFICERS. The chief officers of the State, serving in 1933, were: Governor, Sennett Conner; Lieutenant-Governor, Dennis Murphree; Secretary of State, Walker Wood; Attorney General, Greek L. Rice; Treasurer, Lewis S. May; Auditor, Joseph S. Price; Superintendent of Education, W. F. Bond.

Judiciary. Supreme Court: Chief Justice, Sydney Smith; Associate Justices, W. D. Anderson, James G. McGowen, George H. Ethridge, W. H. Cook, V. A. Griffith.

MISSISSIPPI, UNIVERSITY OF. A coeducational, State institution of higher learning at University, Miss., chartered in 1844 and opened in 1848. The university consists of a college of liberal arts and schools of law, engineering, medicine, pharmacy, education, and commerce

and business administration. The enrollment for the autumn of 1933 was 1110, while that for the 1933 summer session was 235. There were 70 faculty members. The library contained approximately 40,000 volumes. The income (appropriation) for the biennium was \$270,000; students' fees amounted to approximately \$180,000. Erection of a new hospital completed the \$1,600,000 building programme which was made possible through special legislative appropriation in 1928. Chancellor, Alfred Hume, C. E., D. Sc., LL.D.

MISSISSIPPI RIVER. See FLOOD CONTROL.

MISSOURI. POPULATION. The population of the State on Apr. 1, 1930, according to the Fifteenth Census, was 3,629,367, as against 3,404,055 in 1920. St. Louis had (1930) 821,960 inhabitants; Kansas City, 399,746; Jefferson City, the capital, 21,596.

AGRICULTURE. The following table shows the acreage, production, and value of the principal crops for 1933 and 1932:

Crop	Year	Acreage	Prod. Bu.	Value
Corn	1933	6,019,000	141,446,000	\$55,164,000
	1932	6,472,000	197,896,000	87,505,000
Hay (tame)	1933	2,797,000	2,547,000	17,829,000
	1932	2,847,000	2,572,000	14,146,000
Cotton ...	1933	345,000	245,000	11,638,000
	1932	406,000	307,000	7,982,000
Wheat ...	1933	1,331,000	16,639,000	12,147,000
	1932	1,404,000	15,733,000	5,665,000
Oats	1933	1,764,000	32,684,000	9,790,000
	1932	1,939,000	36,841,000	5,526,000
Potatoes ..	1933	54,000	2,808,000	3,089,000
	1932	56,000	5,600,000	2,520,000
Tobacco ..	1933	9,000	8,325,000	999,000
	1932	8,200	8,405,000	1,177,000

* Tons. † Bales. ‡ Pounds.

MINERAL PRODUCTION. Mines in the State shipped silver, lead, and zinc to the total value of \$7,089,018 (1932) as against \$12,014,134 for 1931. The amount of silver was trifling, 1128 ounces being produced by recovery from ore and concentrates in 1932 and 40,000 in 1931. The quantity of recovered lead fell to 117,159 short tons (1932) from 160,121 (1931). That of zinc, to 985 tons, from 3205. Producers of lime sold 180,000 short tons, valued at \$6.01 a ton (1932) as against 224,416 tons, at \$6.60 for 1931. The coal fields benefited somewhat by reason of the interruption of production in 1932 in Illinois and Ohio, through labor troubles.

EDUCATION. The latest statistics obtainable for the public schools of the State as a whole were those covering the academic year 1931-32. For that year, the number of persons of school age in the State was reckoned as 956,707. There were enrolled in the public schools 683,830 pupils. Of these, 194,734 were in rural common schools; in elementary grades, 344,005; in high schools, 145,091. The year's expenditures for public-school education totaled \$41,874,442, or about 2 per cent below the total for the year before. Salaries of teachers, by the year, averaged \$615 for men and \$603 for women in rural schools; in high schools, \$1540 for men and \$1037 for women.

The situation of the rural schools deteriorated in the year 1932-33; according to the *United States News*, one in four of the teachers in these schools taught for a month or more of that period without pay; and 10 per cent of them took rural-school positions for 1933-34 at salaries of less than \$320.

CHARITIES AND CORRECTIONS. The State's Board of Charities and Corrections was abolished by an enactment of 1933. Its powers and duties with

regard to children were transferred to a Board of Managers of Eleemosynary Institutions. The latter board was invested with the management of the State Home for Children, at Carrollton. It exercised this function through a Children's Bureau.

LEGISLATION. A regular session of the Legislature was convened on January 4. Dealing with the current banking emergency it granted extraordinary powers to the Governor and the commissioner of finance to regulate State banks and trust companies during the continuation of the trouble. There was created, to pronounce for the State with regard to the proposed repeal of the Eighteenth Amendment of the Federal Constitution, a State convention, to be composed of 68 delegates, to be nominated by State senatorial districts, but to be elected at large by popular vote. A measure for the repeal of the prohibition law of the State failed to pass the lower house, but another measure, rendering lawful the sale of beer containing alcohol up to 3.2 per cent, was enacted. State salaries were subjected to fairly general reductions reported as averaging 10 per cent. Savings were effected by the abolition of some of the State boards and bureaus. Provision was enacted for a system of central State purchasing. The economy measures thus passed had been strongly sponsored by Governor Park. Appropriation at the rate of about \$3,000,000 a year from general revenue was made for aid to public schools. The Twentieth Amendment to the United States Constitution was ratified.

POLITICAL AND OTHER EVENTS. Governor Guy B. Park was inaugurated on January 9. Supporters of Federal prohibition sought to prevent the election of delegates to a State convention to act on the repeal of the Federal Eighteenth Amendment; they contended that the proclamation calling for the popular election of the delegates was void as coming within 3 months after the Legislature had provided for the election, thus contravening the State's law as to the application of any laws not specifically declared as emergency acts. The State supreme court held that the Federal call for State conventions overruled the State's law and allowed the election. Accordingly on August 19 the election was held; 68 delegates in favor of repeal were chosen by a popular vote in the proportion of more than 2 to 1. The majority for repeal in this vote was achieved chiefly in the cities; 55 of the 114 counties gave majorities against repeal; they were chiefly in the farming regions of the north and the southwest.

The banks of the State were temporarily relieved from obligation to pay their depositors, at the height of the banking panic, by the proclamation of a series of legal holidays on March 3. The banks of the State fared relatively well as to ability to reopen later in March. The City of St. Louis, in contrast to several other of the chief cities of the Middle West, continued to balance its budget and to pay in cash. It went outside of its budget only for money borrowed to meet the exceptionally high requirements for disbursements to relieve the needy. The Missouri State Life Insurance Company, with liabilities of \$149,961,746, was placed in the hands of the State superintendent of insurance on August 28, as insolvent. At Kansas City the William Rockhill Nelson Gallery of Art and Atkins Museum, which cost \$15,000,000, was opened on December 11.

OFFICERS. The chief officers of the State, serving in 1933, were: Governor, Guy B. Park, Lieu-

tenant-Governor, Frank G. Harris; Secretary of State, Dwight H. Brown; Auditor, Forrest Smith; Treasurer, Richard R. Nacy; Attorney General, Roy McKittrick; Superintendent of Public Schools, Charles A. Lee.

Judiciary. Supreme Court: Chief Justice, Ernest S. Gantt; Associate Justices, Frank E. Atwood, William F. Frank, George R. Ellison, Charles Thomas Hays, Clarence A. Burney, Ernest M. Tipton.

MISSOURI, UNIVERSITY OF. A State institution of higher education in Columbia and Rolla, Mo., founded in 1839. The enrollment for all divisions for the first semester of 1933-34 was 3423 of whom 2496 were men and 927 were women. The total enrollment for the 1933 summer session was 1470, of whom 712 were men and 758 were women. The total annual enrollment of all classes of students, including those in correspondence and extension courses was 7382. There were 437 faculty members. The endowment of the University was approximately \$1,807,210, and the total income from all sources was approximately \$2,716,258. The libraries contained 340,000 volumes. President, Walter Williams, LL.D.

MIXED CLAIMS COMMISSION. See ARBITRATION, INTERNATIONAL.

MODERN ARCHITECTURE. See ARCHITECTURE.

MODERN ART, MUSEUM OF. See ART MUSEUMS.

MOFFETT, REAR ADMIRAL WILLIAM ADGER, U.S.N. An American naval officer died off the New Jersey coast in the Akron disaster of Apr. 4, 1933. Born in Charleston, S. C., Oct. 31, 1869, he was graduated from the United States Naval Academy in 1890. During the Battle of Manila Bay in the war with Spain he served on the *Charleston* under Admiral Dewey. He was commander of the *Chester* when on Apr. 10, 1914, at Tampico, Mexico, Admiral Mayo demanded a salute of the American flag as satisfaction for the seizure by Mexican soldiers of a boat load of American marines who were attempting to land. He held the same command at Vera Cruz, when that city was captured by American forces on Apr. 21, 1914, to prevent the landing of a cargo of arms from Germany. During the World War he was commandant of the United States Naval Training Station at Great Lakes, Ill., receiving in recognition of the service which he rendered in training 40,000 naval recruits the Distinguished Service Medal. He served as technical adviser to the Conference on the Limitation of Armaments held in Washington during 1921-22 and at the same conference held in London in 1930.

Admiral Moffett became chief of the Bureau of Aeronautics of the U. S. Navy Department in 1921, being reappointed in 1925 and again in 1929. Under his direction there were added aircraft suitable for carrying out any operation which the fleet might find it necessary to accomplish from the air, including scouting, torpedo, bombing, observation, and fighting planes, almost 1000 in all. He sponsored also the construction of the Navy's various airships, the *Shenandoah*, the *Los Angeles*, the *Macon*, and the *Akron*, and it was on the latter that he lost his life during an inspection flight. Previous to the flight he had expressed his confidence in the dirigible for both national defense and commercial purposes. See AERONAUTICS.

MOIR, SIR ERNEST WILLIAM. A British engineer, died in London, June 15, 1933. Born June 9,

1852, he attended University College School and University College, London, and began his career with the engineering firm of A. Chaplin and Co. of Glasgow. During his association with Tancred, Arrol and Co., he had charge of the construction of the southern cantilevers of the Firth of Forth railway bridge, opened in 1890. Sent to the United States as resident engineer for Sir Benjamin Baker in 1888, he was engaged in the preliminary construction of the Hudson River tunnel for the Pennsylvania Railroad, utilizing the shield system in cutting through the rock under the river from the Jersey shore. He later constructed the four single-track tunnels under the East River for the Long Island Railroad, a subsidiary of the Pennsylvania System.

After 1900 Sir Ernest was a director of S. Pearson and Son, London contractors for public works, and at the time of his death was partner with Lord Cowdray in this firm. He designed and constructed the Blackwall Tunnel for street traffic under the Thames River in London; the Surrey commercial dock and its extensions; the Great Northern and City Railway under London; Seaham harbor; the Admiralty harbor and defense works at Dover; the Southern extension of the Royal Albert Dock in London; and the Valparaíso (Chile) harbor works.

During the early part of the World War, Sir Ernest represented the British government in the purchase of war supplies in the United States. Recalled to England in 1915, he served on the council of the Ministry of Munitions, founding the inventions branch of that Ministry and having charge of the purchase of rolling stock and rails for the various Allied fronts. He was also president of the Inter-Allied Non-Ferrous Committee and, under the Ministry of Health, chairman of the Committee on New Methods of House Construction.

Both before and during the War, Sir Ernest rendered a valuable service to the British Admiralty as a member of its engineering committee, reviewing the proposed modifications and improvements of naval bases and giving evidence on the organization and efficiency of the works department. He testified also at hearings of the Government Departmental Committee on Deep Excavations and of the Royal Commission on Oil Fuel Storage. In 1916 he was created a baronet. He was an officer of the French Legion of Honor, a Fellow of University College, London, and a member of the Institute of Civil Engineers.

MOLUCCA ARCHIPELAGO. See NETHERLAND INDIA.

MONACO, mōn'ā-kō. A principality on the Mediterranean coast, surrounded on the land sides by the French Department of Alpes-Maritimes. Total area, 149 hectares (368 acres); population (1933), 22,994. Monaco, the capital, had 2085 inhabitants; La Condamine, 11,787; Monte Carlo, 11,055. Revenue is mainly derived from a gambling concession. Net profits of the Monte Carlo Casino, a gambling resort, for the fiscal year ended Mar. 31, 1932, totaled \$712,000; gross profits were \$3,538,000.

Under the constitution promulgated, Jan. 5, 1911, the government consists of the Prince, assisted by a council of state, and a national council elected by universal suffrage. A decree issued by Prince Louis, Dec. 26, 1930, dissolved the council of state, and national council and suspended some of the constitutional guarantees. Ruler in 1933, Prince Louis II.

HISTORY. On Jan. 18, 1933, Princess Charlotte, only child of Prince Louis, renounced her rights to the throne in favor of her son, Renie. Treaties concluded with France during the year stripped the Prince of all but nominal sovereignty. The roulette monopoly of the Casino was abolished and France reserved the right to fortify the Rock of Monaco in the event of war. On Dec. 18, 1933, the Principality applied to the U. S. Supreme Court for permission to sue the State of Mississippi for the principal and interest due on bonds in default since 1841.

MONETARY MEASURES. See UNITED STATES under *The Treasury*.

MONEY. The table on page 509 from the annual report of the director of the United States Mint shows the distribution of the stock of money in the United States on June 30, 1933, with comparative totals for June 30, 1932, Oct. 31, 1920, Mar. 31, 1917, June 30, 1914, and Jan. 1, 1879.

MONGOLIA. A large, vaguely defined region lying west of Manchuria and south of the Siberian territories of the Soviet Union. It is divided politically into Inner Mongolia, administered partly by China and partly by Manchoukuo (q.v.), and Outer Mongolia, an independent Soviet republic under the protection of the Soviet Union. The total area is roughly estimated at from 1,367,000 to 1,875,000 square miles and the population at about 2,000,000, mostly half-nomadic Mongols with a small infusion of Chinese and Russians. The Mongols live mainly by stock raising and furs, skins, hides, horns, and wool are the principal exports. The fertile soil needs irrigation to be productive. Mineral deposits are fairly extensive but there is little commercial production.

INNER MONGOLIA. Inner Mongolia was comprised mainly within the Chinese provinces of Jehol, Suiyuan, and Chahar, which also included parts of China proper. In 1933, Jehol was taken from China by the Japanese and incorporated in the new state of Manchoukuo.

A movement for an autonomous Inner Mongolia, under nominal Chinese control, was launched at a conference of Mongol princes and other dignitaries held in October, 1933, at the great Lama temple at Pailingmiao (Bathahalek), 100 miles north of Kweihua. The region which they desired to have set apart as a semi-independent Mongol state comprised practically all of Suiyuan province and about half of Chahar, or approximately 160,000 square miles. The Mongol leaders threatened to seek union with Manchoukuo if their demands were not granted by the Chinese authorities at Nanking. Negotiations between the Mongols and Chinese were still under way at the end of the year. In the meantime Japanese and Manchoukuo troops had occupied the Dolonnor district along the eastern border of Chahar and made several raids to the west for the alleged purpose of breaking up bandit groups. These moves aroused fears in China and the Soviet Union that Japan was planning to annex additional large portions of Inner Mongolia to Manchoukuo.

OUTER MONGOLIA. Established as an independent republic along Soviet lines in May, 1924, Outer Mongolia, according to data furnished by Soviet sources, had a total area of 1,544,500 square kilometers (596,177 square miles) and a population of 767,000. The capital is Ulan Bator Hoto (formerly Urga), with about 60,000 inhabitants. Trade is largely with the Soviet Union and is a government monopoly. Governing powers are vested in a parliament (the Great Huruldan) elected by uni-

versal suffrage. It elects an executive committee of 30 members (the Little Huruldan) which acts in its behalf, mainly through a smaller committee of five. All lands, forests, minerals, waterways, and marine products were collectively owned, and the Mongol princes and priests were deprived of their privileges.

According to Japanese reports, a Nationalist uprising against the Soviet régime in Outer Mongolia occurred late in 1933 and civil war ensued. The report was not confirmed. See CHINA, JAPAN, MANCHOUKUO and UNION OF SOVIET SOCIALIST REPUBLICS, under *History*.

MONTANA. POPULATION. The population of the State on Apr. 1, 1930, according to the Fifteenth Census, was 537,600, as against 548,889 in 1920. Helena, the capital, had (1930), 11,803 inhabitants.

AGRICULTURE. The following table shows the acreage, production, and value of the principal crops for 1933 and 1932:

Crop	Year	Acreage	Prod. Bu.	Value
Wheat	1933	3,653,000	27,194,000	\$15,308,000
	1932	4,070,000	55,610,000	14,738,000
Hay (tame) ..	1933	1,548,000	1,934,000	12,958,000
	1932	1,630,000	2,388,000	13,134,000
Sugar beets ..	1933	68,000	842,000	.....
	1932	54,000	739,000	8,983,000
Oats	1933	383,000	6,511,000	2,084,000
	1932	403,000	10,075,000	2,015,000
Potatoes ..	1933	23,000	1,955,000	1,271,000
	1932	22,000	2,244,000	898,000
Dry beans ..	1933	35,000	336,000	773,000
	1932	24,000	259,000	363,000
Corn	1933	215,000	2,472,000	1,236,000
	1932	215,000	2,580,000	774,000
Barley	1933	205,000	2,768,000	1,024,000
	1932	195,000	3,900,000	858,000

* Tons. † 100-lb bags

MINERAL PRODUCTION. The gold, silver, copper, lead, and zinc mined in 1933 had an estimated value of \$8,469,580. Of this total gold (reckoned at \$20.67 an ounce though for much of the year it brought considerable more) supplied \$1,056,372; silver (2,572,000 ounces), \$887,340; copper (65,789,000 pounds), \$4,210,496; zinc, (43,448,000 pounds), \$1,868,204.

The definitely ascertained production of copper, almost wholly from the mines at Butte, was cut to 84,847,349 pounds for 1932, from 184,555,735 for 1931; in value, \$5,345,383 (1932) and \$16,794,572 (1931). As most of the product of gold and silver came from the copper ore, the output of silver likewise fell, to 1,686,213 fine ounces (1932), from 3,829,837 (1931); a slight rise was that of gold, to \$839,318 (1932), from \$829,192 (1931). The loss of gold production from the copper ores was a little more than offset by the resumption or increase of activity in gold mines. No like extensive resumption of work in old silver mines occurred up to the end of 1932. The production of lead, 2,157,766 pounds for 1932, was some 75 per cent below the 8,860,186 pounds of 1931; in value, the decline was in the proportion of 80 per cent. The production of zinc, 4,393,000 pounds (1932), was likewise far below the 13,494,896 of 1931. The aggregate value of the output of the five metals was \$6,856,737 (1932) as against \$19,575,053 (1931).

The production of petroleum declined, chiefly by reason of the lack of new discoveries to make up the reduced productivity of the Kevin-Sunburst and other existing fields. It fell to 2,449,000 barrels (1932), from 2,830,000 (1931).

FINANCE. State expenditures in the year ended

LOCATION, OWNERSHIP, AND PER CAPITA CIRCULATION OF UNITED STATES MONEY, JUNE 30, 1933
 [From Annual Report of the Secretary of the Treasury, 1933]

Kind of money	Money held in the Treasury			Money outside of the Treasury			
	Total	Amount held in trust against gold and silver certificates (and Treasury notes of 1890)	Reserve against United States notes (and Treasury notes of 1890)	Held for Federal reserve banks and agents	All other money	Total	Held by Federal reserve banks and agents ^a
						In circulation ^b Amount	Per capita ^c
Gold coin and bullion ..	\$3,234,213.012	\$1,230,717,109	\$156,039,088	\$1,771,485,596	\$ 75,971,219	\$ 320,938,621	\$ 2.55
Gold certificates	\$ 4,317,554,384 ^d
Standard silver dollars ..	507,190,969	481,004,304	26,186,665	265,486,779	2.11
Silver certificates	1,230,717,109 ^d
Treasury notes of 1890	27,995,481	.22
Subsidiary silver	360,699,178	2.87
Minor coin	9,372,110	1,186,324	.01
United States notes	5,677,680	256,865,245	2.04
Federal reserve notes	3,960,271	112,531,839	.90
United States notes	17,070,215	268,809,105	2.14
Federal reserve bank notes ..	513,088	8,060,793,295	24.35
National bank notes	19,694,260	125,845,001	1.00
Total June 30, 1933	\$3,797,691,605 ^e	\$1,711,721,413	\$156,039,088	\$1,771,485,596	\$158,445,508 ^f	\$5,720,764,384	\$45.51
Comparative totals:							
June 30, 1932 ^g	3,493,121,805 ^h	1,979,137,320	156,039,088	1,235,736,772	132,208,625	5,895,171,375	45.63
Oct. 31, 1920	2,436,864,530 ⁱ	718,674,378	152,979,026	1,212,360,791	352,850,336	5,698,214,612	53.21
Mar. 31, 1917	2,952,020,313 ^j	2,681,691,072	152,979,026	117,350,216	4,172,945,914	40.23
June 30, 1914	1,845,569,804 ^k	1,507,178,879	150,000,000	188,390,925	3,459,434,174	34.93
Jan. 1, 1879	212,420,402 ^l	21,602,640	100,000,000	90,817,762	816,266,721	16.92
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June 30, 1914	1,845,56						

June 30, 1932, as reported by the U. S. Department of Commerce, were: for maintaining and operating governmental departments, \$7,446,090 (of which \$1,192,828 was for local education); for interest on debt, \$385,121; for permanent improvements, \$6,685,205; total, \$14,516,416 (of which \$8,328,335 was for highways, \$1,717,735 being for maintenance and \$6,610,600 for construction). Revenues were \$13,708,228. Of these, property and special taxes furnished 18.6 per cent; departmental earnings and compensation to the State for officers' services, 6.0; sale of licenses, 27.9 (in which was included a gasoline sale tax that produced \$3,006,606). Funded debt outstanding on June 30, 1932, totaled \$5,833,156, of which \$1,500,000 was for highways. Net of sinking-fund assets, the debt was \$4,314,763. On an assessed valuation of \$410,634,611 the State levied in the year ad-valorem taxes of \$2,253,979.

EDUCATION. The decrease in the number of the teaching force in the public schools over four years ending with 1933 was reported in the *Journal* of the National Education Association to have been in the proportion of some 12 per cent; during the same time the enrollment in the schools increased by 7 per cent. A shortening of the terms in some of the school districts was in prospect. The State Department of Public Instruction, nevertheless, had in preparation a plan carrying provisions for general adult education, literacy classes, and vocational education.

The number of persons of school age in the State was reckoned in 1933 as 160,797. There were enrolled in the public schools, in the academic year 1932-33, 118,559 pupils. Of these, 80,897 were in common schools or elementary grades; in high schools, 31,662. The year's expenditures for public-school education totaled \$11,138,401.

LEGISLATION. A regular session of the Legislature was held, convening on January 2. It created a State convention to be composed of 51 delegates, to be elected by popular vote at the general election of November, 1934 or at a prior special election, who should act for the State with regard to the proposed repeal of the Federal Eighteenth Amendment. A liquor law was enacted, in anticipation of the repeal of Federal prohibition; it rendered the sale of liquor a monopoly of the State, save for beer, which was classed as non-intoxicating. The Governor, secretary of State, and attorney general were to act as a board of liquor control, with a supervisor, operating liquor dispensaries at which persons holding purchasing permits costing \$2 a year might buy for consumption at their residences, in amounts that the State might fix. An act, later held invalid, permitted redemption of property previously sold for taxes, without penalty or interest, if taxes should be paid up by Nov. 30, 1933. Building-loan associations were authorized to become members of the Federal Home Loan Bank system. A State income-tax law was enacted.

A special session met on November 27 to provide more State money for the relief of needy persons, limit hours of labor, extend the time for redeeming real estate from tax liens, and make provisions for carrying out State merchandising of liquor.

POLITICAL AND OTHER EVENTS. Governor John E. Erickson was inaugurated on January 2. He resigned on March 13 to become, by appointment of his successor, Lieutenant-Governor Cooney, United States Senator in place of Thomas J. Walsh, deceased. Congress having passed a measure to give

Federal consent to the formation of an agreement by Montana and Wyoming for a division of the waters of the Yellowstone River, Montana was reported to have shaped a tentative agreement with Wyoming to that end. Federal Secretary of the Interior Ickes declared in June that the Federal government would not approve the damming of Yellowstone Lake, which it was supposed that this agreement contemplated.

OFFICERS. The chief officers of the State, serving in 1933, were: Governor, John E. Erickson (resigned to become Senator); Lieutenant-Governor (later Governor), F. H. Cooney; Attorney General, Raymond T. Nagle; Secretary of State, Sam W. Mitchell; Treasurer, James J. Brett; Auditor, John J. Holmes; Superintendent of Public Instruction, Elizabeth Ireland.

Judiciary. Supreme Court: Chief Justice, Lew L. Callaway; Associate Justices, John A. Matthews, Albert H. Angstman, Ralph J. Anderson, Samuel V. Stewart.

MONTANA, STATE UNIVERSITY OF. A State institution for the higher education of men and women at Missoula, Mont., founded in 1895. The enrollment for the autumn of 1933 was 1431. In the 1933 summer session 559 students were registered, of whom 228 were men and 331 women. The faculty had 92 members. The productive funds and income for the year amounted to \$545,000. There were about 200,000 volumes in the library, including government documents. President, Charles H. Clapp, Ph.D.

MONTE CARLO. See MONACO.

MONTEJO Y RICA, TOMÁS. See SPANISH LITERATURE.

MONTES, món'tás, ISMAEL. A Bolivian statesman, died Nov. 18, 1933, in La Paz where he was born Oct. 5, 1861. Educated for the law at the University of La Paz, he was admitted to the bar in 1886 and later became judge of the La Paz district court. His political career began in 1890 when he was elected Liberal deputy from La Paz. In 1903 he was appointed Minister of War, having risen to the rank of colonel in the army after serving with distinction in the War of the Pacific of 1879. He again distinguished himself as a military leader during the war with Brazil over the possession of the Acre region in 1903.

In 1904 Montes was elected to the presidency, and because of the death of his successor, Dr. Guachalla, before his inauguration in 1908, continued in office a year beyond the regular term, pending a new election. Under his able administration the country made rapid progress along economic lines, especially in the extension of the railway system. He was also instrumental in promoting agriculture, mining, the financial credit of the country, and its educational system, founding normal schools, schools for the Indians, and agricultural, mining, and professional schools.

On the expiration of his term in 1910 Montes was commissioned general of a division in the Bolivian army and was appointed Minister to France. The following year he was transferred to the Court of St. James's. While in both Paris and London he negotiated new loans under favorable conditions for Bolivia. He was reelected president in 1913 and continued throughout his four-year term his energetic efforts to better the financial and economic conditions of the country. The principal achievement of his second administration was the passage in 1914 of a law providing for much needed reforms in the banking system. On the sinking of the *Tubantia* during Germany's

submarine campaign, Bolivia broke off diplomatic relations in April, 1917. Its principal aid to the Allies during the War were exports of its metal resources.

Exiled by the revolutionary junta of 1920, Montes lived most of the time until 1928 in Paris. On his return he became chairman of the board of the Central Bank of Bolivia, which he had founded in 1911, and head of the Liberal party.

MONTSEERAT, mõnt'së-rät'. One of the presidencies of the LEEWARD ISLANDS (q.v.).

MONUMENTS, NATIONAL. See PARKS, NATIONAL.

MOONEY, THOMAS. See CALIFORNIA under *Political and Other Events*.

MOORE, GEORGE. An Irish novelist, dramatist, poet, and critic, died in London, Jan. 21, 1933. He was born at Ballyglass, Co. Mayo, Ireland, Feb. 24, 1852. After attending a Roman Catholic school at Escott, he turned to the study of art, first in London and then in Paris, but always remained a dilettant. While in Paris, however, he became an intimate of the circles frequented by Baudelaire, Mallarmé, Zola, Monet, Manet, and other great literary and artistic figures, later incorporating his impressions of these geniuses in *Confessions of a Young Man* (1888) and *Memoirs of My Dead Life* (1906). He returned to London in the late '70s and, temporarily in straitened circumstances, worked diligently as a journalist and critic, acquiring by degrees idiomatic fluency in the writing of English, which for years had been an unused tongue to him. His first publications were two small volumes of verse, *Flowers of Passion* (1877) and *Pagan Poems* (1881).

In 1883 appeared Moore's first novel, *A Modern Lover*, a transplantation in its realistic approach of the French "philosophical" novel. It was followed in quick succession by *A Mummer's Wife* (1884); *A Drama in Muslin* (1886); *A Mere Accident* (1887); *Spring Days* (1888); *Mike Fletcher* (1889); and *Vain Fortune* (1890). On the appearance of *Esther Waters* in 1894 Moore's position among the novelists of his generation was established; it showed him to be a realist in his strict regard for truth but, in contrast with his French masters, one whose work was often aglow with imaginative insight and poetic quality. *Evelyn Innes* (1898) and its sequel, *Sister Teresa* (1901), established his claim to remembrance as one of the first writers to break down the barriers of Victorian inhibition.

In 1901 an interest in the movement known as the Irish literary revival took Moore to Dublin where he remained for a decade, assisting Lady Gregory and William Butler Yeats in the establishment of the Irish National Theatre (Abbey Theatre) and identifying himself variously with its literary activities. Out of this residence grew *The Untilled Field* (1903), a collection of stories of anti-Catholic tendency, and *The Lake* (1905), a novel Irish in theme and setting. Catholic objections to the free play of his ideas in art, and also, perhaps, a general failure to fit in with the aims, moods, and methods of the movement, led him to abandon his native land again in 1911. His dominant trait of exhibitionism was admirably displayed in the indiscreet record of his Irish adventures, *Hail and Farewell*, published in three volumes during 1911-14 as *Ave*, *Salve*, and *Vale*.

George Moore attained his greatest artistry as a novelist in *The Brook Kerith* (1916), in which with mystical insight he recreated the story of

Jesus, and in *Heloise and Abelard* (1921), an almost lyrical version of the ageless medieval romance. His last novels were *Ulick and Soracha* (1926) and *Aphrodite in Aulis* (1931). *A Story-teller's Holiday*, another subjective work, banned on its publication in 1918, was recognized by the United States Department of the Treasury as a work of "established literary merit" only a few weeks previous to his death and the ban on its importation lifted.

Although primarily a novelist, Moore was also an art critic and a dramatist. His most stimulating critiques were *Impressions and Opinions* (1890); *Modern Painting* (1893); and *Reminiscences of the Impressionist Painters* (1906). Of his plays the most masterly and impressive were *The Bending of the Bough* (1900); *The Making of an Immortal* (1927); and *The Passing of the Essenes* (1930). His other works include: *Literature at Nurse* (1885); *Parnell and His Island* (1887); *The Celibates* (1895); and *In Single Strictness* (1922). At the time of his death he was writing a volume of reminiscences, entitled *A Communication to My Friends*.

Of him Mr. Martin A. McGoff, of Liverpool, justly wrote: "Anyone familiar with Moore's intellectual make-up would not expect accuracy in details from him, nor any particular sensibility to other people's feelings where a literary effect was concerned. In *Salve*, statements about W. B. Yeats, which appeared in the first issue, were subsequently withdrawn. Always writing for effect, Moore's object was to reproduce a picturesque personality—one that would appeal to Holbein and Durer but was a little too benign for Quintin Mastys; and Moore certainly would not scruple over a little 'artistic license' over the facts of a portrait. The exaggeration of the age lends an added touch of pathos which Moore could not miss."

Oscar Wilde said of Moore that "he had to write prose for seven years before he realized that there was such a thing as grammar, and another seven years before he found out that a paragraph is architectural." Wilde's satire like that of Moore knew no scruples.

MORAVIA AND SILEZIA. A Province of Czechoslovakia. See CZECHOSLOVAKIA under *Area and Population*.

MORAVIANS. A religious denomination comprising, in the United States, three branches: The Moravian Church (Unitas Fratrum); the Evangelical Union of Bohemian and Moravian Brethren in North America; and the Independent Bohemian and Moravian Brethren Churches. For early history see THE NEW INTERNATIONAL YEAR BOOK, 1932.

THE UNITAS FRATRUM, the largest branch, is organized in the United States in two coordinate provinces: the Northern, with a provincial synod meeting every fifth year; and the Southern, of which the provincial synod meets every third year. The church maintains the following four educational institutions: Linden Hall, Lititz Pa.; Moravian College and Theological Seminary, and Moravian Seminary and College for Women, Bethlehem, Pa.; and Salem Academy and College for Women, Winston-Salem, N. C. Missionary workers are maintained in southern California and Alaska, and in Nicaragua, Honduras, the West Indies, Jamaica, Labrador, Surinam, South America, the Himalayas, Unyamwezi, Central Africa, and South Africa. The official peri-

odical, *The Moravian*, is published weekly in Bethlehem, Pa.

On Jan. 1, 1933, there were in the United States 152 churches; 170 ministers; 26,809 communicant members, although the actual membership was estimated at 37,026; and 146 Sunday schools with 24,476 pupils. The five "home provinces" of the American and European branches had a total membership of 57,649. In Europe there were also affiliated societies, known as "Diaspora," with a membership of about 30,000. The foreign missions had a membership of 146,528. Samuel H. Gapp, Ph.D., D.D., has been president of the Northern Province since 1930. Headquarters of the Provincial Elders' Conference (executive board) of the Moravian Church in America are at 45 West Church Street, Bethlehem, Pa.

MORGAN, REAR ADMIRAL CASEY BRUCE, U. S. N., RET. An American naval officer, died at Lake Clear, N. Y., Aug. 17, 1933. He was born in Augusta, Ga., Oct. 20, 1867. Following his graduation from the U. S. Naval Academy in 1888, he was commissioned ensign in the Navy in 1890, and soon after his promotion to the rank of lieutenant-junior in 1898, he served on the *Raleigh*, Dewey's flagship, in the Battle of Manila Bay. He was later an inspector of equipment in San Francisco (1905-06), executive officer in Milwaukee (1906-08), and inspector in charge of the 11th Light House District in Detroit (1908-10). On returning to sea duty he was in command of the *Dubuque* (1910-11), the *Nashville* (1911-12), and the *Missouri* (1912-13). In 1913 he was at the Naval War College in Newport, R. I., and from 1914 to 1916 served as commander of the *Minnesota*.

In 1917 Admiral Morgan assumed command of the *Agamemnon* (the former German liner, *Kaiser Wilhelm II*), and in 1919 was assigned to the *Imperator* (another seized German vessel, later renamed the *Berengaria*) in the same capacity. Both these vessels were part of the transport force for the A.E.F. On his promotion to the rank of temporary rear admiral in October, 1919, he assumed command of the Transport Force. He was commandant of the Naval Station at Cavite, P. I., from 1919 to 1920 and commander of the Special Service Squadron from 1921 until his retirement in 1923. The permanent rank of rear admiral was conferred on him in 1930.

MORGAN, HARRY HAYS. An American diplomat, died in London, Mar. 19, 1933. He was born in New Orleans, La., Dec. 24, 1860, attended Exeter Academy during 1876-78, and studied law with his father, Philip H. Morgan. His first diplomatic post was that of secretary of the American Legation in Mexico City, where his father was envoy during 1882-85. After 1897 he represented the State Department at several Swiss consulates, including Horgen, Aarau, and Lucerne. In 1906 he was transferred to Stuttgart, Germany, and the following year to Amsterdam, the Netherlands. In 1910 he was advanced to consul-general, holding that post in Barcelona, Spain, until 1913 and in Hamburg, Germany, until 1917.

On Cuba's declaration of war against Germany in April, 1917, a few days after the entry of the United States into the conflict, Mr. Morgan was sent to the island as special investigating agent, and remained there during the next two years as representative for the United States Food and Fuel Administrations and War Trade and Shipping Boards. After the war he was sent to Bel-

gium, first as consul-general in Antwerp and then in Brussels, serving also in 1919 as a member of the United States Commission which negotiated the economic reconstruction of Belgium. Previous to his retirement in 1925 he was consul-general in Buenos Aires, Argentina. He was the father of Lady Furness and Mrs. Reginald C. Vanderbilt.

MORMONS. See LATTER-DAY SAINTS, CHURCH OF JESUS CHRIST OF.

MOROCCO. Morocco is divided administratively into (1) the French Zone (area, 162,162 square miles; population, 1931, 5,057,449), including about 85 per cent of both the area and population; (2) the Spanish Zone (area, 13,125 square miles; population, about 1,000,000); and (3) Tangier (q.v.). The chief cities of the French Zone are Marrakech, 191,936 in 1931; Casablanca, the chief port, 160,418; Fez, 106,838; Meknes, 54,156; Rabat, the political capital, 53,006. There were about 4,230,000 Islamized Berbers and Arabs, 120,000 native Jews, and 150,000 foreigners. The school enrollment (1931) was 63,007 (37,107 Europeans, 13,648 Moslems, and 12,192 Jews). The principal towns in the Spanish Zone are Tetuan (38,000), Alcazar (12,750), Ceuta, and Melilla. The following statistics cover the French Zone, unless another zone is specified.

PRODUCTION. Agriculture and livestock raising are the chief occupations. There were some 9,300,000 acres of arable land in the French Zone in 1932. Crops for that year totaled (in thousands of units, bushels except as indicated): Wheat, 27,970; barley, 47,147; oats, 1267; corn, 4677; linseed, 369; wine (gallons), 9956; olive oil, (gallons), 2856. Livestock in 1932 included 1,598,000 cattle, 7,558,000 sheep, 3,860,000 goats, 117,000 swine, 80,000 horses, 108,000 mules, 611,000 asses, and 120,000 camels. Production of potash in 1932 was 997,317 metric tons (900,723 in 1931).

COMMERCE. Imports into the French Zone in 1932 were valued at 1,785,100,000 francs (\$69,977,000 at par), against 2,075,200,000 francs (\$81,348,000) in 1931. Exports totaled 685,100,000 francs (\$26,855,000), compared with 761,400,000 (\$29,846,000) in 1931. The value of the principal imports for consumption (1932) was: Refined sugar, \$6,683,000; tea, \$3,593,000; cotton piece goods, \$5,218,000; gasoline, \$3,107,000; automobiles, \$2,384,000. The chief export items were: Wheat, \$8,168,000; phosphate rock \$4,972,000; barley, \$3,590,000; eggs, \$2,059,000; and palm fibre, \$1,073,000. In 1931 France supplied 56.2 per cent of all imports and purchased 63.4 per cent of the total exports. Other sources of imports were the United Kingdom (8.5 per cent in 1931); United States (6 per cent); Germany (2.5 per cent).

FINANCE. Budget estimates of the French Zone for the fiscal calendar year 1933 were: Revenue, 842,205,000 francs; expenditure, 916,000,455 francs. The public debt on Dec. 31, 1931 amounted to 1,750,210,000 francs (\$68,608,000). The budget for the Spanish Zone in 1932 balanced at 51,841,200 pesetas, including a subvention of 26,600,000 pesetas from the Spanish Treasury.

COMMUNICATIONS. Railways in the French Zone extended 1433 miles in 1929; highways, 3490 miles (1931). Air lines connected Casablanca with Dakar and with Toulouse, via Tangier and Rabat. In the Spanish Zone there were about 72 miles of railway (1933) and 350 miles of good roads. A new road across the Rif country between Ceuta and Melilla was officially opened Nov. 2, 1933. The

shipping tonnage entered at French Zone ports in 1931 was 3,529,000 (3,483,000 in 1930).

GOVERNMENT. Nominal authority is vested in the Sultan of Morocco, who resides in the French Zone, usually at Rabat. But effective control is exercised by the French Resident General, who has authority to veto all the Sultan's edicts and decrees. Local administration is under native caids and French agents. Sultan in 1933, Sidi Mohammed, who ascended the throne Nov. 18, 1927. Auguste Henri Ponsot succeeded Lucien Saint as French Resident General in 1933. The Spanish Zone is administered by a Spanish high commissioner resident at Tetuan. Nominal authority is vested in a Khalifa, chosen by the Sultan of Morocco from a list of two candidates selected by the Spanish government. Khalifa in 1933, Sidi Muley Hassan Ben el Mehedi. Spanish High Commissioner, Luciano Lopez Ferrer, appointed June 20, 1931.

HISTORY. During 1933 the French brought almost to conclusion their 25 years of effort to subdue the unruly Berber tribesmen of the Upper Atlas region. In February they met with a serious reverse. An expedition sent against rebels in the Djebel Sarro was defeated with the loss of 79 killed and 107 wounded. The French then mobilized a force of 25,000 men and launched four columns from Marrakech, Tadla, Meknes, and Eastern Morocco which converged upon the rebel stronghold in the Atlas chain about 175 miles south of Rabat. After some of the most sanguinary fighting recorded since the French entered Morocco the Berbers were surrounded and forced to surrender during September. At the end of 1933 the only part of the French Zone not subject to French control was a strip of territory bordering on the Spanish colony of Rio de Oro.

Meanwhile the completion of a new highway between Ceuta and Melilla in Spanish Morocco had enabled the Spaniards to reduce their Moroccan forces by 8000 men to a total of 32,000.

MORRIS, SIR DANIEL. A British agriculturist, died at Bournemouth, Eng., Feb. 9, 1933. He was born at Loughor, Glamorgan, Wales, May 26, 1844, and received his education at Cheltenham; the Royal College of Science, South Kensington; and Trinity College, Dublin. In 1877 he was appointed assistant director of the Royal Botanic Gardens, Ceylon, and in 1879 director of the Botanic Department of Jamaica. He was assistant director of the Royal Botanic Gardens, Kew, England, from 1886 to 1898, during which time he visited the West Indies and other colonies on several special missions connected with the improvement of their agriculture. While Imperial Commissioner of the West Indian Department of Agriculture (1898-1908) he was active in inaugurating agricultural reforms. Among the successful enterprises undertaken by him was the reestablishment of the cultivation of Sea Island cotton in the West Indies. After his retirement from active duty he served until 1913 as scientific adviser in tropical agriculture to the Colonial Office.

Sir Daniel was president of the West Indian Agricultural Conferences (1899-1908), the South-East Union of Scientific Societies (1918-19), and Section K (botany) of the British Association for the Advancement of Science (1919). He served also during 1909-24 as vice-chairman of the John Innes Horticultural Institution. After organizing the Canadian Reciprocity Conference in 1908, he served during 1909-10 as member of the Royal

Commission to Inquire into Closer Trade Relations between Canada and the West Indies. Among his publications were: *The Colony of British Honduras* (1883); *Planting Enterprise in the West Indies* (1883); *Agricultural Resources of St. Helena* (1884); *Fruit as a Factor in Colonial Commerce* (1887); *The Specific Resources of the West Indies* (1888); *The Colony of the Leeward Islands* (1891); and *Botanical Enterprise in the West Indies* (1891). From 1899 to 1908 he was editor of the *West Indian Bulletin*, the quarterly journal of the Imperial Department of Agriculture, and from 1902 to 1908 of the *Agricultural News*, Barbados. In 1893 he was made Companion of St. Michael and St. George and in 1903 Knight Commander of St. Michael and St. George.

MORRISTOWN NATIONAL HISTORICAL PARK. See PARKS, NATIONAL.

MORSE, CHARLES WYMAN. An American financier, died Jan. 12, 1933, at Bath, Me., where he was born in 1856. On his graduation from Bowdoin College in 1877, he engaged in the ice-shipping business in Maine, but three years later removed to Brooklyn and then to New York City. Here he established an ice business which finally, in 1899, under the name of the American Ice Co., expanded to include the areas of Philadelphia and Baltimore. This company practically secured a monopoly in New York. Through political affiliations it obtained exclusive wharfage rights, enabling it to raise prices from 30 to 60 cents per hundred-weight until public clamor caused an investigation. The scandalous condition then revealed was regarded as one of the causes of the overthrow of Tammany Hall in 1901. In the meanwhile Morse had sold his holdings, making a profit, it was claimed, of over \$12,000,000. He then turned to the shipping business. His efforts to secure a monopoly of the American coastwise transportation service resulted in the combination of the Clyde Steamship Co., the Mallory line, the Metropolitan Steamship Co., the Hudson Navigation Co., the Ward line, and others under the control of the Consolidated Steamship Co. Morse entered also the publishing business and was influential in establishing the Butterick Co., of which he was first vice-president.

To finance his vast industrial undertakings, and especially to make possible a spectacular manipulation of American Ice, Consolidated Steamship, and United Copper Stocks, Morse secured control of the Garfield National Bank in 1895 and soon thereafter of a chain of eight other State and national banks, using methods afterward considered questionable. Because of his connection with several of the banks which failed during the panic of 1907 and the general belief that in a measure he was responsible for the panic, his methods and transactions came up for review in the Federal courts. The National Bank of North America (New York), of which he was vice-president, was closed in January, 1908. The indictment charged that he had criminally misapplied the funds of this bank (and so of others also), that "he had entered upon a career of reckless and forbidden speculation," and that he had concealed his unlawful practices by making false entries in the books. Later in the same year he was convicted and sentenced to 15 years' penal servitude in Atlanta Penitentiary; higher courts sustained this decision. The case attracted general attention, but opinions regarding the outcome were various. Many, regarding it as a salu-

tary lesson to those who were conducting big business illegally, rejoiced in the ability of the government to convict a rich man. Others thought that, while Morse was guilty, such actions as his were common in Wall Street and that his offense was more technical than real. The case was important in that it gave an impetus to the anti-trust movement.

After Morse had served a part of his sentence, his health was reported to have been undermined, and efforts were made, particularly by his wife, to obtain a pardon, which was granted by President Taft in 1912. A sojourn abroad enabled him to recuperate rapidly and he returned to the United States the next year. From then on he again acquired corporate interests, becoming president of the Hudson Navigation Co., and building for the Emergency Fleet Corporation of the United States Shipping Board during the World War 22 merchant vessels. In 1922, however, with his three sons, he was indicted by the grand jury of the District of Columbia on the charge of using the United States mails to defraud investors in the stock of the United States Steamship Co. After numerous postponements of the trial the indictment was quashed, and he retired in 1927 to his birthplace at Bath, Me.

MORTALITY RATES. See VITAL STATISTICS, and each country under *Area and Population*.

MORTGAGES. See AGRICULTURE.

MOSKOWITZ, BELLE LINDNER ISRAELS. An American public relations counselor, died Jan. 2, 1933, in New York City, where she was born Oct. 5, 1877. She attended Teachers College, Columbia University, and in 1903 was married to Charles H. Israels. Following his death in 1911 she was married three years later to Henry Moskowitz. After serving on the editorial staff of *The Survey* during 1908-10, she became field secretary of the Playground and Recreation Association of America, forming its Committee on Amusement Resources for Working Girls. Her interest in bettering the condition of the masses was further stimulated by her appointment in 1913 as clerk of the grievance board of the Dress and Waist Manufacturers' Association. Made manager of the Association's labor department the following year, she was instrumental during her two-year tenure of this office in settling thousands of individual disputes. During this period she assisted in founding the Travelers' Aid Society and served for several years as vice-president of the Association to Promote Proper Housing for Girls and as director of the Council of Jewish Women.

After 1917 Mrs. Moskowitz was connected with Publicity Associates, Inc., becoming its president in 1928. Previous to the entry of the United States into the World War she was secretary of Mayor Mitchell's Committee of Women on National Defense. She played a prominent part in Alfred E. Smith's campaign for the governorship of New York in 1918 and following his election was made secretary of the Reconstruction Commission, concerned principally with the improvement of housing and marketing conditions. She was also secretary during 1920-21 of the Labor Board appointed by Governor Smith, and after 1922 was director of the publicity committee of the Democratic State Committee. Throughout Governor Smith's four administrations she was his most influential adviser, both in politics and statecraft. At the time of her death she was vice-chairman of the Democratic National Committee.

MOTHS. See ENTOMOLOGY, ECONOMIC.

MOTION PICTURES. The two greatest popular screen successes of 1933 were *She Done Him Wrong* and *Little Women*; which would seem to suggest at first glance that it would be difficult to discover any one general trend in audience interest during the year. *She Done Him Wrong* was a rowdy, hearty cartoon of New York night life in the '90's, filled with vigorous humor and ribald gayety. *Little Women*, on the other hand, was a gentle, sentimental evocation of the sweetness and light of a period long past in the national life. In viewpoint, manner, and conception they were utterly different. The first was all raucousness; the second, all wistful gentleness. Thereupon puzzled producers, longing to find out what the public wanted, grew understandably bewildered until they noted that, despite all of their vast differences in attitude and approach, the two films had one thing in common. They dealt amid a show of nostalgia with a day when life apparently was simpler.

There were, as a matter of fact, many trends in the year's cinema, but of them all the mood of escape gave evidence of being the most important. There were films devoted to recapturing the pioneer past in America, films contemplating the careers of dead kings and queens; fantasies of various types, as represented by such different approaches as *Alice in Wonderland* and *Mickey Mouse*; nostalgic depictions of a nation's great past, such as *Cavalcade*, and wistful love stories based upon metaphysical themes, of the type of *Berkeley Square*. In almost all cases of outstanding hits it was discernible that nostalgia, whether done with gusto or with sentimentality, was the most popular audience commodity devised in the course of the year.

The two outstanding films, as judged by popular appeal, also provided the two most successful new performers of 1933. They were Katharine Hepburn and Mae West. Miss Hepburn, a stage actress of minor fame, had made her screen debut the year before, but it was during the last season that her work in *Christopher Strong*, *Morning Glory*—probably her best performance—and, above all, the triumphant *Little Woman* made her the most talked about and admired actress in the cinema. Miss West, an actress and playwright who had got into various difficulties with the police when she appeared on the stage several years ago in one of her own dramas, *Sex*, emerged in *She Done Him Wrong* and *I'm No Angel* as the films' most successful exponent of good-natured, unashamed ribaldry, which laughed at sex, instead of taking it with any gravity. Her speech and mannerisms definitely became part of the American social consciousness, and she became a great fad among the French.

Greta Garbo, generally regarded as the most distinguished personality yet developed by the screen, with the possible exception of Charles Chaplin, did not appear in a new film until the last week in the year. She had passed several months in Europe, and she was so late in going to work in a new vehicle that there were many observers who predicted that, with such new idols as Miss Hepburn and Miss West springing up, the forgetful screen followers would neglect her. When, however, she emerged in *Queen Christina*, a fanciful romance presumably dealing with the life of the eccentric daughter of Gustavus Adolphus, the heroic Swedish king, the popular and



Courtesy of RKO Radio Pictures

"LITTLE WOMEN"

Left to right. Jean Parker as *Beth*, Katharine Hepburn as *Jo*, Spring Byington as *Mrs. March*, Joan Bennett as *Amy*, and Frances Dee as *Meg*



Courtesy of Paramount Pictures

"CRADLE SONG"

Dorothea Wieck and Evelyn Venable

MOTION PICTURES



Courtesy of United Artists

"THE PRIVATE LIFE OF HENRY VIII"
Featuring Charles Laughton



Courtesy of Paramount Pictures

"SHE DONE HIM WRONG"
Mae West and Cary Grant

critical acclaim that had followed her in the past was renewed with great heartiness, and most of the film critics agreed that her portrait of the mannishly-attired Scandinavian ruler was her finest performance since the arrival of screen speech. The picture, incidentally, marked the return to the films of John Gilbert, who had once been a tremendously popular star, but had suffered a complete eclipse since the coming of the talking pictures.

Three of the popular and nostalgically inclined films of the year were directly attributable to England. First, there was *Cavalcade*, Noel Coward's pageant of the British Empire since Victoria's day, in which the playwright ended his pæan to Britain on a note of wistful sighing over the greatness of his country's past. Although made in Hollywood, the film was presented by a cast which, with one exception, was English, and its production was based carefully on the version that was originally acted on the London stage. Then, there was *Berkeley Square*, which although it was the work of an American newspaper man, John L. Balderston, and was made in California, dramatized the love for Eighteenth Century London of a citizen of the modern United States; featured an English actor, Leslie Howard, in the leading rôle and was so faithful to Britain in its spirit and atmosphere that it was generally regarded as an Anglo-American, rather than a strictly American, photoplay. Its chief virtue, though, was its demonstration of the cinema's ability to capture a delicate quality of fragile, metaphysical romance.

In the past British films have not been regarded highly in this country, either by reviewers or public. The arrival from England of *The Private Life of Henry VIII*, a vigorous, moderately ribald comedy of the much-married Tudor, with Charles Laughton in the leading rôle, demonstrated conclusively that Great Britain must henceforth be regarded seriously as a rival to Hollywood's eminence as the film capital. Before it, such a work as the lively melodrama called *Rome Express* hinted that pictures rivaling in popular appeal those made in Hollywood could be manufactured in the vicinity of London, but it required the Laughton picture to establish the alien product definitely as something to be sought after by the American film-going public. Whereas *Cavalcade* and *Berkeley Square* were at least American in their birthplace, the new film suggested to a hitherto skeptical country that the English were to be regarded as serious rivals to the native product. It was not long after the arrival of the historical film that the Fairbankses, father and son, were announced as scheduled to appear in films made abroad.

In past years, photoplays made in Germany have been the recipient of a great deal of admiration. At the beginning of 1933, a distinguished Teutonic drama called *M* which dealt, amid a strange mingling of pity and terror, with the pathological case of a wholesale child murderer, arrived and it was regarded quite definitely as standing in the front rank of the accepted screen classics. It proved, however, to be the last of the important importations from Germany. With the arrival of the Hitler régime, most of the distinguished figures of the Teutonic cinema were forced to flee and the ensuing regimentation of the screen resulted in nothing better than an obvious sort of propaganda melodrama called *Storm Trooper Brand*, which has not even been

shown in America. In addition, the numerous little film houses that had been accustomed to showing German films in English-speaking cities diminished to almost nothing.

While the German photoplays were being increasingly subjected to regimentation, the Russian films, on the other hand, showed signs of relaxing their intense preoccupation with the building of Socialism. It was not that they gave evidence of weakening in their essential crusading zealously, but that for the first time they began to contemplate individual, rather than purely collective, problems; to go in for the merest suggestion of romantic attachment; to consider with some show of kindness the problem of the old school intellectuals who were trying to adjust themselves to a new régime, and, above all to take advantage of the hearty, earthy Russian sense of humor. The best of the new Soviet films were *Shame* and *Men and Jobs*, which regarded the construction of the new state with surprising humanness and gayety, and *The Patriots*—known as *Okraina* in Russia—which was a rather grim picture of war days, brightened but not softened by scenes of fresh character humor. It was even reported that a musical comedy film, to be produced by the director of *The Road to Life*, was in the process of manufacture in Moscow.

Chiefly the French cinema industry has seemed in the past to be René Clair, and nothing more. Last year M. Clair was represented on American screens by a minor, but gayly charming musical romance called *Quatorze Juillet*, but his was not the only contribution made by France to the motion picture. A delicate, poignant study of tragic adolescence called *Poil de Carotte* seemed to most observers the most distinguished work turned out by the French motion picture studios in several seasons.

Another international film that aroused much interest was the silent picture that S. M. Eisenstein, the Soviet director who made *Potemkin*, photographed in Mexico under the financial guidance of Upton Sinclair. Eisenstein's reputation as a director has always been based in great part on his skill at editing his films, but his Mexican work was left behind in the United States when the Russian returned to Moscow after a lengthy controversy with his backer. The ambitious project, which was to have been called *Que Viva Mejico* and was to have captured all of its maker's comment on the Southern republic, was left behind in bulky, incomplete form, and eventually Mr. Sinclair turned it over to the Hollywood film cutters, who transformed it into an apparently innocuous little screen work called *Thunder Over Mexico*. Many people felt that the film should have been edited only by its maker and that the picture which finally appeared was a gross extortion of Eisenstein's ideas. Thereupon a violent controversy raged between the Eisenstein and the Sinclair partisans, amid much mutual acrimony. The general verdict seems to have been that, whatever the personal merits of the battle, the picture was not all that it would have been had the editing of the film been left to Eisenstein.

The growing social consciousness of the American films continued during the year, with every sign that the cinema would eventually develop into an important medium for effective propaganda. Observers differed widely as to whether or not this phase of film making was a desirable one, and there appeared to be evidence on both

sides. The Russian films, it was felt, showed the worth of crusading zeal in adding to the dramatic distinction of screen dramas, while the apparent collapse of the German films under the Hitler régime was generally regarded as a warning against such a trend. It seemed certain, though, that for better or for worse and despite the popularity of the escapist films, the photoplay was destined to be used with increasing vigor as a pulpit. The most blatant of the works in this editorial manner was *Gabriel Over the White House*, which was released shortly after President Roosevelt took office, and which shouted forth, in melodramatic terms, the advantages of a dictatorship in America. *This is America* a compilation of news reels depicting the history, grave and gay, of the United States from 1917 to the inauguration of Roosevelt, was definitely editorial in its plea for the war-time spirit of national coöperation. A modest film called *Private Jones* was regarded by many as presenting a sardonic and scornful commentary on military bureaucracy, while some news reel scenes showing the killing of a striker in a Pennsylvania mine war were hailed by editorial writers as demonstrating the value of the screen for the vigorous presentation of social propaganda.

In the field of social comment there was also the screen version of the Faulkner novel, *Sanctuary*, which, somewhat censored, appeared in the films as *The Story of Temple Drake*. Although brightened up somewhat in the interest of the censors and the picturegoers, this version of Faulkner's eerie, tortured story of Southern decadence retained enough of the original quality to make it a work of power and significance. It was strongly disapproved of in many quarters, but it was regarded as a valuable example of the screen's ability to present a reasonably faithful edition of an important novel and an interesting social document.

Among the great successes of the year were those scored by Walt Disney, the outstanding figure in the making of cartoon comedy for the screen. Long accepted as one of the distinguished creators of the cinema for his brilliant Mickey Mouse comedies, Mr. Disney has also been admired for his Silly Symphonies, but up to 1933 his endeavors in this field had been more critical than popular. Early in the year he presented *Father Noah's Ark*, a slightly ribald treatment of the Biblical story, but although it was regarded by many observers as a brilliant creation and is still considered by some of them the best of his Silly Symphonies, it never managed to approach the popularity of Mickey Mouse. With his version of the celebrated nursery tale adventures of the *Three Little Pigs*, however, Disney brought the Symphonies into equal repute with his exploits of the popular rodent and it was not long before America was singing the simple little theme song of the three pigs, *Who's Afraid of the Big Bad Wolf?*

Elaborate musical comedy films resumed something of their popularity last year, when *Forty-Second Street*, *Gold Diggers of 1933*, and *Footlight Parade* were produced with extravagant and fantastic chorus numbers which could not possibly have been presented on any stage. The number in the latter show in which the chorus girls went through their routine while swimming about under a waterfall was the most spectacular episode of its kind.

Among the chief examples of the expert use of shrewd popular material produced during the year were *The Price Fighter* and *the Lady and Lady for a Day*. A fragile, poetic quality of religious reverence, rare for the screen, was provided in *Cradle Song*. In *The Invisible Man*, based upon the H. G. Wells novel, the fantastic horror story was expertly manipulated. Other important films of the year included *Dinner at Eight*, *Only Yesterday*, *Bombshell*, *State Fair*, *Topaze*, *Our Betters*, *King Kong*, *Mamma Loves Papa*, *The Emperor Jones*, *Eskimo*, *The Little Giant*, and *Penthouse*. Among the performers whose work was important during the year were Jean Harlow, Charles Laughton, Leslie Howard, Diana Wynyard, Myrna Loy, Lee Tracy, Spencer Tracy, Otto Kruger, May Robson, John and Lionel Barrymore, Paul Robeson, Margaret Sullavan, Claudette Colbert, Alison Skipworth, James Cagney, Edward G. Robinson, Marlene Dietrich, Janet Gaynor, Robert Montgomery, and Helen Hayes.

MOTORBOATING. Motorboat competition grew to new heights in 1933, when there were more regattas held than ever before and there were more contesting drivers and boats on the waterways of the world. Of course, the outstanding event, from the spectacular viewpoint, was the successful defense of the Harmsworth trophy by the veteran Gar Wood, with his *Miss America X*. His challenger on the St. Clair River at Marine City, Mich. in the summer, was Hubert Scott-Paine, Englishman, who brought a novel boat with him, one adapting its hull design from outboards, and which Scott-Paine figured would equal Wood's 6600 horse power with a mere 1375. Wood won in two straight heats and thus retained the trophy he has held since 1920 when he won at Osborne Bay, England.

In the Gold Cup class, *El Lagarto*, owned by George C. Reis of Lake George, N. Y. made a clean sweep. His eleven-year-old craft took the National Sweepstakes at Red Bank, N. J., the Gold Cup at Detroit and the President's Cup on the Potomac at Washington.

Paul Hyatt of Brooklyn annexed the Lipton Trophy for outboards on the Schuylkill. Sam Crooks, winner of individual honors in the inter-collegiate championships at Lake Hopatcong, N. J., aided Rutgers to win the team title. William Feldhusen of Staten Island won the annual Albany to New York race on the Hudson, the leading long distance fixture. The race was run on a handicap basis for the first time and Feldhusen passed his last rival five miles from the finish line.

The Townsend Medal, symbolic of the American outboard championship, was taken by young Lewis G. Carlisle, of East Islip, N. Y. Eugene Appel of Ventnor, N. J. took the 125-cubic-inch piston displacement hydroplane title in his *Emancipator II* at Ocean City, N. J. The national outboard championships, held on the lagoon at the Century of Progress Exposition at Chicago, resulted in wholesale toppling of defending champions. All except one champion of 1932 were dethroned, the exception being Frank Vincent of Tulsa, Okla., who retained his class B professional title. The winners in the amateur division were Paul Hyatt, Clinton Ferguson of Waban, Mass., John C. Maypole, of River Forest, Ill., and George Keuhn, of Milwaukee. Mid-Western drivers took all four professional events, the winners being Vincent, Robert Meyer of Chicago, James Rogers of Mel-

rose Park, Ill., and Walter Everett of Tulsa, Okla.

For the first time a mile-a-minute speed was attained in an outboard in 1933. In the class F (professional) mile trials held at Cedar Lake, Indiana, on Oct. 9, 1933, Herschel Turk of Tulsa, Okla., made a new record of 60.303 m.p.h. George Coleman Jr., of Miami, Okla. (the holder of the previous record of 59.50 m.p.h.) later, on the same day, beat Turk's record by driving his boat at 61.75 m.p.h.

MOTOR RACING. See **AUTOMOBILE RACING.**

MOTZKIN, LEO. A Jewish statesman, died in Paris, France, Nov. 7, 1933, age 66. A Russian by birth, he received his higher education in Berlin and in 1889 founded what was later claimed to be the first German-Jewish society with Zionist principles. During the '90s he was associated with Dr. Theodore Herzl in the Zionist movement which sought the creation in Palestine of a publicly recognized and legally secured home for those Jews "who cannot or will not be assimilated by the country of their adoption." He helped draw up the political programme which was adopted by the first Zionist Congress held in Basel, Switzerland, in 1897 and fought against the acceptance of the offer submitted to the seventh Congress by the British government of a grant of land in British East Africa for an autonomous Jewish settlement.

During the World War Dr. Motzkin had charge of the Copenhagen bureau of the International Zionist Association which consisted of more than 1000 constituent societies with 500,000 members in all parts of the world. After the War he served as general secretary and later as president of the committees of Jewish delegations sent to Paris to insure the preservation of Jewish rights in drawing up the peace treaties. In 1920 he instituted an international conference to aid Jewish refugees left destitute by the War, and as president of the actions committee of the International Zionist Association after 1925 headed several Jewish delegations to the League of Nations, where he fought for the protection of Jewish minority rights.

MOUNTAIN CLIMBING. See **EXPLORATION; POLAR RESEARCH.**

MOUNT HOLYOKE COLLEGE. An institution for the higher education of women at South Hadley, Mass., founded in 1837. The registration for the autumn session of 1933 was 968. The faculty, including professors, associate professors, assistant professors, instructors, and chief administrative officers, numbered 130. The endowment funds amounted to \$4,629,88 and the income for the year was \$1,233,071. The total amount of gifts and bequests during the year 1932-33 was \$106,548. There were 131,800 volumes in the library. President, Mary Emma Woolley, Litt.D., L.H.D., LL.D.

MOVABLE DAMS. See **DAMS.**

MOZAMBIQUE (PORTUGUESE EAST AFRICA). A Portuguese colony between Tanganyika Territory and the Union of South Africa. Area, 297,657 square miles; population (1930), 3,995,831 including 35,570 Europeans. The colony is divided into the state-administered Province of Mozambique (245,776 square miles) and the territory of Manica and Sofala (51,881 square miles; population 313,927 in 1929) administered from Beira by the Mozambique Company under royal charter. Lourenço Marques, the capital of the Province, had 42,779 inhabitants (1930); Beira had 23,694.

The chief products of the Province are sugar, maize, cotton, and minerals. For 1931, imports into the Province totaled 50,951,922 escudos gold (gold escudo equaled \$1.08); exports, 44,022,586 escudos gold. Imports of the chartered territory (1930) amounted to 80,250,344 escudos; exports, 75,209,406 escudos. Revenue of the Province for 1932-33 was estimated at 356,402,149 escudos paper; expenditure, 340,933,897 escudos paper. In 1931, 771 ships aggregating 3,925,408 tons cleared the port of Lourenço Marques; and in 1931, 643 ships totaling 3,180,695 tons cleared the port of Beira. The Province is under a governor-general, assisted by a governor in each of the six districts. Governor-General in 1933, José Cabral.

MUIR, MAJ.-GEN. CHARLES HENRY, U. S. A., RET. An American soldier, died in Baltimore, Md., Dec. 8, 1933. He was born at Erie, Mich., July 18, 1860. On his graduation from the United States Military Academy in 1885 he was commissioned 2d lieutenant in the 17th Infantry of the United States Army and during his early career saw service in the Indian campaigns, participating in 1890 in the Battle of Wounded Knee against the Sioux. During the Spanish-American War he distinguished himself in the storming of Santiago, Cuba, receiving in recognition of his gallantry the Distinguished Service Cross. His greatest exploit, however, was during the Philippine Insurrection when with the aid of 10 others he succeeded in routing General Malvar from his headquarters at Rosario, seizing \$25,000 from his treasury and releasing 300 Spanish prisoners. He received the Silver Star Citation for his gallantry in action at Taal in 1900. The following year, having been promoted to the rank of captain, he was sent to China with the relief expedition sent out by the United States during the peace negotiations following the Boxer Rebellion. From 1903 to 1907 he was a member of the General Staff in Washington, being promoted at the end of this service to the rank of major. He was commissioned lieutenant-colonel in 1914 and colonel in 1916.

On the entry of the United States into the World War General Muir was made a brigadier-general in the National Army and was sent to Camp Jackson, S. C., to train the troops of the 81st Division. Transferred to Camp Logan, Texas, he trained there the troops of the 5th Division and at Camp Hancock, Ga., those of the 28th Division. Promoted to the rank of major-general, he accompanied the latter division, composed mainly of Pennsylvania National Guardsmen, to France and commanded it in the Battles of the Marne, St. Agnan, the Ourcq, the Vesle, and in the Meuse-Argonne offensive. After the Armistice General Muir was transferred to the command of the Fourth Army Corps of the American Army of Occupation in Germany, retaining the post until April, 1919. On his return to the United States he was stationed at Camp Merritt, N. J., during the muster-out of the 28th Division. His services in the World War were rewarded with the Distinguished Service Medal, the Victory Badge with six stars, and the Croix de Guerre with palms. He was also made Knight Commander of the British Order of St. Michael and St. George and Commander of the French Legion of Honor.

Commissioned brigadier-general in the Regular Army in 1919, General Muir served as commandant of the general service schools at Fort Leavenworth, Kans. While commanding Camp Lewis,

Wash., in 1921, he was commissioned major-general. From 1922 until his retirement in 1924 he was commander of the Third Corps Area with headquarters in Baltimore.

MUNICIPAL GOVERNMENT. Curtailment of all municipal operations except unemployment relief, and in some cities that as well, continued through the year 1933. Heavy debt service charges, the great burden of the unemployed, shrunken revenues as a result of uncollected taxes, and difficulties in borrowing money for current expenses, harassed the municipal officials and the people they served. Between the poor municipal credit and public sentiment against increasing the debt and tax burden, outlays for permanent municipal improvements were small in 1933. This in turn increased the number of the unemployed and the volume of relief expenditures. State aid was given in varying degrees but where this diverted funds from highway or other State construction work it reacted unfavorably upon the municipalities. Federal loans from the \$3,300,000,000 fund provided by the National Recovery Act (see UNITED STATES under *Administration*) did not provide the immense sums for municipal construction work that had been expected, due partly to the slowness of most cities in submitting programmes and other data required under the Act, partly to the rigid demands of the Recovery Administration, and partly to the inability of the many cities to finance their share of the outlays. Late in the year \$400,000,000 were set aside from the recovery fund to speed up construction work and take men from the unemployment relief rolls. This fund is under the control of a Federal Civil Works Administrator and of local administrators in each municipality, with no contribution from local funds and a minimum of red tape. (See UNITED STATES under *Administration*.) It is available for projects that can be got under way immediately.

Defaults on municipal bonds and short-term notes, either principal or interest (see *The Bond Buyer*, New York, for classified summary of a thousand defaults, reported up to May 5, 1933), together with pressure for renewals of old grants and for new loans, gave grounds for bankers to continue their demands for reduced and balanced budgets (see 1932 YEAR BOOK). At the close of the year both *New York City* (see NEW YORK under *Political and Other Events*), and *Newark*, N. J., were forced into financing plans dictated by the bankers, the one for New York providing that the tax on real estate should not be increased during the next four years, that the 1934 budget must be reduced and new revenues found. Public sentiment continues not merely for lower tax rates but also for making them imperative through statutory provisions or, more rigid still, by constitutional amendment. A new statutory limit in *Indiana* and a new constitutional limit in *Michigan* were noted in the 1932 YEAR BOOK. Three other States must be added: *West Virginia*, *Oklahoma*, and *Ohio*. On July 1, there became effective in *West Virginia* a constitutional amendment—adopted in November, 1932, by an 8 to 1 popular vote—setting a limit on the real estate tax rate. The Legislature apportioned the total rate between the State, counties, boards of education, and cities, leaving the cities little to go on. According to the October issue of *Public Management* (Chicago) "most of the cities of *West Virginia* were able to raise, under the levy limitation amendment, only enough revenue to pay debt

service charges for the current year." Acting on a suggestion of the State tax commission, many of the tax levying bodies of the State kept their levy for operating expenses within the constitutional limit but went beyond it for debt service charges. In a suit brought against *Huntington* to enjoin it from such a course the State Supreme Court ruled (*Engineering News-Record*, Oct. 19): "Regardless of constitutional limits on levies, old obligations must be paid and paid from restricted levies before any money is given to current expenses." This left *Huntington*, *Morgantown*, *Wheeling*, and other cities with almost no funds for police, fire, street, sewerage, garbage disposal, and public lighting purposes. An application for a rehearing of the case was pending in October. The *Oklahoma* amendment cut the tax limit for the State and all local governments from 43.5 to 27 mills. The combined rate of counties, cities, and school districts cannot exceed 15 mills, except that 10 mills additional may be authorized by popular vote. The 15 mills is said to be barely enough for current expenses after budget slashing, leaving nothing for permanent improvements. The Ohio tax limit, adopted by the voters on November 7, is only 10 mills.

CITY MANAGERS. Adoption of the council-manager plan at *Asbury Park*, N. J., by some 3700 to 3000 votes brought the total number of manager cities up to 450 adoptions that accord with the *Model City Charter* of the National Municipal League. In addition, 165 other places have the plan in some modified form. Most of these places are in the United States but some are in Canada and other English-speaking countries. For distribution by States and by other countries and much other information on city managers and municipal government see *The City Manager Year Book*, (Chicago). *Henrico County*, Va., adopted the county-manager plan on September 19, while in June *Princess Anne* and *Northampton counties*, Va., defeated it by popular vote. Across the continent, *Sacramento County*, Calif., voted to have a city manager. The movement for the consolidation of counties and of cities and counties makes slow progress. In *Texas*, a county home-rule constitutional amendment was adopted by a large popular majority on August 26. It authorizes such reorganization and mergers of local units as promise to give increased economy and efficiency in the 13 counties of the State having populations of more than 62,000 by the 1930 census. In *Florida*, a constitutional amendment authorizing the consolidation of the City of *Jacksonville* and *Duval County* will go to referendum vote in 1934. In *Georgia*, a merger of the City of *Macon* and *Bibb County* was defeated in August by a small majority. The governor of Wisconsin vetoed a bill which would have enabled electors of *Buffalo* and *Pepin Counties* to vote on consolidation but signed an act allowing adjoining towns to consolidate, on petition signed by the owners of two-thirds of the taxable property, if approved by popular vote.

BIBLIOGRAPHY. Among the many new publications in this field are: *Andrews, County Government in South Carolina* (Chapel Hill, N. C.); *Bromage, American County Government* (New York); *Finnegan, Tammany at Bay* (New York); *Griffith, Current Municipal Publications* (Boston); *Harris, Local Government in Many Lands*, second edition (London); *Merriam, Parrott, and Lepawsky, The Government of the Metropolitan Region of Chicago* (Chicago); Na-

tional Municipal League, *Model City Charter* (New York), the council-manager brought to date—the first edition, dealing with the “strong” mayor and council man, appeared in 1900; Rightor, *Bonded Debt of 277 Cities as of Jan. 1, 1933, and Comparative Tax Rates of 284 Cities, 1933* (reprints from *National Municipal Review*, New York); Schlesinger, *The Rise of the City, 1878–98*, vol. x of “A History of American Life” (New York); Seasongood, *Local Government in the United States* (Cambridge); Snavely, Hyde, and Briscoe, *State Grants-in-Aid in Virginia* (New York) also gives data on 14 other States; Wells, *German Cities; a Study of Contemporary Municipal Politics* (Princeton).

MUNICIPAL OWNERSHIP. The finances of cities, the bond market, and the state of the public mind in regard to any increase of municipal debts have not been conducive of late to new ventures in municipal ownership. Notwithstanding this cities have held fast to the utilities already in their possession and have authorized some new ventures. A number of cities voted down municipal acquisition of utilities in October and November, but in magnitude of projects the votes for municipal ownership were far in the lead. The largest of the latter was at *Detroit*, on Nov. 7, where by a 2 to 1 vote an outlay of nearly \$88,000,000 was authorized for a rapid transit system, including subways and elevated railways, to be financed by mortgage bonds secured by the property and revenue of the system. The bond issue was limited to whatever amount may be provided under the National Recovery Act (see UNITED STATES under *Administration*). Application has been filed for a grant of \$26,000,000 and a loan of \$62,000,000, on the assumption that the project will be self liquidating. In addition to the action just noted, voters of Detroit and vicinity authorized the creation of a Port of Detroit Authority and a \$60,000,000 bond issue for port development, the whole of Wayne County to be included in the port district. *Camden, N. J.*, voted \$10,000,000 for an electric light and power plant on November 7, as did *Sandusky, Ohio*, \$1,400,000. On November 25, *Knoxville, Tenn.*, approved by a vote of about 4500 to 2500 a \$3,225,000 bond issue for a municipal system to utilize electric light and power from Muscle Shoals, the current to be brought from the Tennessee Valley Association, one of the large developments under the National Recovery Act. (See UNITED STATES under *Administration*). The city has applied to the NRA for a loan to cover the amount voted. The proposal was fought by the Anti-Bond Association of some 1200 members, as well as by the Tennessee Public Service Co., a subsidiary of the National Power & Light Co. It is reported that the company will compete with the city in supplying light and power. On October 20, *Bessemer, Ala.*, voted in favor of municipal ownership of both electric and water plants, services now being rendered privately. Seven other *Alabama* cities voted in favor of municipal ownership of electric light and power plants. Of these, *Sheffield*, *Florence*, and *Muscle Shoals* are adjacent to the Federal hydro-electric plant at Muscle Shoals. The other five are: *Guntherville*, *Hartsell*, *Russellville*, and *Tarrant City*. Another small *Alabama* city that recently voted against municipal ownership of its electric lighting service was *Hammond*. A more notable defeat of municipal ownership occurred in November at *Birmingham, Ala.*, where, besides voting down municipal

operation of electric light and power facilities by some 9700 to 6900 ballots, three other projects were defeated: street railway, 12,400 to 3,800; central steam heating system, 12,100 to 3,800; water-works, 10,000 to 6400, a much better showing than for the other projects. *Birmingham* is one of 9 of the 93 cities in the United States above 100,000 population that does not own and operate its water-works. Had *Birmingham* voted for electric light and for street railway ownership it would have bought power from Muscle Shoals. In other parts of the country electric bonds were defeated on November 7 as follows: *San Francisco*, a large sum for an additional electric generating plant, as well as for a transmission and distribution system; *Salt Lake City*, \$18,000,000 for an electric power plant; and at *Youngstown*, \$500,000 for municipal electric light service. *Cincinnati* voted decisively against taking over the privately-owned gas and electric works. In the 1932 YEAR BOOK the ownership of water-works in the United States was given as 7853 publicly against 2936 privately owned, or 73 and 27 per cent respectively. A summary made especially for this YEAR BOOK, based on heretofore untabulated data given in *The Canadian Engineer* (Toronto) for Mar. 28, 1933, shows that of 582 water-works systems in the Dominion, 488 are publicly and 83 privately owned, with 11 of un-stated ownership, giving percentages of 84, 14, and 2, respectively. The 84 per cent of municipal ownership in Canada compares with 73 per cent in the United States. In both countries the largest cities own their water-works and the population publicly supplied is very much above that privately supplied. See Cooke (editor) *What Electricity Costs* (New York).

MUNICIPAL PLANNING. See CITY AND REGIONAL PLANNING.

MUNRO, DANA CARLETON. An American educator and historian, died in New York City, Jan. 13, 1933. He was born at Bristol, R. I., June 7, 1866, and was graduated from Brown University in 1887. He also attended the Universities of Strassburg and Freiburg (1889–90). In 1912 he received the degree of L.H.D. from Brown University. He was successively instructor and assistant professor of Roman and medieval history at the University of Pennsylvania from 1893 to 1902 and professor of European history at the University of Wisconsin from 1902 to 1915. He then became Dodge professor of medieval history at Princeton University, serving also from 1916 to 1928 as chairman of the history department at that institution. During the World War he was research assistant to the Committee on Public Information (1917–1918) and chairman of the National Board for Historical service (1918–19). He was president of the Wisconsin Academy (1912–15), of the American Historical Society (1925–26), and of the Medieval Academy (1930–33). He was also a fellow of the Royal Historical Society.

Dr. Munro published *Medieval History* (1902); *Essays on the Crusades* (joint author, 1902); *A Source Book of Roman History* (1904); *Medieval Civilization* (joint author, 1904, part ii, 1906); *Syllabus of Medieval History* (8th ed., 1919); *German War Practices* (1917); *German Treatment of Conquered Territory* (1918); and *The Middle Ages* (1921). He served as editor of *Translations and Reprints from the Original Sources of History* (1894–1902), and in 1928–29 was managing editor of the *American Historical*

Review. He was also editor of the department of medieval history for the *NEW INTERNATIONAL ENCYCLOPEDIA*.

MURAL PAINTING. See **PAINTING**.

MURRAY, SIR DAVID. A British painter, died in London, Nov. 14, 1933. He was born in Glasgow, Jan. 29, 1849, and studied at the Glasgow Art School. After devoting 11 years to business he turned to landscape painting and in 1882 removed to London. Elected an associate of the Royal Academy in 1891 and an academician in 1905, he exercised a marked and salutary influence on contemporaneous British landscape painting. His color, especially in his earlier works, was fresh and brilliant, his handling dexterous, and he delighted in delicate detail and movement. His subjects were chiefly landscapes of the Trossachs, Picardy, southern England, the Isle of Lewis, and the Italian lakes, and marines from the Dorset coast. Among the best known were "My Love has Gone a-Sailing," "In the Country of Constable," "Loch Linne near Port Appin," "River Road," "View of Windsor," "Mangolds," "Gorse," "Hampshire," and "Long After." Sir David served after 1917 as president of the Royal Institute of Painters in Water Colors and in 1918 was created a knight.

MUSIC. **GENERAL NEWS.** Economic conditions and the depletion of patrons' purses after four years of hard times again played a prominent part in the course of the musical events of 1933 in the United States, while in Europe the principal outside influence of the year was the advent to power of the Hitler régime in Germany and the effects upon music and musicians of its nationalistic and racial policies. This overshadowed to some extent what would have been the principal features of the year under normal conditions, the observances of the fiftieth anniversary of the death of Richard Wagner and of the hundredth anniversary of the birthday of Johannes Brahms.

Although many thought that the nadir of the depression had passed by the beginning of the spring, the after-effects of a long period of adverse conditions caused economic difficulties among several of the principal American musical organizations at the end of the season of 1932-33. The Metropolitan Opera Association of New York, the only permanently organized resident opera company in the country giving an extensive season, announced in February that its resources had been exhausted and that its continuance was doubtful, but was enabled to go on by the success of a campaign to raise a guarantee fund of \$300,000. Several symphony orchestras faced the possibility of suspension in the spring, but all the principal organizations were enabled to continue, although in some cases with shortened schedules. A revival of interest in opera marked the second half of the year.

The house-cleaning policy of the new German régime, which proceeded against musicians not meeting the requirements of unimpeachably Aryan ancestry or believed to be out of sympathy with the ruling party's ideas, began to attract international attention in March when Bruno Walter, who had been prevented from conducting in Berlin and Frankfurt-am-Main, relinquished his post as conductor of the Leipzig Gewandhaus orchestra and left the country.

Fritz Busch, general music director of the Dresden Opera, was ousted soon afterwards. Although of Aryan descent, he was said to be in-

sufficiently in sympathy with Nazi ideas; being charged with having too liberal a policy toward foreign artists at the opera house, and also with accepting too many outside engagements. With him went the Intendant of the Dresden Opera, Dr. Alfred Reucker. In June, Otto Klemperer was told to resign from his musical directorship at the Berlin State Opera, under the non-Aryan section of the Civil Service Act, and Franz Schreker and Arnold Schönberg received indefinite leaves of absence from their professorial posts in the Prussian Academy of Fine Arts. Schönberg went first to France, then, accepting an invitation to come to America to teach composition for the Malkin Conservatory of Music in Boston, arrived there late in October.

Musical affairs were included in the State corporation scheme with the organization of a sub-chamber for music, controlling activities in public performance and in official organizations, as part of the State Chamber of Culture, with Richard Strauss as president and Wilhelm Furtwängler as vice-president.

Musicians living outside of Germany lost little time in protesting against the hardships of this kind which were inflicted on their colleagues. On April 1, ten prominent musicians living or working in the United States sent Chancellor Hitler a cable requesting him to modify the anti-Jewish policy which had affected so many of their fellow-artists. Arturo Toscanini, at his own request, headed the list of signers. This aroused uncertainty as to whether he would fill his engagement in the summer's Wagner festival at Bayreuth, of which town he had been made an honorary citizen on February 11 in connection with the Wagner anniversary observance. No action was taken against him on account of his participation in this appeal, except for the temporary barring of his records from radio programmes, but early in June he made public a message he had sent to Mme. Winifred Wagner, stating that since the policies which grieved him had not been changed, he felt compelled to withdraw from Bayreuth.

Furtwängler, who had come to occupy a dominating position in German musical affairs by the latter part of the year, took an early stand against the extreme application of racial and political considerations to musical matters, making representations to Dr. Joseph Goebbels in April. Modifications in this regard had begun to be made in June, when State Commissioner Hans Hinkel gave out a statement that the free artistic activities of foreigners and non-Aryans should not be hindered.

Although the most intensive observances of the fiftieth anniversary of Wagner's death took place in Germany and Austria, its observance was virtually world-wide. The principal ceremony in Germany took place at Leipzig, where a memorial concert under Dr. Karl Muck was attended by Mme. Winifred Wagner, the composer's daughter-in-law, and by Chancellor Hitler and other high officials of the government. Max von Schillings delivered the memorial address. In the memorial ceremony at Bayreuth on the exact date of the anniversary, February 13, the freedom of the city was conferred upon Mme. Wagner, Wagner's surviving step-daughters, Eva Chamberlain, Daniela Thöde, and Blandina Gravinga, as well as Arturo Toscanini. In Vienna, President Miklas opened a Wagner memorial exhibition in the Konzerthaus on February 13, when the Staat-

soper presented *Parsifal* and the Volksoper, *Die Meistersinger*. A Wagner museum at Tribschen, the villa near Lucerne where Wagner had lived during the composition of *Tristan und Isolde*, was opened on July 30. In America most of the symphony orchestras played Wagner programmes in the neighborhood of the anniversary date, while the Metropolitan Opera in New York presented a special performance of *Parsifal*.

The most important festival in observance of the centennial of Brahms' birth (May 7) took place in Vienna from May 16-22, under the auspices of the Deutsche Brahms Gesellschaft and the Vienna Friends of Music. Furtwängler, as head of the former organization, made the memorial address: the heads of the German and Austrian governments bestowed their patronage on these occasions. Another important festival was held in Hamburg, Brahms' native city.

On June 2, Dr. Frank Damrosch, head of the Institute of Musical Art of New York (for the last few years a part of the Juilliard School of Music) resigned after twenty-eight years' service, and was succeeded as dean by Ernest Hutcherson, who is also dean of the Juilliard Graduate School.

Philip Hale, music critic of the Boston *Herald* and programme annotator for the Boston Symphony Orchestra, resigned from both positions in the autumn owing to advancing years and ill health. The dean of American writers in this field, he was highly esteemed both for his critical judgment and the extent of his musical knowledge.

ARTISTS. As a result, direct or indirect, of the policies of the new German régime, several prominent musicians changed the scenes of their activities. Three principal figures among the conductors who had been ousted from German positions, Bruno Walter, Otto Klemperer, and Fritz Busch, soon found opportunity elsewhere. Another musician of note who had left Germany in 1933 was Artur Schnabel, who, in January, had played all of Beethoven's piano sonatas in seven Berlin programmes. Later he gave a similar series in London, and, in October, came to the United States for a short tour, giving all-Beethoven recitals, and appearing as soloist with the principal orchestras. The high accomplishment and sincerity of his art and the thoroughness of his musicianship won him unusual success in his American appearances.

Ignace Jan Paderewski, in his seventy-third year, made an American tour early in the year, and planned to return in the season of 1933-34, but early in November acute neuritis made him cancel all his concert engagements, and his condition was causing some apprehension by the end of 1933.

During the last few years, most of the child prodigies who had been successful on the concert stage had been violinists, but in this class the feature of 1933 was the work of an eight-year-old American pianist, Ruth Slenczynski, who, after a Paris appearance early in the year, made her New York début in a recital on November 13, astounding the critics by her technical talent and the maturity of her musicianship.

Lily Pons, the Metropolitan Opera Company's French coloratura soprano, who, having sung only in French provincial opera companies before coming to New York, had not yet been heard in the

French capital, made her first Paris appearance in a benefit concert with the Paris Symphony under Pierre Monteux on May 29.

With conditions militating against the obtaining of the necessary financial backing, there were fewer début recitals in New York and other large American cities, and few, if any new names appeared in the list of artists who had won a national reputation.

The National Federation of Music Clubs held its biennial competition for young artists during the first part of the year. In the finals at Minneapolis on May 24 during the Federation's biennial convention the winners were Marion Clayton, organist; Edward Austin Kane, singer; Louise Essex, cellist, and Dalles Frantz, pianist. The Schubert Memorial, of New York, chose the last two artists for its sponsorship, and arrangements were made for the appearance of Mr. Frantz as soloist with the Philadelphia Orchestra the following January.

CHAMBER MUSIC. The Adolf Busch String Quartet, with Rudolf Serkin, German pianist, paid their first visit to America in April to take part in the Library of Congress Festival in Washington sponsored by the Elizabeth Sprague Coolidge Foundation (see *American Festivals*), and also made its New York début in an invitation concert April 26. Mrs. Coolidge, who has long been noted as the chief American patron of chamber music, presented the Pro Arte Quartet of Brussels in three October concerts for the Chicago Society of the Friends of Music. In November, she presented the same ensemble in four concerts in the Boston district, including a Cambridge concert in which Arnold Schönberg was the guest of honor at a performance of his second quartet. The Pro-Arte group also played in Schönberg programmes given in New York and Washington in honor of the composer.

The League of Composers, of New York, which had done much to bring forward new chamber music and works for small orchestra, celebrated its tenth anniversary with a concert on April 2, when Francesco Malipiero's *Epodi ed Iambi* was played for the first time. In its next concert, April 16, Leopold Stokowski conducted a revival of Schönberg's *Pierrot Lunaire*, which, critics found, had "dated."

London had a generous supply of chamber music programmes throughout the music season, with the Lener and Adolf Busch quartets among the foreign visitors. On February 17, the Kutscher Quartet and Frederick Thurston gave the first performance of Arthur Bliss's new quintet for clarinet and strings at Wigmore Hall; another new work by Mr. Bliss, a sonata for viola and piano, was introduced by Lionel Tertis and Albert Sammons on November 3. In connection with the Brahms anniversary, all his chamber music works were played in May in a series of eight concerts.

CHORAL SOCIETIES. Choral activities, as far as the presentation of large-scale works was concerned, were at a rather low ebb in New York during 1933, although the Oratorio Society, according to custom, gave Bach's B minor Mass on May 2 and Handel's *Messiah* December 27. The Schola Cantorum, the city's other large concert chorus, gave no concerts of its own, although it took part in two orchestral programmes.

An interesting, while ancient novelty was provided by a group from Margarete Dessoff's choirs, which presented on March 13 the first American

performance of Orazio Vecchi's humorous late sixteenth century "harmonic comedy," *L'Amfiparnasso*.

Local choruses, for the most part, held their own during the year in the United States, and some new ones were organized. The dean of American metropolitan choral groups, the Handel and Hayden Society of Boston, reviewed Elgar's "The Dream of Gerontius" on April 23 under Thompson Stone. On February 21 the Apollo Musical Club of Chicago gave a new cantata, "The Bird Woman" by William Lester; its idiom was described as American in texture but somewhat reminiscent of Massenet.

In Toronto two new choruses, the Philharmonic Society under Matthias Turton and the Bach Choir under Reginald Stewart, both gave their first concerts in April.

One of London's 1933 choral novelties was Hindemith's *Das Unaufhörliche*, introduced in a B.B.C. Orchestra concert in March under Sir Henry Wood. In Berlin, Otto Bochum's oratorio *Der Jungste Tag*, given in March by the Singakademie under Georg Schumann, was one of the season's principal novelties. A short "Choros" on a fourteenth century subject by Anton van den Horst, given in the winter at Amsterdam by the Residentie Orchestra under the composer, was regarded as the most striking recently composed Dutch choral work.

AMERICAN FESTIVALS. The Library of Congress Chamber Music Festival, one of a series held in Washington at approximate intervals of eighteen months, took place from April 23 to 25. The Juilliard School of Music, of New York, presented Cimarosa's opera *The Secret Marriage* under Albert Stoessel's direction. The Adolf Busch String Quartet played works of Pizzetti, Busch, and Beethoven. Serge Koussevitzky conducted a chamber orchestra of Boston Symphony players in Aaron Copland's *Music for the Theater*, Stravinsky's Octuor, Ravel's Introduction and Allegro for flute, harp, and strings and Hindemith's *Kammermusik* No. 1. The Laurent Wind Quintet of Boston and the Kroll Sextet of New York played music by Bohuslav Martinu, Gustav Strube, and Schönberg, and the festival closed with a programme of violin and piano sonatas played by Busch and Adolf Serkin.

The thirtieth biennial May Festival in Cincinnati opened May 2 under the direction of Eugene Goossens, who conducted the Cincinnati Symphony and May Festival Chorus. The principal works performed were Handel's oratorio *Belshazzar's Feast* and scenes from Wagner's *Die Meistersinger*. Among the soloists were Emily Roosevelt, Margaret Matzenauer, Kathryn Meisle, Robert Steel, Herbert Gould, Richard Crooks, Dan Beddoe, and Ezio Pinza.

The third annual American Music Festival of the Eastman School of Music was held at Rochester, N. Y., from May 2-5 with the Rochester Philharmonic Orchestra, Eastman School Orchestra, Eastman Little Symphony and Eastman School Chorus taking part. Among the new works performed were Lawrence Powell's *Keltic Legend*, William Still's *From the Black Belt*, Irving Landau's Free Variations on a theme of Walter Mourant for orchestra, Bernard Rogers's Cantata *The Exodus*, and two ballets, Burrill Phillips's *Princess and Puppet*, and Still's *La Guaiablesse*. Howard Hanson was the festival director with Karl Van Hoesen, Samuel Belov, and Herman H. Genhart among the conductors.

After the death of J. Fred Wolle in January, it was feared that the historic festivals of the Bach Choir of Bethlehem, Pa., would have to be abandoned, but the 1933 festival was represented by a performance of the B minor Mass in memory of Dr. Wolle on May 13 under the direction of Bruce Carey of Philadelphia. Later it was decided to continue with Mr. Carey as permanent conductor.

The principal feature of the University of Michigan festival at Ann Arbor was the world première in concert form of the opera *Merry Mount* with music by Howard Hanson, and book by Richard L. Stokes. This work, scheduled to have its stage première at the Metropolitan the following winter, was given on the closing day, May 20, with Leonora Corona, John Charles Thomas, Frederick Jagel, Rose Bampton, and Chase Baromeo as soloists. The Chicago Symphony Orchestra under Frederick A. Stock and Eric Delamarter and the University Choral Union under Earl V. Moore furnished the instrumental and choral background of the programmes, with Guy Maier and Lee Pattison, making their first appearance since the resumption of their two-piano partnership; Nina Koshetz and Grete Stückgold among the other soloists.

The annual festival of the Westchester Choral Society at White Plains, N. Y. was reduced to a single concert under Albert Stoessel's direction on May 19, with Albert Spalding, violinist, as guest artist with the chorus of 1200. In December Mr. Stoessel resigned owing to the pressure of his other work and was succeeded by Sandor Harmati, who began preparations for a three day series in 1934.

The third annual White Top festival at Marion, Va., on August 11 and 12, was devoted to Southern Appalachian balladry, folk music and dances.

The second festival of American music on the Yaddo Estate at Saratoga, N. Y. was held September 30 and October 1. The programme included a string quartet by Walter Piston, a concerto for string sextet by Roy Harris, works for voice with string quartet by Richard Donovan, Evelyn Berckman, and Dante Fiorillo, piano works by Ross Lee Finney and George Antheil, songs by Theodore Chanler, Charles Ives, Israel Citkowitz, and Roger Sessions and other works by Henry Cowell, Otto Luening, Charles Martin Loeffler, Quincy Porter, and Carl Ruggles. The Piston and Harris works were regarded as the outstanding items among the works performed.

The Worcester County Musical Association's seventy-fourth annual festival at Worcester, Mass. given October 2-7 under Albert Stoessel's direction, was the first to be held in the new municipal Memorial Auditorium. A Festival Fanfare and Chorale by Mr. Stoessel and a *Dedication* for organ by Walter Howe, both composed for the occasion, opened the first concert. The principal works performed were Cimarosa's *The Secret Marriage* given by the Juilliard School's opera group; Verdi's Requiem, Mendelssohn's *Elijah*, Stravinsky's *Symphony of Psalms*, Brahms's *Song of Destiny*, Vaughan Williams's *Toward the Unknown Region*, and Constant Lambert's *The Rio Grande*.

FOREIGN FESTIVALS. The Wagner festival at Bayreuth, Germany, began July 21 and closed August 20 with a schedule including eight performances of *Die Meistersinger*, five of *Parsifal*, and two of the "Ring" cycle. After the withdrawal of Arturo Toscanini six weeks before

the festival, Richard Strauss was engaged to conduct *Parsifal* while Karl Elmendorff, beginning his fifth Bayreuth season, took over *Die Meistersinger* in addition to his scheduled work with the "Ring." One *Meistersinger* performance was conducted by Heinz Tietjen, who had been appointed artistic director. New settings by Emil Praetorius were furnished for all the productions except *Parsifal*, which was given for the last time with the original sets of 1882.

Mr. Toscanini's withdrawal was one factor in reducing the foreign attendance at Bayreuth; the fall of the dollar in exchange value was another deterrent as far as Americans were concerned. Chancellor Hitler and other high officials attended the first series of performances, and the government bought and distributed several thousand tickets, besides giving the festival all possible publicity through officially controlled organs.

Chancellor Hitler took praiseworthy precautions against letting political demonstrations divert attention from the music-dramas. Notices were distributed urging those attending from hailing the Chancellor's presence or singing patriotic songs in the theatre; Wagner, it was pointed out, represented the highest possible tribute to German greatness. Still, according to certain foreign observers, this could not prevent a change in the prevailing atmosphere, which became political and nationalistic, instead of international and purely artistic, as before.

The annual Munich Festival, which began July 18, was again devoted to Wagner and Mozart, including the presentation of the former's works from *Rienzi* to *Parsifal* in chronological order; several of these with new settings by Adolf Linnebach. Hans Knappertsbusch conducted the Wagner performances and shared the Mozart repertoire with Paul Schmitz. Sir Thomas Beecham conducted an orchestral concert.

The Salzburg Festival began on July 29 in the face of difficulties from Germany, which had imposed the virtually prohibitive tax of 1000 marks on visitors to Austria; substitutes also had to be found for Hans Pfitzner and two or three German singers who had been prevented from filling their engagements. But, thanks especially to propaganda conducted in Great Britain and Belgium by the "Friends of Salzburg," visitors from other countries almost made up for the loss of the usual German contingent.

Conductors included Richard Strauss, Clemens Krauss, Bruno Walter, and Vittorio Gui, who substituted for Pfitzner. Strauss's *Die Aegyptische Helena* which had hitherto been popular only in Dresden, was presented for the first time in a revised version in which the second act was somewhat condensed and simplified.

The year's chief Italian festival was the "Musical May" at Florence, which began April 30. One feature was an international congress of musicians, at which papers were read in four languages on topics such as musical criticism, radio, the gramophone, films, contemporary operatic tendencies, interpretation and creation, diffusion of musical culture and international exchanges. Among stage works presented in the festival programme were Spontini's *La Vestale* in which the American soprano Rosa Ponselle made a much applauded Italian debut.

The eleventh annual festival of the International Society for Contemporary Music was held at Amsterdam from June 9 to 14. Among the

major presentations in a programme of choral, orchestral, chamber music works, and other works in smaller forms were Willem Pijper's opera *Heer Halewijn*, B. van Sigenhorst Meyer's *Canticum Fratris Solis*, J. N. Mul's *Mass Causa nostrae Laetitiae*, Diepenbrock's *Carmen Saeculare*, Guillaume Landre's first symphony and William Walton's *Belshazzar's Feast*.

In London, an orchestral festival from May 8-19, devoted partly to Brahms, was conducted by Adrian Boult and Serge Koussevitzky; Adolf Busch and Artur Schnabel appeared as soloists. The annual Dolmetsch Festival at Haslemere, devoted to early music played on instruments of contemporary type, began July 21.

The annual Three Choirs Festival was held at Hereford in September under the direction of Dr. Percy Hull. The programme included the Brahms Requiem and Elgar's *The Kingdom* and *The Apostles*, these conducted by their composer, and, as novelties, George Dyson's *St. Paul's Voyage to Melita* and Martin Shaw's *Sursum Corda*. A scene by Armstrong Gibbs for contralto and orchestra, *The Love-Talker*, was presented at a secular concert.

The Sheffield Festival was revived in November after a lapse of twenty years with Sir Henry Wood and J. F. Stater conducting and a programme including Kodaly's *Psalmus Hungaricus* and Mahler's Eighth Symphony (Symphony of a Thousand).

AMERICAN ORCHESTRAS: Bruno Walter began his second term as conductor of the Philharmonic-Symphony Orchestra of New York on Dec. 29, 1932, and closed it February 26. On January 4 he introduced to America the suite arranged by Richard Strauss from his ballet *Schlagobers* (Whipped Cream), a product of 1922 which found scant favor with the New York critics. January 19 brought the American premiere of Serge Prokofiev's suite *The Gamblers* derived from an opera based on a novel of Dostoevsky.

Arturo Toscanini, entirely recovered from the muscular trouble in his arm which had cut short his term in 1931-32, gave his first concert of the season March 1, when he presented the local premiere of Howard Hanson's second (Romantic) Symphony, which was marked by a somewhat self-conscious reversion to romanticism. A later, not particularly important, novelty was Alexander Wepruk's *Songs and Dances of the Ghetto*. Mario Castelnuovo-Tedesco's second violin concerto *The Prophets*, which received its world premiere April 12 with Jascha Heifetz as soloist, was acclaimed for its musicianship and lofty intentions, but its subject was considered too vast for any composer not of the class of Bach or Wagner.

Mr. Toscanini devoted his last five Sunday afternoons of the season, which closed April 23, to a Beethoven cycle including all the symphonies except the ninth. This drew capacity houses and was considered a high point of the season from the artistic point of view.

Although the Philharmonic-Symphony Society did not broadcast a public appeal for funds, it let it be known on March 14 that only by drastic economies had it been made possible to continue for another season. The musicians took their second pay cut in two years; the conductors, it was said, had also agreed to reduce their stipends. It was decided to discontinue the concerts in Brooklyn and at the Metropolitan Opera House, replacing these by a new Sunday series at Carnegie

Hall, and, except for one concert in Hartford, all appearances outside of New York.

The new season, the ninety-second counting from the foundation of the Philharmonic Society and the sixth since the amalgamation with the Symphony Society of New York, began October 5 under Bruno Walter's direction. His first novelty, introduced to America October 14, was the late Leos Janacek's rhapsody *Taras Bulba*. An American work, Randall Thompson's second symphony, was played for the first time in New York, November 2. It won unusual acclaim, for a novelty, and, while not regarded as a work of genius, was considered well wrought and pleasing. Richard Strauss's rarely heard *Macbeth* was revived November 2. 1929—*A Satire* by David Stanley Smith, dean of the Yale University School of Music, was introduced to New York November 15. It was expertly scored and effective as a representation of its subject (the emotions besetting the American public before and after the stock market crash of 1929) but was hampered by slightly excessive length and insufficiency of salient thematic material. Arnold Bax's *Summer Music* and *Overture to a Picturesque Comedy* were played for the first time in New York November 22; the first of these was regarded as often exquisite and poetic.

Hans Lange began his mid-season share of the Philharmonic Symphony schedule December 21, reviving Vaughan Williams's Pastoral Symphony, which had been heard in New York only once before in 1922. Nikolai Lopatnikoff's first symphony, played December 28, was the last novelty of the year.

The orchestra also took part in the sixteenth summer season of outdoor symphony concerts at the Lewisohn Stadium from July 29–August 23. Willem van Hoogstraten conducted most of the symphony concerts, while Leon Barzin and Hans Kindler directed five each. José Iturbi directed two concerts in August in which he doubled as conductor and piano soloist with successful results.

The New York Orchestra, a coöperative group of ninety musicians, invited Nikolai Sokoloff, who was closing his long career with the Cleveland Orchestra, to be its conductor. Mr. Sokoloff gave a preliminary concert at Carnegie Hall on January 16, and, during the summer, conducted the orchestra in a tri-weekly symphony concert series on his estate at Weston, Conn.—a mere hamlet, but accessible by automobile from the principal centres of Fairfield County.

The series of large-scale concerts arranged by Walter Damrosch at Madison Square Garden for the benefit of the Musicians' Emergency Fund continued with a Beethoven programme January 25, in which the finale of Beethoven's Ninth Symphony was presented choreographically as a *Pageant Pantomime of World Peace*. On April 3, both Fritz Kreisler and Sergei Rachmaninoff appeared as soloists. The 1933–34 series began with a Bach-Wagner programme November 18, followed by other concerts on November 25 and December 9.

The Musicians Symphony Orchestra, organized in March, 1932, to give work to worthy instrumentalists out of regular jobs, closed its series on May 2. Two of its 1933 concerts were conducted by a California girl, Antonia Brico, and others by Georges Enesco, Sandor Harmati, Vladimir Golschmann, and Henry Hadley; the Wiener Saengerknaben and the Hall Johnson

Negro Choir, besides various prominent soloists, appeared as assisting artists. On March 10 Ignace J. Paderewski appeared in a special concert under Ernest Schelling's direction.

A valuable contribution to the New York orchestral season was made by the training orchestra of the National Orchestral Association, which gave concerts for subscribing members who paid very moderate fees. It introduced Nicolai Berezowsky's Fantasy for two pianos and orchestra February 14, Vladimir Dukelsky's first symphony April 4; Arnold Zernachson's chorale and fugue October 31 and William B. Dinsmore's *Elegie* December 12.

The New York Civic Orchestra, of unemployed musicians, began giving free concerts in museums in the spring under the auspices of the Gibson Relief Committee; later its support was taken over by the New York State Department of Education.

The Philadelphia Orchestra closed its thirty-third season April 30. During the seventeen weeks since the first of the year, Leopold Stokowski had conducted for nine weeks, and Issay Dobrowen for six, while Eugene Ormandy and Alexander Smallens shared the remaining concerts. Novelties offered in this period were few, the only American premiere in the regular programmes being Alexander Weprick's *Songs and Dances of the Ghetto* introduced by Mr. Dobrowen March 10. Mr. Stokowski presented the whole of Wagner's *Parsifal* in three installments on March 31, April 1, and 3. On April 27 and 30, two "wired transmission" concerts were given with Mr. Smallens conducting and Mr. Stokowski operating the controls regulating the volume and proportion of sound. Both concerts were given at the Academy of Music, the audience listening to the first in Washington and to the second in the Academy's foyer; the results of the experiment were enthusiastically described. Another innovation was two "youth" programmes conducted by Mr. Stokowski for hearers between twelve and twenty-five years old; these were continued the following season.

Like several other American orchestras, the Philadelphia Orchestra faced a difficult financial situation at the end of the season, and was not assured of beginning another until May 27, when the musicians agreed to a further pay cut of 9 per cent, to be made only if conditions in the new season should demand it.

The thirty-fourth season began October 5 under Mr. Stokowski, who conducted for the rest of the year, except for three weeks under Mr. Ormandy and one under Mr. Smallens. Werner Josten's *Concerto Sacro* No. 1 had its local premiere October 13, and Roger Sessions's suite from *The Black Maskers* October 20. Frances McCollin's Adagio and Irene Pickhardt's *Mountains* were both played for the first time November 3; Henry Eichheim's *Bali*, first played in a "youth" concert in April, entered the regular series December 1.

The fourth summer series in Robin Hood Dell, with an orchestra consisting mainly of Philadelphia Orchestra players, ran from July 6 to August 30. Unlike the New York Stadium concerts, it was unusually well attended, the receipts wiping out a \$7000 deficit left over from 1932. This was attributed mainly to the introduction of opera (see under *Opera*) on Monday and Tuesday evenings.

The Boston Symphony Orchestra closed its

fifty-second season and its ninth under Serge Koussevitzky's direction with a Brahms festival April 26 to 30 in commemoration of the Brahms centenary. Dr. Koussevitzky conducted all the concerts of the first part of 1933, except in January when Richard Burgin, the concertmaster, and Albert Stoessel held the baton for a week each. On January 20, Mr. Stoessel gave the first concert performance of Philip James's "Station WGBZ," which had won first prizes in the National Broadcasting Company's composers' competition in 1932.

Dr. Koussevitzky gave the world première of Louis Gruenberg's symphony, a work composed in 1919 and revised in 1929, on February 10. A Sinfonietta by Edward Burlingame Hill, of the Harvard musical faculty, was introduced in a Cambridge concert March 9. William Walton's *Belshazzar's Feast*, regarded in England as the principal choral work produced in 1931-32, was performed for the first time in America March 31, with the assistance of the Cecilia Society. *Rebus, an Imaginary Ballet* by Igor Markevitch, a twenty-year-old Russian living in Paris, had its first performance in a New York concert of the Boston Symphony on April 6. Critical comment ran from fairly favorable to distinctly condemnatory, but, nothing daunted, Dr. Koussevitzky introduced another Markevitch work, *Introduction and Hymn* to Boston December 15 in a programme including the world première of Emerson Whithorne's suite *Moon Trails*.

The new season opened October 6. Its first novelty was Nicolai Tcherepnin's Three Pieces for Orchestra, based on Poe's *Masque of the Red Death* (October 13). American premières were afforded Honegger's third *Mouvement Symphonique* November 3 and Gabriel Pierné's *Divertissement on a Pastoral Theme* November 10. Arthur Lourié's *Sinfonia Dialectica* was introduced to Boston December 1. Richard Burgin relieved Dr. Koussevitzky for the concerts of November 24-25.

The Chicago Symphony Orchestra closed its forty-second season April 21 and began the next October 6, a week earlier than usual to accommodate visitors at the Century of Progress Exposition. Most of the concerts were conducted by Frederick A. Stock, who has directed this orchestra since the death of Theodore Thomas in 1905, while the others were under the direction of Eric Delamarter, the assistant conductor, who gave the first performance of his third symphony, in E major, on February 16. Schönberg's *Gurrelieder* was introduced to Chicago, January 10. The first symphony of Felix Borowski, programme annotator for this orchestra, had its world première March 16. John Alden Carpenter's *Sea Drift* was played for the first time November 30.

A financial crisis and threat of discontinuance—which, a Chicago critic noted, had become an annual affair—was announced in the spring, but the problems of beginning a new season had been solved by June, when the orchestra gave a series of concerts at the Auditorium in connection with the Exposition. Mr. Stock conducted most of these programmes, with Rudolph Ganz and Karl Krueger as guest leaders.

In January Artur Rodzinski, conductor of the Los Angeles Philharmonic, was invited to succeed Nikolai Sokoloff as conductor of the Cleveland Orchestra, and began his first Cleveland season October 25. The following week, in a

Polish programme, he gave the American première of Karol Szymanowski's fourth *Symphonie Concertante* for piano and orchestra. An innovation was a stage production of Wagner's *Tristan und Isolde* given in the regular series at Severance Hall November 30 and December 2; the public response resulted in a third performance December 4.

The Detroit Symphony closed its season March 4 after giving the regular number of concerts within a period shorter than before. The 1933-34 schedule, beginning November 2, was reduced from sixteen to fourteen pairs of subscription concerts. Ossip Gabrilowitch continued as conductor throughout the year, assisted by Victor Kolar. On January 19, Rudolph Ganz conducted the Detroit Orchestra in the first performance of his humorous suite *Animal Pictures*.

Eugene Goossens, conductor of the Cincinnati Symphony Orchestra, was kept out of action by a long illness from February until the last week of the season; during this period Vladimir Bakaleinikoff, the assistant conductor, Eugene Ormandy, and Walter Damrosch conducted in his stead. In January, Mr. Goossens presented the first performance of Leopold Godowsky's *Java* suite. The new season began October 10 with a schedule of sixteen pairs of symphony concerts and ten "popular" concerts. Tickets, as in the case of some other mid-Western orchestras, were reduced in price.

The St. Louis Symphony Orchestra closed its fifty-fourth year and its second season under Vladimir Golschmann on March 25. The new season (1933-34) opened on November 3. Mr. Golschmann offered his hearers a considerable proportion of new music, including Two Symphonic Movements by Alexander Tansman in January; Alexander Steinert's *Symphonic Legend* in February; Roussel's *La Ville Rose* on November 3 and Maurice Jabot's *Suite Française* November 10. The Minneapolis Symphony, under Eugene Ormandy, began its thirty-first season October 29. In Kansas City the new Philharmonic Orchestra of eighty-five musicians gave its first concert November 28.

William Andrews Clark, Jr. the sole guarantor of the Los Angeles Philharmonic Orchestra, announced in December, 1932, that he would withdraw after the close of the 1933-34 season, and various civic groups conferred at intervals during 1933 about ways of supporting the orchestra during the future. Otto Klemperer, who had been removed from his Berlin post owing to the racial policy of the Nazi régime, was appointed as Artur Rodzinski's successor, and conducted his first Los Angeles concert October 19.

The annual summer series at the Hollywood Bowl was jeopardized in the spring when the musicians balked at a thirty per cent pay cut, but matters were finally adjusted under a re-organized sponsoring group. The series consisted of thirty-two concerts within eight weeks, conducted by Sir Hamilton Harty, Ossip Gabrilowitch, Raymond Paige, Pietro Cimini, Ernest Lert, and others. Charles Wakefield Cadman's *Dark Dancers of the Mardi Gras* was played for the first time August 8.

During Issay Dobrowen's absence in the East early in the year, the San Francisco Symphony Orchestra was conducted by Alfred Hertz and Bernardino Molinari; Mr. Dobrowen was engaged as sole conductor for the 1933-34 season, which began December 8. It was planned to have Arturo

Toscanini as guest conductor in December, but his visit was postponed until the following spring. The orchestra gave the usual summer series at the Exposition Auditorium and at Hillsborough, Calif.; the former series was curtailed by the exhaustion of available funds. The Seattle Symphony under Basil Cameron and the Portland Symphony under Willem van Hoogstraten continued their activities; the former, in January, gave the American première of *No. 3 Beaufort* by the Finnish composer Uuno Klami. The National Symphony Orchestra of Washington, D. C., began its third season under Hans Kindler's conductorship in the fall, while the Rochester (N. Y.) Philharmonic Orchestra continued its policy of guest conductors.

FOREIGN ORCHESTRAS. In contrast with the financial difficulties faced by most of the major American orchestras, London had a boom in orchestral music during 1933, with three groups giving regular seasons; the B. B. C. Orchestra with Adrian Boult as regular conductor; the London Philharmonic under Sir Thomas Beecham and the London Symphony under Sir Hamilton Harty, who resigned from the Halle Orchestra of Manchester in February. There were also the Courtauld-Sargent concerts with Malcolm Sargent as chief conductor, while the London Philharmonic also played in the Royal Philharmonic Society's concerts, a series which, nearly moribund a year or two before, was increased from eight to eighteen concerts in 1933-34. The Berlin Philharmonic, under Furtwängler, appeared in London in February.

The thirty-ninth annual season of Promenade Concerts under Sir Henry Wood was held from August 12 to October 7, with six British composers conducting their own music as guests.

Although the standards of the orchestras of Paris were not regarded as on a par with those of the larger cities of America or Germany, they outstripped these in their number and in their devotion to indigenous music. The chief orchestras active in 1933 were the Colonne under Paul Paray, the Lamoureux under Albert Wolff, the Paris Symphony under Pierre Monteux, the Pasdeloup under Piero Coppola, the Poulet under Emile Cooper, the Conservatoire under Philippe Gaubert and the Walter Straram Orchestra. The most noted foreign visitor to appear with a Paris orchestra was Arturo Toscanini, who led the Straram group in three concerts in October.

The changes of personnel imposed by the new régime considerably altered the roster of German conductors. The regular features of the Berlin season were the Philharmonic concerts under Furtwängler and Erich Kleiber and Kleiber's concerts with the State Opera Orchestra.

Carl Schuricht was appointed conductor of the Gewandhaus Orchestra of Leipzig, and Werner Ladwig and Walter Stoeper took over the Dresden Philharmonic concerts after Fritz Busch's departure. In July, the veteran Dr. Karl Muck resigned the conductorship of the Hamburg Philharmonic, objecting to its prospective merger with the orchestra of the Municipal Opera.

Clemens Krauss was the regular conductor of the Vienna Philharmonic until May, when it was decided to divide the new season among guest conductors. Arturo Toscanini conducted the Philharmonic in two concerts in October and also took it to Budapest. The new Vienna Concert Orchestra, trained by Herrmann Scherchen, made its début in the fall under Kurt Adler; Monteux

and Alexander von Zemlinsky conducted later concerts.

An innovation in Italy was the establishment of summer orchestral concerts in Milan and Rome; the latter series was held in the Forum with Molinari, Mario Rossi, Sergio Failoni, Riccardo Zandonai, and Tullio Serafin as the conductors.

Willem Mengelberg, Pierre Monteux, and Edward van Beinum shared the direction of the Concertgebouw Orchestra of Amsterdam. In Moscow Margaret Heifetz, a nine-year-old musician, conducted a concert of the Philharmonic Orchestra early in the year, and was praised for her interpretations of Beethoven's Fifth Symphony and *Scheherazade*. The Persimfans, Moscow's conductorless orchestra, resumed its activities March 12, after a year's suspension.

A feature of the orchestral year in Mexico City was the début of José Iturbi in the spring as a conductor in a series of concerts including Beethoven's Ninth Symphony.

OPERA. On Feb. 9, the directors of the Metropolitan Opera Association of New York announced that unless the public could contribute a guaranty fund of \$300,000, they would be unable to renew the lease on the Metropolitan Opera House expiring May 31.

A committee headed by Lucrezia Bori, one of the company's leading sopranos, immediately began a campaign, appealing both to operagoers and to radio listeners. The total raised had approached near enough to the goal by April 16 to permit the announcement of a fourteen week season in 1933-34. By April 28, the required amount had been subscribed or pledged; the Julliard Foundation gave \$50,000; \$24,000 was raised by two special performances in which the artists donated their services, and another \$20,000 by an Opera Ball held April 28.

During the 1932-33 season, which began November 21, the company gave 126 performances of thirty-six operas at the Metropolitan in 113 nights and matinees. Eighteen works were given in Italian 64 times, 11 in German 36 times, six in French 19 times, and one American opera seven times. The company gave 16 performances in Philadelphia, 6 in Brooklyn, 3 in White Plains, and 2 in Hartford, Conn. The usual post-season tour was represented only by three performances in Baltimore. The subscription season closed March 11; post-season benefit performances were given March 17, 18, and 24.

The only novelty of 1933 was *The Emperor Jones* by Louis Gruenberg, who derived his libretto from Eugene O'Neill's play of the same name. This had its world première January 7 with Lawrence Tibbett in the title rôle, Marek Windheim as the overseer, Smithers, and Pearl Besuner completing the speaking cast, while Hemsley Winfield mimed the dancing witch-doctor. A Negro chorus and dance group from the New Negro Art Theatre also took part.

This opera, conducted by Tullio Serafin, was the fourteenth American work to be given at the Metropolitan during Giulio Gatti-Casazza's régime. It proved popular with the public during its first season, being presented seven times at the Metropolitan and three times elsewhere by the company. It was also heard in Chicago, Los Angeles, and San Francisco.

Bedrich Smetana's *The Bartered Bride*, given in German, was revived February 4 after five years out of the repertoire, with Elizabeth Reth-

berg, Rudolf Laubenthal, Ludwig Hofmann, and Marek Windheim as the principals. Artur Bodanzky conducted. Montemezzi's *L'Amore dei Tre Re* was revived under Mr. Serafin on February 17 with Lucrezia Bori, Edward Johnson, Richard Bonelli, and Tancredi Pasero heading the cast.

Among the new singers appearing at the Metropolitan in 1933 the most significant from an artistic point of view were Frida Leider, soprano, and Maria Olszewska, contralto, German singers who had been acclaimed by American critics who had heard them in Europe or with the Chicago Civic Opera. Both made their debuts in *Tristan und Isolde* January 18. Richard Crooks, an American tenor well known as a concert artist, made his Metropolitan debut as Des Grieux in *Manon* February 25.

In the new season Emanuel List, an Austrian basso who had sung in New York motion picture houses and become an American citizen before winning operatic note abroad, made a very favorable impression in his Metropolitan debut as the Landgrave in *Tannhäuser* December 27. Nino Martini, a young Italian tenor hailed as the first specialist in the radio field to join the Metropolitan, made his debut December 28 as the Duke in *Rigoletto*.

The other newcomers engaged for 1933-34 were Lotte Lehmann, Lillian Clark, and Irra Petina, sopranos; Cyrena Van Gordon, mezzo-soprano; Carlo del Corso, tenor; John Charles Thomas, barytone, and Virgilio Lazzari, basso. Four artists who had left the Metropolitan from one to twelve years before, returned to it: Claudio Muzio, soprano; Paul Althouse, Charles Hackett, and Max Lorenz, tenors.

The Metropolitan gave *Lakmé* in Philadelphia December 19 and a Christmas matinee of *Hänsel und Gretel* in New York before beginning the regular subscription season December 26 with Deems Taylor's *Peter Ibbetson*—the first American opera in the Metropolitan's history to be given on an opening night.

On June 2 a company headed by Alfredo Salmaggi, a New York impresario, began a season at the Hippodrome at unusually low prices, ranging downward from ninety-nine cents. The success of the venture was remarkable and unexpected; crowds thronged the Hippodrome through July and into August, despite some very hot weather. After an intermission from August 14 to September 6, the company began a fall season which, at slightly higher prices, ran until December 18.

The Juilliard School of Music gave three productions: Monteverdi's *L'Incoronazione di Poppea* and Puccini's *Gianni Schicchi* February 23-25, Cimarosa's *The Secret Marriage* April 25-27, and Mozart's *The Marriage of Figaro* April 25-27. On April 25, the Henry Street Settlement Music School gave the American première of Kurt Weill's *Der Jasager*. The Ukrainian Art Theatre gave the first New York performance of Tchaikovsky's *Mazeppa* February 4, and another Tchaikovsky work, *Iolanthe*, had its first American public performance September 10 at Scarborough, N. Y.

Chicago, left without any regular opera by the demise of the Civic Opera Company in 1932, had to content itself during the winter with two performances of *Toaca* with Maria Jeritza, John Charles Thomas, and Mario Duca (Myron Duncan) as principals. *The Emperor Jones*, preceded

by *Pagliacci*, was presented on May 2 and 5. In connection with the Century of Progress Exposition, several opera performances were given during the summer.

Operatic activity in Chicago began to pick up in the fall, when Fortune Gallo's San Carlo Opera began a popular-priced season at the Auditorium Theatre on September 18. This lasted for five weeks, and an eight weeks' season was contemplated for the autumn of 1934.

Meanwhile plans for the resumption of opera at the new Civic Opera House resulted in the organization of the Chicago Grand Opera Company with Paul Longone as impresario. This began a five weeks' season December 26 with *Tosca*, in which Mme. Jeritza, Pasquale Amato, and Mario Chamlee sang the leading rôles and Genaro Papi conducted.

Philadelphia, during the regular music season, had to depend mainly upon the Metropolitan for its opera. The experiment of opera in the summer concerts at Robin Hood Dell, under the direction of Alexander Smallens, began with *Aida* July 10 and 11. The success of this venture, which offered familiar Italian and French works twice weekly, made it probable that it would be continued on a more permanent basis the next summer.

For a second consecutive summer, there was no opera at Ravinia Park, near Chicago, but the usual "Zoo" opera season in Cincinnati was held with a schedule of six weeks of grand opera and two of Gilbert and Sullivan. Light opera, as usual, was presented in the St. Louis Municipal Opera's outdoor season. Boston had relatively little opera in 1933, although the company operating at the New York Hippodrome gave a series from September 24 to October 14.

The San Francisco Opera Association, under Gaetano Merola's direction, held its second season in the new War Memorial Opera House from November 3 to December 1, giving ten subscription performances and five repetitions. The casts were composed mainly of Metropolitan Opera principals, with Alfred Hertz and Wilfred Pelletier sharing the conductorship with Mr. De Merola. The repertoire included *Samson et Dalila*, *Coq d'Or*, *Aida*, *Tristan und Isolde*, *Manon*, *The Emperor Jones*, *The Secret of Suzanne*, *Cavalleria Rusticana*, *Pagliacci*, *La Traviata*, *La Bohème*, and *La Forza del Destino*.

In London the international opera season at Covent Garden, which had been shortened to four weeks in 1932, was increased to six divided evenly between German and Italian opera. The German half of the season, which began May 1, included Wagner's "Ring" cycle, *Tristan und Isolde* and *Parsifal*, with Sir Thomas Beecham and Robert Heger conducting. Among the Italian operas offered were two of the less familiar operas of Verdi, *Don Carlos* and *Otello*. Sir Thomas Beecham conducted Berlioz's *La Damnation de Faust* in operatic form May 26.

The company which had its headquarters at the "Old Vic" and Sadlers Wells Theatres did some notable work in the field of opera in English; on October 11, it gave Rimsky-Korsakoff's *Tsar Saltan* for the first time in England. A new group, the Metropolitan Opera Company, began its schedule in September with Wagnerian presentations in suburban London theatres, going thence to Birmingham, but was brought to a close in October by financial losses.

Both Paris opera houses pursued their usual

schedules, with a short summer lapse at the Opera Comique; rumors of turning this house to other uses proved unfounded. At the Opera Berlioz's *La Priée de Troie* and Alberic Magnard's *Guerooeur* were revived in March; Halevy's *La Juive* had its first performance in forty years in April. Joseph Canteloube's *Veroingetoria* had its premiere in June with Georges Thill in the title rôle and Philippe Gaubert conducting. Wagner's *Ring* was given between April 18 and 24, and further Wagnerian performances, with Lauritz Melchior and Frida Leider, were given in the autumn. At the Opera-Comique, Tullio Serafin, of the Metropolitan, conducted a Rossini series in October.

Zandonai's *Giulietta e Romeo*, first given in Rome in 1922, was the year's first novelty at La Scala in Milan; the same composer's one-act *Una Partita*, with a libretto by Arturo Rossato, was received with cool politeness in February. The most important Milanese novelty, produced in April, was Igino Robbiani's *Guido del Popolo* which, with a libretto by Rossato, was the winning choice among 200 scores entered in the Scala's competition for new operas.

Verdi's *Macbeth*, with Benvenuto Franci in the title rôle, was the winter's first revival at the Royal Opera in Rome. Zandonai's *La Farsa Amorosa* was considered successful at its premiere in March under the composer's direction, Marinuzzi's *La Palla de Mozzi* was the season's only novelty at the Carlo Felice in Genoa. In the fall, the continuance of the San Carlo Opera in Naples seemed doubtful, but the financial difficulties were surmounted. Another opera by Robbiani, *Romanticismo*, was praised in its February premiere in Venice.

In Germany the principal new production of the year was Richard Strauss's latest opera *Arabella*, libretto by the late Hugo von Hofmannsthal, given for the first time at the State Opera in Dresden on July 1. Clemens Krauss, general music director of the Vienna Opera, conducted; artists of the Vienna Opera also played a large part in the cast, which included Viorica Ursuleac, Margit Bokor, Martin Kremer, and Alfred Jerger. The house was sold out at raised prices, and there were seventeen curtain calls for the artists and the composer. American critics found a resemblance to the manner of *Der Rosenkavalier*—the story was also a comedy staged in Vienna—and thought well of the first half of the score. Inspiration and interest, however, were thought to have slumped after the middle of the second act.

The Wagner anniversary was observed in Dresden with the presentation of all his works in chronological order; the summer festival which had brought forward *Arabella* also included four Wagner works and Strauss's *Frau ohne Schatten* and *Die Aegyptische Helena*, these conducted by the composer. Dr. Karl Böhm, who conducted the Wagner works, was appointed general music director in succession to Fritz Busch, but, owing to a contract in Hamburg, could not take up this post until June, 1934.

Wagner also dominated the Berlin opera houses in the winter, and nine performances of *Parsifal* were given in Berlin in five days during the Holy Week and Easter period. In June Wilhelm Furtwängler, whose previous official status had been that of guest conductor, became the chief executive of the State Opera with the title of First State Conductor, with Erich Kleiber,

Robert Heger, and Leo Blech (who, though Jewish, had retained his post) as his assistants. *Arabella* was first heard at the State Opera on October 12. The American soprano Dusolina Giannini appeared there both in the spring and the fall; another American singer heard there in October was Margaret Halstead, who sang Venus in *Tannhäuser*.

The Berlin Municipal Opera revived Hermann von Waltershausen's twenty-year-old *Oberst Chabert* in March; Georg Vollerthun's patriotic *Freikorporal* was first produced June 10. Berliners waxed enthusiastic over a week of Italian works at the Municipal Opera from October 9 to 15, with Italian singers, including Rosa Raisa, Toti dal Monte, and Beniamino Gigli, under the direction of Ettore Panizza. Max von Schillings succeeded Carl Ebert as Intendant of the Municipal Opera in March; his death in the summer left this theatre without a permanent head.

Jaroslav Kricka's *Spuk im Schloss* was the year's first novelty at the State Opera in Vienna, where the Wagner repertoire also received much attention in connection with the anniversary observance. *Rienzi* was revived without cuts. In October, Clemens Krauss conducted the local première of Strauss's *Arabella* with Lotte Lehmann in the title rôle.

The opera season at the Teatro Colon in Buenos Aires began May 25 with Pizzetti's *Debora e Jaele*; a German season under Fritz Busch ran from August 8 to September 10. *L'Amico Fritz*, *Khovantchina*, *Palla de' Mozzi*, *Vida Breve*, and *Königskinder* were among the operas produced in addition to more items in the international Italian and German repertoire.

BIBLIOGRAPHY. Biographies of Wagner and Brahms, thanks to the fiftieth anniversary of the former's death and the centenary of the former's birth, formed an important part of the 1933 output of books on musical subjects. A partial list of the books published during the year follows:

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Books on Brahms: Daniel Gregory Mason, *The Chamber Music of Brahms*, New York; Willi Schramm, *Johannes Brahms in Detmold*; Ralph Hill, *Brahms, his Life and Times*, London; Ottilie von Balassa, *Die Brahmsfreundin Ottilie Ebner und ihr Kreis*, Vienna; Alfred von Ehrmann, *Johannes Brahms, Weg, Werk und Welt*, Leipzig; Kurt Arnold Findeisen, *Lied des Schicksals, Roman um Johannes Brahms*, Leipzig; William Murdoch, *Brahms*, with an analytical study of the pianoforte works, London; H. C. Colles, *The Chamber Music of Brahms*, London; Robert Haven Schaufier, *The Unknown Brahms; Johannes Brahms' Heimatbekenntnis in Briefen an seine Hamburger Verwandten*, ed. Kuet Stephenson, Hamburg; Joseph Müller-Blattau, *Johannes Brahms*, Potsdam.

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Correspondance de Liszt et de la Comtesse d'Agoult, ed. Daniel Ollivier, Paris; Mary Tibaldi Chiesa, *Ernest Bloch*, Turin; Saul Elman, *Memoirs of Mischa Elman's Father*, New York; David Ewen, *Wine, Women and Walts*, a romantic biography of Johann Strauss, son and father, New York; Helen M. Fowles, *Ernest Fowles, a Memoir*, Newark; Basil Maine, *Chopin*, New York; Charles Phillips, *Paderewski, the Story of a Modern Immortal*, New York; Richard Specht, *Beethoven as he Used*, tr. Alfred Kalisch, London; Richard Specht, *Giacomo Puccini*, tr. Catherine Alison Phillips, New York and London; Robert Haas, *Wolfgang Amadeus Mozart*, Potsdam; Marguerite-Marie de Fraguier, *Vincent d'Indy, Souvenirs d'une élève*, Paris; Marc Pincherle, *Corelli*, Paris.

HISTORY: David Ewen, *From Bach to Stravinsky, the History of Music by its Foremost Critics*, New York; William Arm Fisher, *One Hundred and Fifty Years of Music Publishing in the United States*, Boston; E. M. Rosamond Harding, *The Pianoforte, a History of the Development of the Instrument up to the Great Exhibition of 1851*, London; Herman Klein, *The Golden Age of Opera*, London; E. Bossi and G. Tebaldini, *Storia dell'organo*, Milan; Antonio Capri, *Il Seicento musicale in Europa*, Milan; José Fornas, *Historia de la musica*, vol. II, Madrid; Marion Bauer, *Twentieth Century Music*, New York.

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MUSK. See **CHEMISTRY, INDUSTRIAL OR APPLIED.**

MUSSOLINI. See **ITALY** under *History*.

MYCOLOGY. See **BOTANY.**

NADIR SHAH GHAZI. King of Afghanistan, died by assassination in Kabul, Nov. 8, 1933. He was born at Dehradun, Apr. 10, 1880, and was known until his coronation as Mohammed Nadir Khan. Entering the Afghan Army, he rapidly advanced through the grades to general and in the brief Third Afghan War against the British, in 1919, was commander-in-chief of the Afghan forces. After acting as Minister of War during 1922-24 he was appointed Minister to France but resigned that post in 1926 on the grounds of ill health. He made his residence in France, however, until the revolt against King Amanullah, who had given offense to Moslem sensibilities by inaugurating drastic social, economic, and religious reforms based on Western models, led him to return. With two of his brothers he reached Bombay in February, 1929, and entered Afghanistan from Peshawar in March, to relieve another brother, Sirdar Shah Mahmud Khan, who was holding out against the usurper, Amir Habibullah. His final defeat of Habibullah at Kabul in October was accomplished only after three reverses.

After ascending the Afghan throne King Nadir not only restored peace by pacifying certain rebellious tribesmen but introduced a number of judicious reforms, organizing a regular army and effecting economies in government. The more important of these reforms, however, was the new constitution, promulgated in 1932, which provided for a bicameral legislature, the insurance of personal freedom and rights of property, compulsory elementary education, and the abolition of slavery. In the field of education he had founded the Kabul University, turning over for its use the palace built by Amanullah at Dar-ul-Aman. It was also his aim to build better roads, provide efficient telephone and telegraph systems, and develop the country's mineral resources. His assassination by Abdul Khaliq was in revenge for the execution the previous year of one of Khaliq's relatives, Ghulam Nabi Khan, a supporter of the deposed King Amanullah. See **AFGHANISTAN** under *History*.

NARCOTICS. See **INTERNATIONAL LAW.**

NATAL. See **SOUTH AFRICA, UNION OF.**

NATIONAL ACADEMY OF DESIGN. A society of American artists, established in New York City in 1825 and incorporated in 1828 for the purpose of "the cultivation and extension of the arts of design." After 1906, when the Society of American Artists merged with it, its membership represented all art tendencies except what it deemed the ultra-radical. In 1933 there were 139 academicians: 101 painters, 29 sculptors, 7 architects, and 2 etchers. The associates numbered 165: 129 painters, 19 sculptors, 12 architects, and 5 etchers.

The academicians elected at the annual meeting in April, 1933, included William J. Glackens, Aldro T. Hibbard, Paul King, Nayley Lever, Spencer Nichols, C. Paul Jennewein, Albin Polasek, and John Taylor Arms. The new associates were Charles Curtis Allen, Stephen Bransgrove, Jay H. Connaway, Jerry Farnsworth, Abram Poole, Theodore Van Soelen, Catharine Morris Wright, Gleb Berujinsky, Arthur Heintzelman, and Troy Kinney. There were also elected to honorary membership Romano Romanelli, Italian sculptor; Ignacio Zuloaga y Zanora, Spanish painter; and Sir Reginald Blomfield, British architect.

Harry W. Watrous was president of the National Academy of Design in 1933; Charles C. Cur-

ran, corresponding secretary; and Charles S. Chapman, recording secretary. Headquarters are at Amsterdam Avenue and 109th Street, New York City, where there is also located the Academy's school of design. For an account of the Academy's exhibition of contemporary art, see ART EXHIBITIONS.

NATIONAL ACADEMY OF SCIENCES. A society incorporated in 1863 for the purpose of investigating, examining, experimenting, and reporting upon any subject of science or art, whenever called upon by any department of the United States government. The membership is limited to 300 active members and 50 foreign associates. New members are elected by the academy on nominations from its 11 sections: Mathematics, astronomy, physics, engineering, chemistry, geology and paleontology, botany, zoology and anatomy, physiology and biochemistry, pathology and bacteriology, and anthropology and psychology.

At the annual meeting held in Washington, Apr. 24-26, 1933, the following new members were elected: Oswald Theodore Avery, Harold Delos Babcock, Thomas Barbour, Alphonse Raymond Dochez, Bernard Ogilvie Dodge, Eugene Floyd DuBois, Griffith Conrad Evans, Bancroft Gherardi, Herbert Eugene Ives, Walter Richard Miles, Samuel Alfred Mitchell, Linus Pauling, Joseph Fels Ritt, and Henry Clapp Sherman.

There were presented also the following medals: The Alexander Agassiz Medal for Oceanography to Albert Defant of Berlin, Germany, for his studies on atmospheric and oceanic circulation and his notable contributions to theoretical oceanography; the Public Welfare Medal to William Hallock Park of New York City, for his work as head of the research laboratories of the New York City department of health and as a pioneer and leader both in research and in the application of scientific discovery to the prevention of disease; the Henry Draper Medal to V. M. Slipher of Flagstaff, Ariz., in recognition of his spectroscopic researches; the Mary Clark Thompson Medal and accompanying honorarium of \$200 to Francis Arthur Bather of Wimbledon, England, for his distinguished services in the fields of paleontology and geology; and the John J. Carty Medal and Award for the Advancement of Science to John J. Carty, in whose honor the award was established for his distinguished accomplishments in the field of electrical engineering, particularly as they have influenced the development of electrical communication. Because of the death of Dr. Carty on Dec. 27, 1932, a posthumous presentation was made to his son.

The academy's autumn meeting was held in Cambridge, Mass., Nov. 20-22, 1933, upon invitation of the Massachusetts Institute of Technology. On this occasion the Comstock Prize, amounting to \$3500, was presented to Percy Williams Bridgman of Harvard University for his investigations leading to increased understanding of the electrical constitution of matter.

The scientific papers read at these meetings by academicians or by persons introduced by them were incorporated in the annual report of the president of the academy to the Congress of the United States. The *Proceedings*, issued monthly, were devoted to condensed reports of the most recent achievements in scientific research work by members of the academy and its agent, the National Research Council, or by persons introduced by members.

The officers in 1933 were: William Wallace Campbell, president; Arthur L. Day, vice-president; Fred E. Wright, home secretary; Robert A. Millikan, foreign secretary; Arthur Keith, treasurer. The academy building is at 2101 Constitution Avenue, Washington, D. C.

NATIONAL AIR RACES. See AERONAUTICS.
NATIONAL BANKRUPTCY MEASURE. See BUSINESS REVIEW.

NATIONAL BANKS. See BANKS AND BANKING.

NATIONAL CHILD LABOR COMMITTEE. See CHILD LABOR.

NATIONAL CIVIC FEDERATION, THE. A movement organized in 1900 to seek the solution of some of the great problems related to social and industrial progress. It provides especially for the discussion of questions of national import, aids in the crystallization of enlightened public opinion, and promotes legislation when desirable.

Early in 1933 the organization held a conference upon the "Tragic Conditions of the Worker and the Farmer," attended by leaders from among farmer, labor, industrial, financial, and professional groups. This resulted in the appointment of a National Committee on Economic Recovery to aid in establishing a spirit of mutual trust and forbearance among these divergent interests and to find a *modus vivendi* to point the way toward safe and stable living conditions for every citizen. Immediately after Inauguration Day it issued a statement, "Stand by the President in His War Against Depression," to each member of Congress and leaders of public opinion throughout the United States.

In view of its experience of more than 30 years with questions related to capital and labor, the federation gave to the National Recovery Administration the benefit of its participation in labor difficulties, especially with reference to the "right" of collective bargaining under the National Industrial Recovery Act. Its interpretation showed clearly that, while the workers under that law have a right to organize and to select their own representatives to present their demands to the employer, the employer has the right to decline such demands, including the closed shop, and that the workers have the right to decline to accept unsatisfactory counter-proposals made by the employer, including the open shop. The relation of a trade union agreement between a corporation and its "company union" under the collective bargaining clause, arising in connection with the establishment of the various codes, was developed.

The federation's programme in opposition to the recognition of the Soviet government, until all its subversive propaganda is withdrawn, was continued, as well as its endeavor to obtain federal legislation to have restored to the Department of Justice the power to deal with efforts to overthrow the government by force and violence. The American section of the International Committee to Combat the World Menace of Communism conducted an educational campaign to enlighten the public upon the activities of the Communists.

The federation circulated an evaluation of our achievements under the competitive system, industrially, socially, and politically, revealing shortcomings and remedies to be sought and analyzing the proposal for a "new social order." The inquiry into the operation of compulsory

unemployment insurance funds, foreign, and domestic, was pursued.

The offices of the federation in 1933 were: Elihu Root, honorary president; Matthew Woll, acting president; Ralph M. Easley, chairman, executive council; Samuel McRoberts, treasurer; Ellis Searles, secretary, Archibald E. Stevenson, chairman, department on subversive movements; James W. Gerard, chairman, commission on industrial inquiry; William R. Willcox, chairman, industrial welfare department; Joseph P. Ryan, chairman, committee on Russian affairs; John Hays Hammond, chairman, department on active citizenship; Miss Maude Wetmore, chairman woman's department; Gertrude Beeks Easley, secretary, executive council; and Mrs. Coffin Van Rensselaer, executive secretary, woman's department. Headquarters are at 570 Lexington Avenue, New York City.

NATIONAL DEBTS. See articles on each country under *Finance*.

NATIONAL DEFENSE. See *MILITARY PROGRESS*; *NAVAL PROGRESS*.

NATIONAL EDUCATION ASSOCIATION OF THE UNITED STATES. An organization of persons actively engaged in educational work and of others interested in education, formed in Philadelphia in 1857 under the name of the National Teachers' Association and incorporated in 1907 under its present name. Its enrollment as of Jan. 1, 1933, was 207,418.

The association consisted in 1933 of 23 departments, devoted to the special problems of method, organization, and course of study in nearly every type of educational work. These departments, each of which had its own officers, were as follows: Administrative women in education; adult education; art education; business education; classroom teachers; deans of women; educational research; elementary school principals; kindergarten-primary education; lip reading; rural education; school health and physical education; science instruction; secondary education; secondary school principals; social studies; special education; superintendence; supervisors and directors of instruction; supervisors and teachers of home economics; teachers colleges; visual instruction; and vocational education. There were also more than 15 standing and special committees actively at work on professional problems.

The association's seventy-first annual meeting was held in Chicago, Ill., July 1-7, 1933. The theme of this convention was "Evaluating American Education." Most of the important addresses consisted of discussions of the educational crisis brought about by the economic depression. There were held, in addition to the general session, meetings of the representative assembly composed of delegates from State and local educational associations, the departments of the association, and the National Council on Education and other allied organizations, at which the progress of the year in education was reviewed.

The association's department of superintendence held its winter convention in Minneapolis, Minn., Feb. 26-27, 1933. The subject of the *Yearbook*, prepared for presentation at this meeting, was "Educational Leadership." The *Journal of the National Education Association* is the organization's monthly publication. It issues also an annual volume of *Proceedings*, research bulletins, and reports on its activities. The officers elected for 1933-34 were: President, Jessie Gray,

Philadelphia; secretary, J. W. Crabtree, Washington; and treasurer, Henry Lester Smith, Bloomington, Ind. Headquarters are at 1201 Sixteenth Street, N.W., Washington.

NATIONAL FARM HOLIDAY ASSOCIATION. See *UNITED STATES* under *Administration*; *AGRICULTURE*.

NATIONAL FIRE PROTECTION ASSOCIATION. See *FIRE PROTECTION*.

NATIONAL FORESTS. See *FORESTRY*.

NATIONAL GALLERY OF ART. See *ART EXHIBITIONS*.

NATIONAL GUARD. See *MILITARY PROGRESS*.

NATIONALITY. See *INTERNATIONAL LAW*.

NATIONALITY OF WOMEN. See *PAN AMERICAN CONFERENCE*.

NATIONAL KINDERGARTEN ASSOCIATION. An organization founded and incorporated in New York City in 1909, with the object of helping to secure the advantages of kindergarten education for all of the nation's children. The association is supported entirely by private subscription which has amounted annually, in recent years, to approximately \$45,000. During 1932, however, it dropped to \$30,000, and in 1933, to less than \$20,000. This fund is used for the purpose of promoting a knowledge of and an interest in the value of the kindergarten as an integral part of the public school system. Field secretaries are employed in 47 States for the purpose of keeping this matter before the public and assisting parents in having classes organized for their children.

The association has been instrumental in securing the establishment to date of 1960 kindergartens. Where no adequate provision has been made in the school laws for the maintenance of kindergartens, the association has worked to stimulate an effort to secure the enactment of improved laws and has been instrumental in obtaining their passage in 16 States. In this it has cooperated with such State organizations as the Congress of Parents and Teachers, Federation of Women's Clubs, Woman's Christian Temperance Union, American Association of University Women, Federation of Labor, and Chamber of Commerce. From 1928 to 1932, through the generosity of its members, the association was able to set aside a fund from which 52 communities, which could not otherwise have opened kindergartens, received financial assistance. Since 1912 it has cooperated with the National College of Education in Evanston, Ill., which has trained students from every section of the country. It has also published and distributed extensively leaflets on methods and value of kindergarten extension.

The association's officers are: Major Bradley Martin, president; Hon. P. P. Claxton, honorary president; Mrs. Henry Phipps, first vice-president; Mrs. Charles Cary Rumsey, second vice-president; Mrs. Roger C. Aldrich, secretary; Miss Bessie Locke, executive secretary; and Julian M. Gerard, treasurer. Headquarters are at 8 West Fortieth Street, New York City.

NATIONAL LABOR BOARD. See *LABOR ARBITRATION AND CONCILIATION*.

NATIONAL MUNICIPAL LEAGUE. An organization, founded in 1894 and incorporated in 1923, whose aim is to promote efficient and democratic government throughout the United States. Among its committees active in 1933 in developing sound principles of governmental

methods, whether municipal, county, State, or national, were those on new municipal programme, model administrative code, model State constitution, citizens' organization for municipal activity, citizens' participation in city government, county government, municipal standards, selection of the judiciary, model special assessments law, and constructive economy in government. In connection with the latter there was begun in April, 1933, a general movement, sponsored by 50 national organizations, for the formation of local citizens' councils concerned with the reduction of costs in government but at the same time financing necessary services.

The thirty-ninth annual meeting of the league was held in Atlantic City, N. J., Nov. 9-11, 1933. Its theme was "The Part of Local Government in Recovery." Coöperating in this conference were the National Association of Civic Secretaries, the Proportional Representation League, and the Governmental Research Association. The officers elected for 1933-34 were: President, Murray Seasongood, Cincinnati; first vice-president, Harold W. Dodds, Princeton, N. J.; second vice-president, Miss Belle Sherwin, Washington; treasurer, Carl H. Pforzheimer; and secretary and editor of the *National Municipal Review*, Howard P. Jones. Headquarters are at 309 East Thirty-fourth Street, New York City.

NATIONAL RECOVERY ACT. See UNITED STATES under *Administration*; INSURANCE; CHILD LABOR; BUSINESS REVIEW; IRON AND STEEL; FERTILIZERS; COAL; WOMEN IN INDUSTRY.

NATIONAL RECREATION ASSOCIATION. An association organized in 1906, under the name of the Playground and Recreation Association of America, for the purpose of uniting in a national movement the efforts made in various parts of the United States to provide safe and adequate areas where children might play under experienced leadership. In recent years, however, its work has expanded to include the community as a whole, a staff of field workers being maintained to assist cities in organizing year-round programmes for adults as well as for children.

The association carries on its work through such services as physical education, music, drama, park recreation, recreation for girls and women and for institutions, a bureau of colored work, and, in coöperation with the United States Department of Agriculture, a service to rural leaders. The National Recreation School, which it maintains, is a graduate school for the training of recreation executives. Its official magazine is *Recreation*, a monthly. The officers in 1933 were: President, Joseph Lee; treasurer, Gustavus T. Kirby; and secretary, Howard S. Braucher. Headquarters are at 315 Fourth Avenue, New York City.

NATIONAL RESEARCH COUNCIL. An organization of American scientists, originally established in 1916 by the National Academy of Sciences for the purpose of coördinating the research facilities of the United States for work on war problems involving scientific knowledge and reorganized in 1918 as a permanent body for the general encouragement of research in the natural sciences. It has the formal recognition and co-operation of 80 national scientific and technical societies, its membership being composed mainly of appointed representatives of these societies.

The activities of the council are conducted by seven divisions of the science and technology group and four divisions of the general rela-

tionships group. The science and technology group consists of divisions representing physics, mathematics, and astronomy; engineering and industrial research; chemistry and chemical technology; geology and geography; the medical sciences; biology and agriculture; and anthropology and psychology. The general relationships group consists of federal, foreign, State, and educational relations divisions. Each division has a chairman and from 12 to 40 members.

In 1933 there was created by executive order of the President a Science Advisory Board to act through the machinery and under the jurisdiction of the National Academy of Sciences and the National Research Council in the appointment of committees to deal with specific problems in the various departments of the government. Among the major undertakings of the council during the year were the administration of about 140 post-doctorate fellowships; the issuing of a series of research monographs in the physical sciences, including several parts of a treatise upon *The Physics of the Earth*; the editing of an *Annual Survey of American Chemistry* and the *Annotated Bibliography of Economic Geology*; and the sponsoring of such new research projects as land classification, corrosion resistance of iron pipe, survey of tropical diseases, and the relations between the basic sciences and psychiatry.

The general administrative officers of the council in 1933 were: Chairman, Isaiah Bowman, director, American Geographical Society, New York City; treasurer, Arthur Keith, geologist, United States Geological Survey; secretary emeritus, Vernon Kellogg, National Research Council. Headquarters are in the building of the National Academy of Sciences, 2101 Constitution Avenue, Washington, D. C.

NATIONAL SAFETY COUNCIL. A co-operative association, devoted to the conservation of human life through a continuous campaign of accident prevention in industry, on the highway, in the home, and elsewhere. In 1933 there were 4000 members, including corporations, firms, individuals, public officials, schools, Chambers of Commerce, clubs, and civic organizations. About 70 per cent of the members were industrial concerns. Affiliated with the national organization were 51 local councils in as many communities throughout the United States.

During 1933 the council's activities laid especial emphasis on the highway accident problem. A second annual National Inter-City Traffic Contest was held, in which approximately 300 municipalities, large and small, participated. Educational work was intensified among urban schools throughout the country, and valuable engineering studies were made in highway safety.

The council publishes the *National Safety News*, for industries; *Public Safety*, for public officials, police chiefs, etc.; *Safety Education*, for schools; *The Safe Worker* and *The Safe Driver*, for industrial employees. It issues also *Safe Practices* and *Health Practices* pamphlets for industry and carries on extensive work through 27 sections represented in the industrial division for the exchange of new ideas, new plans, and new practices among members.

The twenty-second annual Safety Congress was held in Chicago Oct. 2-6, 1933, with an attendance of approximately 4000 delegates and visitors. The officers elected were: President, J. E. Long, Albany; vice-president for public safety, Robert

I. Catlin, Hartford; vice-president for engineering, J. E. Culliney, Bethlehem, Pa.; vice-president for industrial safety, George H. Warfel, Omaha; vice-president for membership, R. T. Solensten, New York City; vice-president for local safety councils, Lew R. Palmer, New York City; vice-president for administration, C. W. Smith, Chicago; vice-president for health, Dr. Cassius H. Watson, New York City; vice-president for education, Albert W. Whitney, New York City; treasurer, William W. Worth, Chicago; managing director and secretary, W. H. Cameron, Chicago. Headquarters are at 20 North Wacker Drive, Chicago, Ill.

NATIONAL SCHOOL SURVEY. See EDUCATION IN THE UNITED STATES.

NATIONAL TRANSPORTATION COMMITTEE. See RAILWAYS.

NATURAL GAS. See Gas.

NAURU. An atoll in the Pacific 12 miles in circumference situated 166° E. longitude and 26 miles south of the Equator. It is administered under a mandate from the League of Nations by the British Empire. Area, 5396 acres; population (1932), 2316. Phosphate is the chief product and 245,165 tons were exported in 1931. Administrator in 1933, W. A. Newman.

NAVAL PROGRESS. The Washington Limitation of Naval Armaments Treaty of 1922 and the London Naval Treaty of 1930 exerted a profound influence on the naval construction of the last decade but they failed in their purpose of reducing the amounts annually expended for armament purposes. While some naval authorities struggled with "scrapping" puzzles and worked out the devious compensation problems involved, others prepared and put into effect cruiser building programmes which effectively changed the *status quo ante* in naval ratios. None the less the continued world-wide depression kept alive insistent demands for a reduction in armament expenditures in order that the economic burden might in some degree be lifted.

The high hopes for the success of the Geneva Disarmament Conference that met in February, 1932, were not altogether dispelled by the abortive attempts of that year. When the general commission of the disarmament conference, not wholly discouraged by wars on two distant continents and intenser nationalistic feeling in Europe, again took up its work in February, 1933, the naval authorities of the world continued to watch proceedings with keenest interest. In March, MacDonald went to Geneva with a compromise scheme based on all the proposals placed before the conference the preceding year. His proposal of some 10,000 words was notable for its definiteness in figures and among other things provided for: (a) Aircraft—500 each for France, Italy, England, United States, Russia, Japan, with a scheme for complete abolition of military craft; (b) Navies—in general, to hold the situation created by the Washington and London conferences until another conference in 1935; the smaller powers keeping to 1932 strength, and France and Italy coming into the London treaty. About the same time Mussolini offered his plan for a new concert of the four major powers of Western Europe. Plainly it called for a difficult operation—a revision of the Versailles Treaty which would at the same time satisfy Germany and secure the consent of France (see DISARMAMENT for further details). On March 27, after agreeing to use the British draft as a basis for discussion at the next meeting, the conference

adjourned for one month, but not before Japan had served notice of her increased needs arising from the situation in the Far East (with the suggestion that Manchoukuo would need a Navy).

In April Norman H. Davis, American ambassador at large, attempted to stir the conference into action by declaring that the success of the approaching London economic conference, and world recovery along with it, was dependent on their making real progress at Geneva. At this time, however, European animosities were much aroused by the triumph of militant nationalistic elements in Germany. By the latter part of May, however, reanimated by a message from President Roosevelt, and by the reasonable tone of Chancellor Hitler's speech on foreign policy and Ambassador Davis's promises of American coöperation to maintain peace it began to look as if there might be definite accomplishments. Difficulties ensued, however, among them being Japanese objections to the inclusion in the general treaty of the naval restrictions adopted at Washington and London, on the ground that these agreements were to run only until 1936, and were not matters to be submitted to all nations for ratification.

By the close of May it became evident that the time was too short for significant results that would influence economic negotiations in London, and the commission was adjourned to a date not later than July 3, but it was August before the commission reconvened. As a matter of fact, the chief problem of the conference in preceding months had been to resist Germany's demand to rearm. With responsibility in this matter more or less removed by the four power treaty, with Japan demanding increased naval allowance, and with no solutions reached in the world economic conference, it was indeed quite evident that there was no immediate prospect of progress in arms limitation. Prior to a formal reopening of the conference on October 16, America, France, England, and Italy reached a working agreement. The general plan was to leave in the background for the time being Japan's demand for naval increases and her objections to arms supervision and consultation agreements, and to seek first a settlement of the European problem, which in its essence was the question of Germany's demand for equality of armaments. The efforts were unsuccessful and Germany abruptly withdrew both from the conference and the League of Nations. Even before this, however, it had seemed to many observers that the conference was working amid ever-increasing difficulties. In a period of intensified nationalism, each nation was more suspicious of others, more unwilling to surrender any special advantage it might have. To reduce the instruments of national security at such a time seemed like putting the cart before the horse, or at least assuming unwarrantedly that the instruments of war were the causes of war. The conference had in fact been diverted from its original purpose of reduction of armaments to the question whether or not Germany should be allowed to rearm.

Upon Germany's withdrawal the conference again adjourned; the steering committee found it impossible in the existing European situation to do any constructive work and though further meetings were expected in 1934, the end of 1933 saw little prospect of any tangible accomplishments following the efforts of two years' labor.

As the year wore on and prospects of limitation of armaments diminished each of the larger naval powers took more effective steps to insure that

its naval forces could be relied upon to sustain its special interests in the world arena. The publicity given to the problems of the conference led to a more general appreciation of a fact well known to technicians that reduction in quantity of armament did not involve a proportionate reduction in the cost of armament. In fact the experience of the past decade had shown that it did not follow at all. In establishing limited tonnage quotas, artificial restrictions as to sizes of units, character of armament, etc. were also included in the restriction. Naval designers, constructors, and engineers incorporated in hull and machinery ingenious weight saving devices and adopted refinements in construction which would not be considered if normal methods of design and building had been followed. Such methods of construction naturally proved expensive. One of the most notable examples was the German *Deutschland* commissioned Apr. 1, 1933. Every scientific resource had been utilized to crowd into her as many elements of battle worthiness as possible within the limits of displacement laid down by the Versailles Treaty. As a result the cost per ton was approximately twice that which might have been expected for a vessel of her size.

A full description of this ship appeared in the INTERNATIONAL YEAR BOOK for 1931. Naval authorities of the United States, Great Britain, and Japan pointed out that under the restrictions of London and Washington treaties none of these great powers might build a ship to compete with the *Deutschland* and her 11-inch guns for the great naval powers might not put guns larger than 8-inch on cruisers.

She was, of course, much less powerful than existing battleships, but they had not the speed to overtake her if she were used as a raider.

As might have been predicted, the building of this small but powerful capital ship (three similar ones were to follow) produced repercussions throughout the naval world. France deemed it expedient, as a retort, to lay down the *Dunkerque* a battle cruiser, the first full-scale capital ship to be built anywhere for ten years. The building of these two ships vastly increased the probability that battleships would reappear in the building programmes of all great naval powers when existing treaties expire in 1936. Italy, during 1933, prepared tentative battleship designs and conducted tank experiments. These developments, together with Japan's announced unwillingness to continue existing ratios on expiration of current treaties will add to the difficulties of future limitation of arms conferences.

Naval opinion appeared to be becoming more or less unanimous on the general principles of armor protection. For example, there was perceptible and universal recoil from the "egg-shell" type of cruiser, packed with machinery and overloaded with guns, but devoid of armor capable of resisting serious blows. These, it was recognized, were not true fighting ships. So far as the demands of armament and speed permit, the latest 10,000-ton cruisers building carried armor over the most vulnerable sections, though it was not pretended that their plating would stand up to 8-in. gun attack. Turning to smaller cruisers of recent design, the majority of those had some armor on the water line, and in most cases the guns were mounted in twin or triple turrets which, though unable to resist direct hits, afford the crews protection from splinters. The open gun shield which proved such a death trap in the World War had

been discarded. It was, of course, impossible to give adequate armor defense to ships of high speed and moderate tonnage, but when, by sacrificing a few knots, an extra inch or two of steel could be interposed between enemy gunfire and the vitals of the ship and her personnel, the loss of speed was accepted. That principle appeared to govern current cruiser design in Great Britain and America, and it was noteworthy that France and Italy, which until recently placed speed before everything, were providing their latest ships with substantial protective plating. One proposition appeared to be indisputable—adequate armor protection was indispensable to any warship above the smaller cruiser category, and high speed was in no sense a substitute for such protection.

A curious commentary on the situation created by the London treaty was formed by the building in England of the destroyer *Vouge*, 1600 tons, for Portugal although the builders could not provide such ships for the Royal Navy. The limit of tonnage for destroyers to signatory powers being 1500 except for flotilla leaders (16 per cent of the whole) 1850 tons. The year before, Yugoslavia obtained from Yarrow's a fine flotilla leader of 2400 tons which was 550 tons more than the limit fixed for flotilla leaders of signatory powers. Nor are these isolated cases. France, who refused to sign the London treaty, had built six destroyers 2569 tons with 5.5-inch guns (5.1-inch is the treaty limit size) and had six more similar ships building. The United States, Great Britain, and Japan could have built such vessels, but if so, these ships would, by virtue of their size, have been reckoned with the cruiser allowance.

Other design matters also influenced naval construction. The United States, which had already laid down the maximum allowed number of 8-inch cruisers, announced her intention of building four light cruisers of 10,000 tons each to carry 6-inch guns. These would be larger than the 8500 ton Japanese cruisers *Mogami* and *Mikuma* laid down in 1931 and reported to have 15 6.1-inch guns in five triple turrets. Shortly after this announcement Great Britain modified her 1933-34 cruiser estimates from one modified *Leander* 7500 tons and three 5200 ton *Arethusas* to one *Arethusa* and two 9000-ton cruisers; thus keeping her tonnage within the allowed limit, but decreasing the number of new cruisers from four to three.

During the year both Japan and France laid down a number of 590-ton destroyers. These it was noted were below the limits of existing treaties which did not take into account destroyers of 600 tons or less. Another interesting development was the building of coastal motor boats. Such vessels were found of great service in the later stages of the World War when used in conjunction with other vessels or with aircraft. The French naval authorities ordered ten such craft, called *vedettes-torpilleurs* (or "V.T.B."), which have been allocated for service at the Channel bases. They were 22-ton vessels with motor-engines of 1100 h.p., speeds up to 48 knots, and able to carry two torpedoes each. The last British C.M.B.'s in service were 11-ton vessels, 55 ft. long, with 750 h.p. engines, speeds of from 38 to 40 knots, and armed either with four small guns and two depth charges or two torpedoes. Neither the United States of America nor Japan had any of these small vessels in service. Italy, however, had 42 on the effective list, which were between 11 and 30 tons, with engines up to 1800 h.p. and speeds up to 40 knots.

A summary of the existing situation in regard

to naval construction among the three leading powers follows:

During the period extending from the Washington conference to Mar. 4, 1933, the United States, the British Empire, and Japan each laid down its allowed quota of 8-inch gun cruisers, and, in addition, Japan and the United States each laid down one aircraft carrier. During this same period the United States dropped far behind Japan and the British Empire in the replacement of ships that became "overage." Japan laid down 6 light cruisers, 57 destroyers, and 40 submarines, a total of 103 replacements, and had projected 36 others, which would give her a full treaty strength navy of "underage" ships at the expiration of the treaty in 1936.

The British Empire had laid down 13 light cruisers, 45 destroyers, and 30 submarines, a total of 88 replacements, and had 28 others projected. Great Britain had pursued a uniform policy of laying down a certain number of ships each year, so she also would have a navy of approximate full treaty strength in 1936.

The United States during the same period started construction on only 8 destroyers and 6 submarines as replacements for "overage" vessels, but after March 4 the construction of 36 vessels—viz., 2 aircraft carriers, 2 8-inch gun cruisers, 4 light cruisers, 24 destroyers, and 4 submarines—was authorized. Even this programme would, however, leave the United States far from possessing a full treaty navy in 1936.

A compilation of the additional naval tonnage required by Great Britain, Japan, and the United States for treaty strength, to be laid down before Dec. 31, 1936, which included replacements permitted by the treaty for ships which would be overage in 1937, 1938, and 1939, indicated that Great Britain's additional naval construction for treaty strength would require the building of a total of 64 vessels, and Japan would be approximately at her full treaty strength. To bring the United States to treaty strength would require the construction of an additional 102 vessels.

The 64 vessels required by Great Britain for treaty strength consisted of two aircraft carriers, 34,100 tons (which might replace the three experimental ships, the *Furious*, *Eagle*, and *Hermes*); 15 light cruisers, 88,930 tons; 39 destroyers, 63,696 tons; 8 submarines, 9362 tons, or a total of 64 ships aggregating 197,628 tons. Great Britain had, in the past, maintained a uniform building policy and had appropriated for three or four cruisers, nine destroyers, and three submarines to be laid down each year, and if this policy were continued, approximate full treaty strength would be authorized by 1936. In this study there was listed 1540 tons under heavy cruisers required by Great Britain for treaty strength.

Of all the great powers, Japan alone would be up to maximum strength by the termination of the naval limitation agreement in 1936. The Japanese budget provided for a continuing building programme covering a period of years. The Japanese Diet this year authorized a programme, extending to 1936, which provided for every ship which Japan was permitted by treaty to lay down.

One hundred and two vessels of various classes were required by the United States to bring American seapower to treaty strength. See details under NAVAL PROGRESS, *United States*.

France and Italy did not ratify the London naval treaty and were not, therefore, included in this compilation.

ARGENTINA. The 3 submarines *Santa Fe*, *Salta*, and *Santiago del Estero*, ordered in Italy, left for Buenos Aires in February without escort and reached their destination forty days later. Characteristics: length 222 feet; displacement 865 tons surface, 1100 submerged; speed, 17.5 and 9 knots; radius, 6000 to 8500 miles; submerged, 20 hours at 4 knots; time to submerge 35 seconds; maximum depth, 330 feet; armament 8 torpedo tubes, one 105 mm gun, and one machine gun. Listening gear and salvage gear were provided. Rear Admiral Casal resigned as Minister of Marine as a result of conflict with other officers over disciplinary measures against certain warrant officers and sailors accused of fomenting discontent in the ranks. There had been several attempts at mutiny and other forms of insubordination, including a hunger strike against pay deductions. Admiral Casal accused certain officers of weakness in putting them down, while some cabinet members felt that he had been unnecessarily harsh.

The fleet was reorganized into five groups—Battle Squadron, Special Service Squadron, Auxiliary Service Ships, Inactive Ships, Naval Air Arm. The battle squadron included two battleships, two cruisers, nine destroyers divided into two flotillas, and the submarines mentioned above with their mother ship *Chaco*.

AUSTRALIA. In October, 5 men-of-war, from the Royal Navy, were lent to the Australian government to replace those sent out in 1919. They were *Stuart*, flotilla leader, and *Vampire*, *Vendetta*, *Voyager*, and *Waterhen*. Sir George Pearce, Minister of Defense, defined the government's naval policy as follows: "The keynote in the policy is cooperation with Great Britain and New Zealand. We aim to have 4 effective cruisers with requisite aircraft, 5 destroyers, and to improve the bases and equipment of the military air forces and coastal defenses. He added that the personnel of the Australian forces must be interchangeable with the Royal Navy, and that therefore identical ships and armaments were necessary. Such a proposal, he concluded, should be announced prior to the presentation of the budget.

BRAZIL. The government allocated \$3,500,000 a year for twelve years to build up their navy. The proposed ships would include 2 cruisers, one of 8000 and one of 5000 tons; 9 destroyers of 1600 tons each; 6 submarines of 850 tons; each; 2 cable layers of 250 tons and 150 tons; 6 mine sweepers and 3 tankers.

It was hoped that delivery of the more important units would be made in two to four years. Preference in bids was to be given to concerns willing to accept in payment goods of Brazilian production such as cocoa, rubber (not coffee), etc. At the end of the year contracts had not been awarded. It was announced, however, that Thornycroft had received an order for 6 oil-burning boilers to replace 18 coal burning boilers of the *Minas Geraes*. The boilers were to be shipped to Brazil for installation there. The new naval training ship *Almirante Saldanha* was ordered built in England. She was a four masted barquentine 3325 tons, with a six cylinder 1400 h.p. Diesel motor, carried 379 officers and men. Armament: four 4.5-inch guns, three 3-inch A.A., several quick-firers and a torpedo tube.

CHINA. As usual the Chinese Navy had difficulty in maintaining loyalty in the high command. During the summer six vessels deserted from the Tsingtao headquarters of the Chinese Northeast-

ern Squadron. They were cruisers *Haichi*, *Haishen*, training ship *Chaooh*, and three gunboats. The first three reached Canton where the officers were welcomed by the leaders of the Southwest Provincial Council, who at the same time were chary of accepting their services for fear of offending authorities at Nanking. Meantime cruisers *Yatsen*, *Haikyung*, and *Haichau* arrived from the north and anchored in Hong Kong waters, presumably in pursuit of the mutinous trio. No contest of arms resulted, however, and the fleeing vessels remained near Canton.

DENMARK. Although the Navy had been virtually reduced to a coast and fish patrol the government accepted a new training ship, the *Danmark*, that had accommodations for 120 boys. She was a three masted, full rigged steel ship equipped with 250 h.p. Diesel motor.

FINLAND. Descriptions of the gunboats *Wainamoinen* and *Ilmari* were given in the 1931 YEAR BOOK. Both were completed in 1933 and interest attached to them principally because they were the first naval craft with pure Diesel electric drive, and, apart from 2 submarines, the first naval vessel with Diesel engines supercharged on the Büchi system. The flexibility and overload capacity of Büchi turbo-charged Diesel engines, together with the economy in space and weight obtained with such machinery, were of particular advantage for this class of ship. The good maneuvering qualities and steering of the vessels were especially appreciated in the narrow waters of the Finnish coast. Moreover, with this type of drive, several economical speeds were possible, with a corresponding wide radius of action at each speed. The fact that, with the electric drive, the main engines were independent of the propeller shafts, and so were located in the most favorable position from all standpoints, gave a very satisfactory layout; no longer considerations of the main engines, but the military aspect of the case, was the deciding factor in arranging the subdivision of the ship, the main engines being located to best suit these requirements.

FRANCE. In spite of the fall of the franc, the economic crisis, frequent changes of ministries, in spite of everything, the reconstruction of naval material had gone steadily forward since the World War. Apart from battleships, nearly all of which had reached the age limit, France now had in each class of war craft a new group of homogeneous ships that were the equal of those constructed by any other country. In addition her construction of the capital ship *Dunkerque* (the first capital ship laid down by any power in the decade following the Washington conference) indicated that she did not expect to have her gains superseded in any naval field.

The sensational speed records advertised by Italian and French officers were questioned by many naval men; but the new destroyer *Oussard* with full crew, stores, and ammunition on board, en route from Brest to Toulon, steamed some hours at 42 knots, then at 43 and reached a top speed of 43.4 and the fuel consumption was relatively economical. In moderately rough weather she displayed the nautical and steaming qualities of a cruiser. Her sister-ship *Tartu* in really rough weather held her own with a 10,000 ton cruiser at high speed. There was in this respect a wide difference between the French 2500-ton *contretorpilleurs* (destroyer leaders) and the otherwise excellent 1400-ton *torpilleurs d'escadre* (torpedo boat destroyers) and, of course, with

the 1300-ton destroyers of most other navies. *Torpilleurs d'escadre* (torpedo boat destroyers) have their critics in the service, whereas the 2500-300-ton super-destroyers met with general approval. From the unending experiments with the *Epervier* and *Milan*, which had been for the last 4 years in hand at Lorient, speed was a question, not only of motor power, but also of sound workmanship and of all-round robustness.

Under the London treaty these ships over 1850 tons would be classed as cruisers, but as France did not sign that treaty, she was not limited in the size of her destroyers.

The naval budget for 1933 totaled 2840 million francs, a reduction of 375 million from 1932. The reduction included 43 million taken from new construction. The budget made no provision for laying down additional new construction. In fact no provision was made for the 7700-ton heavy cruisers authorized by the *Tranche* of 1932. Lack of credits, as well as other difficulties caused much delay in the work on the *Dunkerque*, progress on her being extraordinarily slow. Submarine progress was also unsatisfactory; the twelve units of the 1929, and 1930 programmes being held back pending improvements and experiments. The 6000-ton *Bertin*, launched in the spring, was considerably modified so that she be less of a mine layer than had been anticipated. Among the modifications was the installation of a 2-inch protective deck. On her displacement of less than 6000 tons the *Bertin* was expected to carry nine 6-inch guns in three triple turrets (one more than similar British and Italian cruisers carried). The scaplane installation on board promised to be rather cumbersome. The submarine mine layer *Diamant* was launched in May. Armament; one 75-mm gun, thirty-two mines, five torpedo tubes. The net layer *Gladiateur* was launched the month before. She was of 2330 tons, with speed of 20 knots; carried four 90-mm guns, and six machine guns, four of the latter for anti-aircraft work. The ship was a new type whose chief mission was assuring protection to ships at anchor by placing around them nets capable of stopping submarines. The English had a similar ship, the *Guardian* of 3050 tons, but it was interesting to note that the United States had no such type. Important vessels under construction or appropriated for are shown in the table on page 537.

GERMANY. Germany's withdrawal from the League of Nations and the Disarmament Conference, Hitler's determination to either secure a modification of the Treaty of Versailles so far as restrictions on Germany's armaments was concerned or to disregard the provisions therein, the general state of political and social unrest in Europe; these things together with the surprising material developments in the *Deutschland* and other recent craft combined to bring to the German Navy an amount of attention out of all proportion to its size. The government proceeded steadily with the programme for modernizing the Navy and replacing ships within the terms of the Treaty of Versailles (these limitations were: 6 armored ships, 10,000-tons; 6 light cruisers, 6000-tons; 12 destroyers, 800-tons; 12 torpedo boats, 200-tons. Replacements might be made for vessels over age—twenty years in case of battleships and cruisers and fifteen years for the torpedo craft). Of the replacements for armored ships, the *Deutschland* was commissioned April first, and the *Admiral Scheer* was launched the same day, while two others were scheduled to follow

FRANCE: WARSHIPS BUILDING, 1933

Class and name	Laid down	Standard displacement	Speed
Capital Ship:			
<i>Dunkerque</i>	1932	26,500	30
Cruisers (A):			
<i>Algeris</i>	1931	10,000	32
Cruisers (B):			
<i>La Galissonnière</i>	1931	7,000	
<i>Jean-de-Vienne</i>	1931	7,000	
<i>Emile Bertin</i>	1931	5,886	
(mine layer)			
<i>Marnes-la-Meise</i>	1932	7,500	
<i>Gloire</i>	No	7,500	
<i>Montcalm</i>	No	7,500	
<i>Chateaurenault</i>	No	7,500	
Destroyers:			
<i>Indomptable</i>	1932	2,569	
<i>Triomphe</i>	1931	2,569	
<i>Terrible</i>	1932	2,569	
<i>Malin</i>	1931	2,569	
<i>Audacieux</i>	1931	2,569	
<i>Fantasia</i>	1931	2,569	
<i>Milan</i>	1929	2,441	
<i>Hardi</i>	No	1,500 (est.)	
<i>Magador</i>	No	2,500 (est.)	
Submarines:			
<i>Orcade</i>	1929	571	13.7
<i>Rubis</i> (mine layer)	1929	669	12
<i>Tonnant</i>	1930	1,379	17
<i>Diamant</i> (mine layer)	1929	669	12
<i>Pyche</i>	1930	571	
<i>Sybil</i>	1930	571	
<i>Vestale</i>	1930	565	
<i>Sultane</i>	1930	565	
<i>Glorieux</i>	1929	1,379	
<i>Centaur</i>	1929	1,379	
<i>Heros</i>	1929	1,379	
<i>Conquerant</i>	1929	1,379	
<i>Ira</i>	1931	571	
<i>Venus</i>	1931	571	
<i>Junon</i>	1931	571	
<i>Minerva</i>	1931	571	
<i>Perle</i> (mine layer)	1931	669	
<i>Casablanca</i>	1931	1,379	
<i>Stax</i>	1931	1,379	
<i>Sidi-Ferruch</i>	1932	1,379	
<i>Quessant</i>	1932	1,379	
<i>Brezeers</i>	1932	1,379	
<i>Agosta</i>	1931	1,379	
<i>r</i>	No	1,379	
<i>x</i>	No	1,379	

shortly. Four reserve destroyers were scheduled for completion during 1934-36. Of the 6 cruisers, 5 had been completed since 1925, while 12 of the 16 destroyers were new. The vessels were not only new in building, but their designs showed a marked advance on anything attempted elsewhere. The results of the extended trials of the *Deutschland* with her internal combustion engines were closely guarded but conservative reports gave her top speed as upwards of 26 knots, and her cruising radius, in excess of 16,000 miles at 12 to 15 knots. Her armor protection was superior to that of any post-war cruiser while her six 11-inch and eight 6-inch guns gave her an offensive power equalled only by capital ships. The larger guns had a muzzle velocity of 3180 foot seconds. She carried four 30-foot range finders whose accuracy at very long ranges was reported to be quite remarkable.

The new naval training ship *Gorch Fock* to replace the ill-fated *Niobe* was launched in the spring and put into service a few months later. She was a three-masted bark of 1500 tons, with auxiliary motors capable of yielding a speed of 8 knots (Germany, together with other naval powers except Great Britain and the United States clung to the sailing vessel as a training ship). Her crew numbered 250. An anti-submarine school was opened at Kiel in October. The hydrophone class was transferred there from the torpedo school.

The personnel of the navy included 13,500 non-commissioned officers and men, 9355 were Prus-

sians, and 2575 from southern or inland states. Only 290 were originally seamen, the greater number being technical workers and artisans.

GREAT BRITAIN. The accompanying table shows details of the navy estimates for 1933 as compared with 1932. It will be noted that the increase in expenditures was largely due to increased allotments for new construction. This in turn was due to the fact that normal expenditures in 1932 were deliberately retarded by the temporary expedient of deferring orders for the annual programme. (Great Britain unlike the United States had held to a regular orderly programme of new ship construction to replace ships as they become over age.)

I. Numbers	Estimates 1933	Estimates 1932
Number of officers, seamen, boys, and Royal Marines	90,300	91,410
Number of Royal Marine Police .	865	865
II. Effective Services	Pounds	Pounds
Wages, etc., of officers and men of the Royal Navy and Royal Marines, and civilians employed on fleet services	12,649,419	12,684,049
Victualing and clothing for the navy	3,711,791	3,723,751
Medical establishments and services	440,017	451,876
Fleet Air Arm	1,098,000	1,025,000
Educational Services	258,560	278,330
Scientific Services	535,727	542,324
Royal Naval Reserves	355,370	850,850
Shipbuilding, repairs, maintenance, etc.,		
Section I. Personnel . . .	6,227,286	6,387,255
Section II. Material . . .	5,065,400	5,187,550
Section III. Contract work .	7,667,595	5,238,170
Naval Armaments	4,213,783	3,744,225
Works, buildings, and repairs at home and abroad	2,402,800	2,520,700
Miscellaneous effective services .	696,960	704,447
Admiralty office	1,101,569	1,115,583
Total effective services . . .	46,415,377	43,953,610
III. Non-Effective Services		
Non-effective services (naval and marine) officers	3,194,522	3,106,705
Non-effective services (naval and marine) men	4,914,350	4,746,350
Civil superannuation, compensation, allowances, and gratuities .	1,076,197	1,046,647
Total Non-effective Services . .	9,185,069	8,899,702
Grand total	55,600,446	52,853,312
Net Increase	3,093,700	

The new construction programme was about the usual size: 4 cruisers (later modified to 3 with total tonnage, however, unchanged), 1 leader, 8 destroyers, 3 submarines, and 5 sloops. Little money for this 1933 programme was expended, most of the expenditures going to the authorizations of previous years. It was noted that over half a million pounds was for the Singapore base. Thus far, four of the seven million estimated pounds for that base had been appropriated (New Zealand gave one million pounds spread over a number of years).

The 1930 building programme was very nearly finished and the 1931 programme was well advanced except for the cruiser *Amphion* whose keel was laid in June. This was two years and three months after the authorization, probably the longest delay that has ever occurred in starting construction of British warships. The submarine *Porpoise* of the 1930 programme, completed in March was the first mine laying submarine to be built in the Royal Navy since the war. The submarine *Thames* completed in 1932 attained sur-

face speed of 22.5 knots with her heavy oil engines. This marked her as the fastest submarine in the world. One of the newly authorized sloops was expected to have all Diesel engines—the first to be built for the British Navy.

It was interesting to compare the costs of recently completed English ships with the average contract prices for the 1933 American programme. American light cruisers \$11,075,000, *Lcander* £1,668,000, and *Achilles* £1,548,000; American destroyer leaders \$3,850,000. *Duncan* £314,000, and *Kempenfelt* £293,000.

While Great Britain gave ample consideration to the use of aircraft in naval warfare she counted very largely on having them in carriers, and chose to put only one on each cruiser rather than three or four per ship as in the American Navy. Her catapults applied their loads to points on the fuselage, a method which allowed either seaplanes or landplanes to be catapulted.

Important vessels under construction or appropriated for are shown in the accompanying table.

GREAT BRITAIN: WARSHIPS BUILDING, 1933

Class and name	Laid down	Standard displacement	Speed
Cruisers:			
<i>Ajar</i>	1932	7,000	
<i>Amphion</i>	1933	7,000	
<i>Arethusa</i>	1933	5,000	
<i>Neptune</i>	1931	7,000	32
<i>Apollo</i>	1933	7,000	33
<i>Phaeton</i>	1933	7,000	33
<i>Galatin</i>	1933	5,000	33
1 <i>Arethusa</i> Class		5,000	
<i>x</i>		9,000	
<i>x</i>		9,000	
Destroyers:			
<i>Exmouth</i> (DL)	1932	1,400	35
<i>Echo</i>	1932	1,375	35
<i>Eclipse</i>	1932	1,375	35
<i>Electra</i>	1932	1,375	35
<i>Encounter</i>	1932	1,375	35
<i>Escapade</i>	1932	1,375	35
<i>Escort</i>	1932	1,375	35
<i>Esk</i>	1932	1,375	35
<i>Express</i>	1932	1,375	35
<i>Faulknor</i> (DL)		1,400	
<i>Foreight</i>		1,375	
<i>Foxhound</i>		1,375	
<i>Fortune</i>		1,375	
<i>Forster</i>		1,375	
<i>Fury</i>		1,375	
<i>Fame</i>		1,375	
<i>Freende</i>		1,375	
<i>Fearless</i>		1,375	
<i>x</i>		1,400	
Eight others of 1,375 tons each.			
Submarines.			
<i>Sturgeon</i>	1931	640	13/10
<i>Seahorse</i>	1931	640	13/10
<i>Starfish</i>	1931	640	13/10
<i>Shark</i>	1933	950	
<i>Severn</i>	1933	1,805	
<i>Sea Lion</i>	1933	640	
<i>Grampus</i>	No	1,500	
<i>Salmon</i>	No	640	
<i>Clyde</i>	No	805	
<i>x</i>	No	1,500	
<i>x</i>	No	1,805	
<i>x</i>	No	640	

GREECE. The two destroyers *Psara* and *Spetsai* built in Italian yards were handed over to the Greek navy. Two other similar units had been in service for some time. The first official friendly visit of a Greek warship to a Turkish port was made in July when the training ship *Ares* with eighty midshipmen arrived at Istanbul and was cordially received by Turkish authorities.

ITALY. For the first time in some years, the Italian navy estimates for 1933-34 showed a reduction. About 180 million lire, or \$9,500,000 had been saved. The standard of expenditure, however,

was still much higher than formerly, and double that of 10 years ago. The following figures illustrate the growth in cost:—1922-23, 611 million lire; 1923-24, 773; 1924-25, 925; 1925-26, 980; 1926-27, 1040; 1927-28, 1218; 1928-29, 1151; 1929-30, 1211; 1930-31, 1584; 1931-32, 1573; 1932-33, 1574. The 10 years of the Fascist régime witnessed a remarkable growth in the power and efficiency of the Italian fleet, and if expenditure had been heavy, there was ample to show for it. Admiral Sirianni, the Minister of Marine, was able to announce during the debate in the Chamber on the navy estimates that 7 10,000-ton 8-inch gun cruisers were practically ready. In service, or in course of construction, were 12 cruisers of from 5000 to 7000 tons; 12 flotilla leaders, 25 destroyers, 54 submarines, 4 experimental torpedo boats, 1 submarine destroyer, 4 mine layers, 1 seaplane carrier, and 2 training ships.

On December 19, during trials in the Tyrrhenian Sea, the cruiser *Bolzano* reached a speed of 38 knots, 2 knots above her designed speed. The *Bolzano* was the seventh and last of the 10,000-ton cruisers with 8-in. guns. They fell into two categories, 3 of the *Trento* type, which include the *Bolzano*, with 150,000 h.p. and 36 knots; and 4 of the *Zara* type with 95,000 h.p. and 32 knots. The armament was the same in both types, eight 8-in. and sixteen 3.9-in. A.A. guns. The cruiser *Armando Diaz* held her trials but results were not made public. Work was started on the 7000-ton cruisers *Garibaldi* and *Duca Abruzzi*. During the year submarines *Naiade*, *Sircna*, *Rubino*, *Galatea*, *Diamante*, *Topazio*, and *Anfitrite* were launched.

The Italians as a part of sound strategy as well as for economical reasons placed special emphasis on mining. Nearly all cruisers and destroyers carried mines as an obligatory part of their equipment. In addition a flotilla of mine layers 600-800 tons was created some years ago. The 10 vessels of the *Azio* class carried together over 8000 mines. The Italian mine-laying gunboats were intended for night work off neighboring coasts and were not well suited for other than Mediterranean conditions.

The building of the *Dunluerque*, aroused the liveliest interest in Italy, but no definite action to meet this new threat (?) was taken. Serious consideration was given to the question of refitting and modernizing the old battleships, and to the feasibility of converting one or more of them to aircraft carriers. The age of the ships, the expense of making necessary alterations, and the unsatisfactory results to be expected finally resulted in the abandonment of such plans. Important vessels under construction or appropriated are shown in the table on page 539.

JAPAN. The navy's budget for the fiscal year beginning April, 1933, was ¥372,000,000, of which ¥150,000,000 or more was for new construction (yen is normally worth approximately 50 cents). The budget estimates for 1934 called for ¥680,000,000 of which the greater portion was for new construction and modernization of capital ships. The second replenishment programme was designed to put Japan in possession of a navy up to the maximum strength permitted under the London treaty. It included the following ships:

1. Two light cruisers of 8500 tons each to be built at an estimated cost of ¥41,200,000.

2. Two aircraft carriers of 10,000 tons each, to be built at an estimated cost of ¥84,000,000. The tonnage allotted to Japan under the London Naval Treaty was

12,000; therefore one of the two new aircraft carriers will replace the *Hocho*.

3. Fourteen destroyers of 1400 tons each, to be built at an estimated cost of ¥94,080,000.

4. Six submarines, of both large and small types, with a total tonnage of 7500, to be built at an estimated cost of ¥40,500,000.

5. One mine layer of 5000 tons, to be built at an estimated cost of ¥12,000,000.

6. Eight torpedo boats to be built at an estimated cost of ¥50,000,000.

In addition to this, the programme included an expenditure reportedly totaling between ¥160,000,000 and ¥200,000,000 on the aerial arm of the Navy. This would go largely toward establishment of eight new flying units. Incidentally the naval air force was already being expanded from seventeen to thirty-one squadrons during the period 1931-38.

Naval headquarters stated that the Japanese building programme was in answer to the United States \$238,000,000 36-ship programme. In view, however, of the efforts of the past few years to bring the Japanese navy up to maximum strength and the public statements by responsible officials that the London and Washington treaties which expire in 1936 would not be renewed or extended on current ratios, it seemed probable that other considerations determined the programme to be presented. Japan lost no opportunity to let the world know that she was dissatisfied with the five-five-three naval ratio and that she attached little importance to treaties that provided for maintenance of peace by other than force. The budget mentioned was by far the largest in the history of the empire and promised to stretch her resources to the limit.

The death of Admiral Count Yamamoto in December seemed likely to have some potent influences on Japanese naval policies of the future.

ITALY: WARSHIPS BUILDING, 1933

Class and name	Laid down	Standard displacement	Speed
Cruisers:			
<i>Armando Diaz</i>	1930	4,896	37
<i>Luigi Cadorna</i>	1930	4,896	37
<i>Montecuccoli</i>	1930	5,855	
<i>M Attendola</i>	1931	5,855	
<i>Emmanuele Filiberto</i>	1932	6,500	
<i>Eugenio de Savoia</i>	1932	6,500	
<i>Garibaldi</i>	1933	7,000	
<i>Duca Abruzzi</i>	1933	7,000	
Destroyers:			
<i>Maestrale</i>	1931	1,220	
<i>Grecule</i>	1931	1,220	
<i>Scirocco</i>	1931	1,220	
<i>Libeccio</i>	1931	1,220	
<i>Spica</i>	1932	650	
<i>Astore</i>	1932	650	
<i>z</i>	1932	650	
Submarines:			
<i>Jalea</i>	1930	600	16 5/9
<i>Jantina</i>	1930	600	16 5/9
<i>Sirena</i>	1931	600	16 5/9
<i>Naiade</i>	1931	600	16.5/9
<i>Diamante</i>	1931	600	
<i>Smeraldo</i>	1931	600	
<i>Rubino</i>	1931	600	
<i>Topazio</i>	1931	600	
<i>Ametisto</i>	1931	600	
<i>Zaffiro</i>	1931	600	
<i>Nereide</i>	1931	600	
<i>Anfitrite</i>	1931	600	
<i>Galatea</i>	1931	600	
<i>Ondina</i>	1931	600	
<i>Torricelli</i>	1931	880	
<i>Galileo</i>	1931	880	
<i>Ferraris</i>	1931	880	
<i>Archimede</i>	1931	880	
<i>Glauco</i>	1931	862	
<i>Otaria</i>	1931	862	
<i>z</i>	1931	1,368	
<i>z</i>	1931	1,368	
<i>z</i>	1931	1,369	
<i>z</i> (mine layer)	1931	1,368	

Minister of the Navy during the Russo-Japanese war, and acknowledged leader of the powerful Satsuma clan that dominated the navy he had continued to exert his will on the policies of the navy.

The Navy office announced reestablishment of a naval base at Port Arthur. It was also learned that the famous cruiser *Aso* was sunk by 8-inch gun fire in a target practice of some new cruisers. In August the Emperor reviewed the strongest fleet that has ever saluted a ruler of Japan. There were present 161 vessels of 850,000 tons, and these had with them 180 aircraft. To stimulate public interest 7000 civilians were invited to the review, including the chiefs of young men's associations, and five Imperial Princes acted as hosts at luncheon.

Important vessels under construction or appropriated for are shown in the accompanying table.

JAPAN: WARSHIPS BUILDING, 1933

Class and name	Laid down	Standard displacement	Speed
Cruisers:			
<i>Mogami</i>	1931	8,500	33
<i>Mikuma</i>	1931	8,500	33
<i>z</i>	?	8,500	33
<i>z</i>	?	8,500	33
<i>z</i>	No	10,000	33
<i>z</i>	No	10,000	33
Aircraft carriers:			
<i>z</i>		10,000	
<i>z</i>		10,000	
Destroyers:			
<i>Hatsuharu</i>	1931	1,378	
<i>Nonohi</i>	1931	1,378	
<i>Wakaba</i>	1931	1,378	
<i>Hatsushimo</i>	1933	1,378	
<i>Ariake</i>	1933	1,378	
Fifteen others of 1,378 tons each			
Mine layer:			
<i>Natsushima</i>			
Submarines:			
<i>I-69</i>	1931	1,400	
<i>I-68</i>	1931	1,400	
<i>I-6</i>	?	1,900	
<i>I-70</i>	?	1,400	
<i>I-71</i>	?	1,400	
<i>I-73</i>	?	1,400	
<i>I-73</i>	?	1,400	
<i>A</i>	?	700	
<i>B</i>	?	700	
Six others of a total tonnage 7,500 tons.			

NETHERLANDS. The crew of the battleship *De Zeven Provinciën* in the East Indies mutinied and for a time held complete sway over the ship. The *Aldebaron* followed the battleship for three days but the mutinous crew felt safe behind their big guns and forced the smaller vessel to keep clear. Bombing planes sent to quell the mutiny were obliged to make use of their explosives. Twenty-odd men, including the leaders of the mutiny were killed before the ship surrendered. Twenty-eight Dutch and 184 native members of the crew were brought to trial. The ship was not seriously injured by the bombing.

NEW ZEALAND. A number of officers were lent to the New Zealand government for about three years for service in the New Zealand division of the Royal Navy. The Dominion government, while it maintained two cruisers, a training ship, a mine-sweeping trawler, and an oiler, drew the officer personnel and one-third of the ratings on loan from the Royal Navy. There were also, however, the New Zealand divisions of the Royal Naval Reserve and Royal Naval Volunteer Reserve.

POLAND. The estimates for 1933-34 amounted to a net total of approximately \$3,000,000, which was a small increase as compared with the previous

year. Detailed statements showed that the sum assigned for the construction of floating units was nearly double, while there had been a very large saving on that included in the 1932-33 estimates for building, port installations and repairs. An order was placed in France for the construction of a mine layer that was also to be used as a training ship.

The Polish fleet consisted of 2 destroyers, 3 submarines, 5 torpedo boats, 2 gunboats, 1 survey vessel, and 3 training ships. In addition there was the Pinsk River Flotilla of 6 river monitors, 8 river scouts, 1 transport, and 2 motor boats.

PORTUGAL. In October President Carmona held in Cascaes Bay the first review of the Portuguese fleet for many years. The government appeared to be intent on putting its navy on a footing more worthy of its historical past and the needs of its colonial empire. Recruiting was being accelerated, and although Portugal was a conscript country, volunteers were being called for and given preference. Work on the building programme of 1930 was progressing satisfactorily. There seemed to be no fear of a return to the old system whereby there were actually more admirals in the Portuguese Navy than there were ships—as happened in 1918, when there were twenty-seven admirals on the active list, and about half that number of ships.

The keels of the sloops *Bartolomeu Dias* and *Alfonso D'Albuquerque* were laid in England. Characteristics: 2000 tons, two sets reduction turbines, 21 knots. Armament four 4.7-inch guns, two 3-inch anti-aircraft guns; equipment for mine laying, provisions for forty mines. Paravanes and depth charges throwers were also to be part of the equipment.

SPAIN. The difficulties that beset the Spanish Navy for some years continued during 1933. Inactivity in port, reduced personnel, and lack of money prevented the maintenance of an efficient organization. Officials at Ferrol and Cartagena shipyards reported that none of the eleven men-of-war that had been under construction since 1928 would be ready for another five years and many Spanish naval officers feared that the ships would be obsolete before being completed.

SOUTH AFRICA. This country's short-lived navy was on the verge of disappearance. The mine sweeper *Protea*, and *Sonneblom* were to be handed back to the Royal Navy, while the *Protea*, the principal naval unit was sold for use as a pleasure vessel. The Minister of Defense planned upon placing reliance for defense entirely upon coastal defenses and aircraft. South African naval volunteers were to be trained in the British service.

SWEDEN. The announcement that the Department of Defense was asking for an increase of over \$4,000,000 in the estimates for new construction, in order to build a cruiser, 4 vedette boats, and 2 submarines was not unexpected for Sweden had recently been showing increased interest in her navy. Only two of the nine armored ships had been completed since the war, the *Drottning Victoria* and the *Gustav V*, both in 1921; and of the other seven, four were about thirty years old. Of the sixteen submarines on the list, ten had been completed since the war, the last in 1930, but the other six were due for replacement. The vedette ship *Karparen* was launched in the early summer. She was the second of four such ships; the first of the series, the *Jagaren*, was launched in December, 1932; *Vaktayen* and the *Snappahnen* were to follow. The cruiser aircraft-carrier

Gotland was launched in September. Equipped with catapult she will carry eight planes. There were also minelaying equipment and storage for one hundred mines. Characteristics: 4500 tons, 33,000 horse power, twenty-seven knots. Armament: six 4-inch, four 3-inch anti-aircraft; machine guns and six 21-inch torpedo tubes.

UNITED STATES. The naval appropriation bill for the fiscal year 1934 carried \$308,669,562. This was aside from the allotment of \$238,020,000 under the Industrial Recovery Act. The latter fund was for immediate construction of 32 vessels in a 3-year building programme in addition to the 17 that were already under construction. A further allotment of \$9,362,000 was made for naval airplanes. Contracts were let for all these expenditures.

Nearly a third of the total built tonnage of the American Navy on Dec. 31, 1933, consisting of 372 vessels, aggregating 1,038,660 tons, was over-age. On that date the total built under-age tonnage was composed of 84 vessels, totaling 708,580 tons. This left in the possession of the navy a total of 288 vessels over-age, the tonnage of which amounted to 330,110. The 372 vessels of the Navy, over-age and under-age, by classes, were as follows: Fifteen capital ships, 455,400 tons; 3 aircraft carriers, 77,500 tons; 11 class A cruisers, 100,000 tons; 10 class B cruisers, 70,500 tons; 251 destroyers, 267,470 tons; and 82 submarines, 67,790 tons.

The 84 vessels built and under-age on Dec. 31, 1933, included 14 capital ships, 429,300 tons; 2 aircraft carriers, 66,000 tons; 10 class A cruisers, 92,650 tons; 10 class B cruisers, 70,500 tons; 3 destroyers, 3570 tons; and 45 submarines, 46,530 tons. The navy was woefully weak in under-age destroyer strength, for on December 31, 1933, of the 251 destroyers built but three were under-age on that date. Nearly half of the submarine tonnage built was over-age, for of the 82 vessels built of this class but 45 were under-age.

To offset some of the over-age tonnage, there was building and appropriated for a total of 52 vessels, aggregating 222,060 tons. By classes, this construction was as follows: Three aircraft carriers, 53,800 tons; 7 class A cruisers, 70,000 tons; 4 class B cruisers, 40,000 tons; 32 destroyers, 50,800 tons; and 6 submarines, 7460 tons. Although the compilation shows that more destroyers were being built than any other class of vessels, these 32 destroyers will hardly improve the destroyer situation, in view of the fact that 248 of these vessels were already over-age.

Under the treaty, however, the United States was authorized to lay down 102 additional vessels before Dec. 31, 1936, the termination of that international naval construction agreement. These vessels will aggregate 207,030 tons and by classes were as follows: One aircraft carrier, 15,200 tons; 1 class A cruiser, 10,000 tons; 5 class B cruisers, 47,100 tons; 65 destroyers, 99,200 tons; and 30 submarines, 35,530 tons. The single class A cruiser was authorized, but not appropriated for, and under the provisions of the treaty may not be laid down before Jan. 1, 1935. The 5 class B cruisers were authorized, but no appropriations had been made for this construction. With the exception of 3 of the five class B cruisers, all of the 102 vessels were replacements for existing vessels becoming over-age.

Upon the announcement that the class B cruisers to be laid down would be of 10,000 tons displacement diplomatic representations were made

to the government urging that no 6-inch gun cruisers be built that were larger than those already in commission. The United States, however, could not see its way clear to alter the delayed programme or to suspend construction on the projected ships.

The only ship completed during the year was the heavy cruiser *Portland*. However, modernization work on the *New Mexico* and the *Mississippi* was finished. The airship *Macon* was also completed and participated in several exercises with the fleet. There was no gain in the number of airships, however, for the *Akron*, was wrecked in a storm earlier in the year. Among those lost was Admiral Moffett, Chief of the Naval Bureau of Aeronautics. One of the unusual features of the *Macon* was the provision for habitually carrying planes in a hangar within the ship, and an ingenious arrangement for discharging them and receiving them through a hook arrangement while the parent ship was in mid-air.

Naval administrative authorities were much concerned over failure to receive appropriations for additional officers and men to man the new ships under construction. The active fleet was al-

UNITED STATES: WARSHIP BUILDING, 1933

Class and name	Standard displacement	Probable date of completion
Aircraft carriers.		
<i>Kanger</i>	13,800	5/34
<i>Yorktown</i>	10,000	8/86
<i>Enterprise</i>	10,000	12/36
Heavy cruisers.		
<i>New Orleans</i>	10,000	2/34
<i>Astoria</i>	10,000	4/34
<i>Minneapolis</i>	10,000	4/34
<i>Tuscaloosa</i>	10,000	3/34
<i>San Francisco</i>	10,000	2/34
<i>Quincy</i>	10,000	1/36
<i>Vincennes</i>	10,000	1/37
Light cruisers:		
<i>Brooklyn</i>	10,000	11/36
<i>Philadelphia</i>	10,000	11/36
<i>Savannah</i>	10,000	8/36
<i>Nashville</i>	10,000	12/36
Submarines:		
<i>Ochalot</i>	1,130	2/34
<i>Cuttlefish</i>	1,130	12/33
<i>Porpoise</i>	1,400	2/36
<i>Pike</i>	1,400	5/36
<i>Shark</i>	1,400	8/35
<i>Tarpon</i>	1,400	11/35
Destroyers:		
<i>Farragut</i>	1,500	2/34
<i>Dewey</i>	1,500	6/34
<i>Hull</i>	1,500	8/34
<i>Macdonough</i>	1,500	8/34
<i>Worden</i>	1,500	10/34
<i>Dale</i>	1,500	1/35
<i>Monaghan</i>	1,500	1/35
<i>Aylwin</i>	1,500	1/35
<i>Porter</i>	1,500	12/35
<i>Selfridge</i>	1,850	2/36
<i>McDougal</i>	1,850	4/36
<i>Winslow</i>	1,850	6/36
<i>Phelps</i>	1,850	12/35
<i>Olark</i>	1,850	2/36
<i>Moffett</i>	1,850	4/36
<i>Balch</i>	1,500	6/36
<i>Mahan</i>	1,500	10/35
<i>Cummings</i>	1,500	12/35
<i>Drayton</i>	1,500	11/35
<i>Lamson</i>	1,500	2/36
<i>Flusser</i>	1,500	11/35
<i>Reid</i>	1,500	2/36
<i>Cass</i>	1,500	2/36
<i>Conyngham</i>	1,500	5/36
<i>Cassin</i>	1,500	2/36
<i>Shaw</i>	1,500	5/36
<i>Tucker</i>	1,500	2/36
<i>Downes</i>	1,500	5/36
<i>Cushing</i>	1,500	2/36
<i>Perkins</i>	1,500	5/36
<i>Smith</i>	1,500	2/36
<i>Preston</i>	1,500	5/36
Gunboats:		
<i>Erie</i>		2/36
<i>Charleston</i>		2/36

ready undermanned and they felt that it would take longer to provide and properly train efficient personnel than it would to build the ships.

The entire fleet remained concentrated on the Pacific Coast but it was officially announced that nearly all units would make a cruise of several months' duration to the Atlantic during 1934.

The Marine Expeditionary Forces that had been maintained at Quantico, Va., and San Diego, Calif., were given the designation of Fleet Marine Force and placed under the immediate jurisdiction of the Commander-in-Chief, United States Fleet.

Important vessels under construction are shown in the table in the first column.

UNION OF SOVIET SOCIALIST REPUBLICS (RUSSIA). Information regarding the Soviet's naval activities was meagre and generally unreliable but utterances by prominent Soviet naval authorities indicated increased interest in the Baltic and a determination to strengthen the navy there to meet emergencies. Shipyards at Leningrad did considerable work preparing the fleet for manoeuvres. While authentic public information was not available in regard to the size of the operating forces, it was generally believed that the fleet consisted of 3 battleships, 4 cruisers, 2 mine layers, 17 destroyers, and 29 submarines. All, however, were probably old ships. The Communist Youth Congress voted to undertake "patronage" of the navy and since then the Baltic and Black Sea Fleets are reported to have been fully reequipped.

YUGOSLAVIA. The training ship *Jadran*, built in Germany and presented to the Yugoslavian Navy by the "Jadranska Straza" (The Adriatic Guard) of the Yugoslavian Navy League, reached Spltato in the early fall and was incorporated into the fleet.

NAVIES. See NAVAL PROGRESS.

NAVIGATION. See SHIPBUILDING; SHIPPING; NAVAL PROGRESS; SAFETY AT SEA.

NAZIS. See GERMANY, AUSTRIA, DANZIG, SAAR, DENMARK, NETHERLANDS, and SWEDEN under *History*; JEWS; FASCISM.

NEBRASKA. POPULATION. The population of the State on Apr. 1, 1930, according to the Fifteenth Census, was 1,377,963, as against 1,296,372 in 1920. Omaha, the chief city, had (1930) 214,006 inhabitants; Lincoln, the capital, 75,933.

AGRICULTURE. The following table shows the acreage, production, and value of the principal crops for 1933 and 1932:

Crop	Year	Acreage	Prod. Bu.	Value
Corn	1933	10,431,000	234,698,000	\$70,409,000
	1932	10,644,000	269,293,000	37,701,000
Hay (tame)	1933	1,871,000	2,858,000*	13,718,000
	1932	1,680,000	2,960,000*	13,320,000
Wheat . . .	1933	2,437,000	29,206,000	18,559,000
	1932	2,277,000	27,958,000	7,508,000
Oats	1933	2,226,000	23,373,000	5,843,000
	1932	2,473,000	74,190,000	8,161,000
Sugar beets	1933	88,000	1,068,000*	.....
	1932	66,000	877,000*	4,021,000
Potatoes ..	1933	115,000	8,625,000	5,606,000
	1932	135,000	8,775,000	2,545,000
Barley . . .	1933	799,000	8,390,000	2,265,000
	1932	918,000	18,360,000	2,754,000
Rye	1933	214,000	1,712,000	736,000
	1932	283,000	2,830,000	538,000

* Tons.

FINANCE. State expenditures in the year ended June 30, 1932, as reported by the U. S. Department of Commerce, were: for maintaining and operating governmental departments \$13,799,477 (of which \$1,160,492 was for local education);

for interest on debt, \$9892; for permanent improvements, \$11,633,573; total, \$25,442,842 (of which \$14,065,864 was for highways, \$3,739,403 being for maintenance and \$10,326,461 for construction). Revenues were \$23,561,756. Of these, property and special taxes furnished 26.0 per cent; departmental earnings and compensation to the State for officers' services, 8.8; sale of licenses, 38.3 (in which was included a gasoline sale tax that produced \$7,008,371). Funded debt outstanding on June 30, 1932, totaled \$237,500, against which were no sinking-fund assets. On an assessed valuation of \$2,875,864,394 the State levied in the year ad-valorem taxes of \$6,193,980.

EDUCATION. The difficulty of providing public revenue on the usual scale for the schools may be accepted as explaining the reported fact that over a hundred measures adverse to the public-school interests were introduced in the year's legislative session. That number of measures, however, were killed, being strongly opposed by the advocates of continued support for education. It was reported at the end of 1933 that no public school in the State had been closed for lack of public support. For the school year ending July 1, 1933, the number of persons of school-going age in the State was estimated at 419,401. There were enrolled in the public schools 321,468 pupils. Of these, 240,185 were in common schools or elementary grades; in high schools, 75,283. The year's expenditures for public elementary and high-school education totaled \$20,765,390. Salaries of teachers averaged, by the year, \$1309 for men and \$1120 for women in cities and villages; in rural schools, \$598 for men and \$590 for women. The averages for the year 1933-34 were estimated as lower by from \$20 to \$70.

CHARITIES AND CORRECTIONS. The 17 custodial and eleemosynary institutions of the State were operated in 1933 under the direction of the State Board of Control. This board was composed of three members, appointed by the Governor for terms of six years, the terms ending in rotation at two-year intervals. The board had full jurisdiction over the institutions in its charge. The number of inmates of all these institutions on Dec. 1, 1933, was 7710. The separate institutions, with the numbers of their respective inmates on that date, were: Institution for Feeble-Minded, Beatrice, 1203; Girls' Training School, Geneva, 190; Soldiers' and Sailors' Home, Grand Island, 228; Hastings State Hospital, Ingleside, 1500; State Industrial School, Kearney, 193; Hospital for Tuberculous, Kearney, 153; Lincoln State Hospital, Lincoln, 1225; Orthopedic Hospital, Lincoln, 104; State Penitentiary, Lincoln, 924; Nebraska Industrial Home, Milford, 71; Soldiers' and Sailors Home, Milford, 114; School for the Blind, Nebraska City, 49; Norfolk State Hospital, Norfolk, 1022; School for the Deaf, Omaha, 207; Reformatory for Women, York, 47; Home for Dependent Children, Lincoln, 110; Reformatory for Men, Lincoln, 370.

LEGISLATION. The Legislature met in regular session on January 3. It dealt with the troubles of the State banking system by passing a law transferring the power to appoint and supervise receivers for suspended banks from the courts to the Governor; the office of banking commissioner was abolished; that of superintendent of banks was created and endowed with power to supervise State banks, trust companies, and divers other institutions doing financial business

under State laws. The writing of insurance on property in the State was restricted by law to agents operating in the State, receipts from taxes on all premiums on insurance thereafter written being thus assured.

Provision was made for eventual State action with regard to the repeal of the Federal Eighteenth Amendment, by a State convention of 101 pledged delegates, to be nominated and elected on an allotment of one to each district for the election of representatives in the Legislature; the popular election of these delegates was to be in December, 1934. The sale of beer containing up to 3.2 per cent of alcohol was rendered lawful, subject to an excise tax by the barrel and to license tax on sellers.

POLITICAL AND OTHER EVENTS. Banks in the State were closed by proclamation on March 4. The greater part were allowed to reopen some ten days later in accordance with Federal arrangements for reopening banking institutions. The United States Supreme Court refused in May to review a decision of a lower court that had held the State's law for the guarantee of bank deposits unconstitutional. Senator Robert B. Howell died on March 11; Governor Bryan appointed William H. Thompson, a former justice of the State supreme court, on May 24 to fill the State's vacant place in the United States Senate.

There was much agitation among farmers early in the year against foreclosures. Foreclosure sales were stopped by threats of violence. Governor Bryan demanded in February that creditors cease foreclosing.

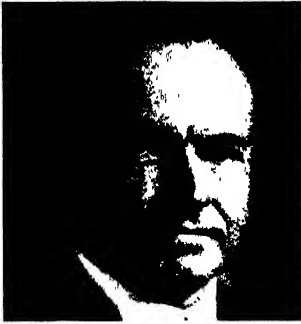
OFFICERS. The chief officers of the State, during 1933, were: Governor, Charles W. Bryan; Lieutenant-Governor, Walter H. Jurgensen; Secretary of State, Harry R. Swanson; Auditor, William B. Price; Treasurer, George E. Hall; Attorney General, Paul F. Good; Superintendent of Public Instruction, C. W. Taylor.

Judiciary. Supreme Court: Chief Justice, Charles A. Goss; Associate Justices, William B. Rose, James R. Dean, Edward E. Good, George A. Eberly, L. B. Day, Bayard H. Paine.

NEBRASKA, UNIVERSITY OF. A State institution of higher education in Lincoln, Nebr., founded in 1869. The enrollment for the autumn of 1933 was 5076. These students were distributed as follows: Agriculture 395, arts and sciences 1588, business administration 576, dentistry 73, engineering 481, graduate college 387, law 181, medicine 343, nursing 119, pharmacy 72, and Teachers College 900. There were 1853 students enrolled in the summer session of 1933 of whom 721 were men and 1132 were women. The faculty numbered 316 full time. The permanent endowment fund amounted to \$960,927. The library contained 275,865 volumes, Chancellor, Edgar A. Burnett, D.Sc.

NECROLOGY. The following list contains the names of notable persons who died in 1933. Articles will be found in this volume, in their alphabetical order, on those whose names are given below without other text.

Abbott, Lawrence Fraser, died Feb. 7, 1933.
Abo-Eatab, The Rt. Rev. Emmanuel, Syro-American ecclesiastic, died in Brooklyn, N. Y., May 29, 1933. He was born in Damascus, Syria, in 1890, and attended a Syrian theological seminary. At the age of 19, under the authority of the Holy Orthodox Catholic and Apostolic Church, he was sent to the United States to assist in establishing Syrian churches of the Greek rite on the North American continent. After serving as deacon for six years, he was made arch-deacon for the Brooklyn



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 President of the United States
 1923-1928



Keystone
HENRY VAN DYKE
 American Essayist



Wide World
CYRUS H. K. CURTIS
 American Publisher



JOHN GALSWORTHY
 English Novelist



JAMES CORBETT
 American Boxer



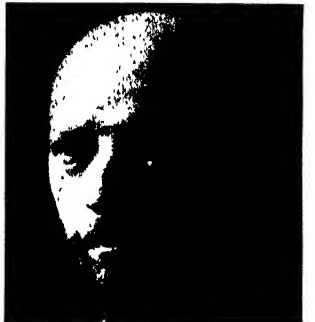
Acme
JOHN GRIER HIBBEN
 American University President



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ANNIE BESANT
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VISCOUNT GREY
 British Statesman

PROMINENT PERSONS WHO DIED IN 1933



Acme

ION G. DUCA
Rumanian Premier



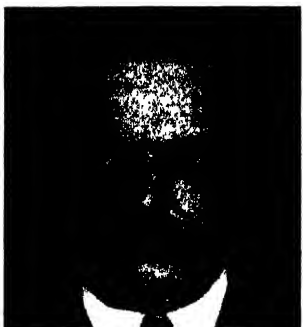
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American Naval Officer



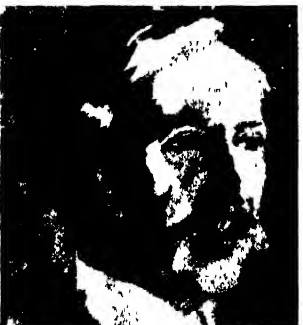
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GYA-TSHO
The Dalai Lama of Tibet



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FRANCISCO MACIA
President of Catalonia

(N. Y.) Diocese, and in 1927 was consecrated Bishop of Montreal, with jurisdiction over the churches of Canada and the eastern United States. At the time of his death he was also pastor of the Syrian Orthodox Cathedral of St. Nicholas in Brooklyn.

Aborn, Milton. American impresario, died in New York City, Nov. 12, 1933. He was born at Marysville, Calif., May 18, 1864, and began his theatrical career at the age of 21. After appearing in comic opera for two seasons, he became stage director and leading comedian in the B. F. Keith Comic Opera Co., playing in Boston, New York, and Philadelphia. In 1895 he organized his own company and toured with it for five years. He afterwards organized with his brother Sargent the Aborn Light Opera Co. and managed a circuit of 12 repertory companies which played both grand and comic opera. In 1913 Mr. Aborn was selected by Otto H. Kahn as director of the Century Opera Co., one of the few attempts at subsidized opera in English in the United States. When this project was abandoned in 1915 he began the staging of grand and comic opera revivals in New York and other cities. The most noteworthy were those of Gilbert and Sullivan's and Victor Herbert's operettas.

Abruzzi, Prince Luigi Amedeo Giuseppe Maria Ferdinando Francesco, Duke of the, died Mar. 18, 1933.

Adams, Thomas Sewall, died Feb. 8, 1933.

Adler, Felix, died Apr. 24, 1933.

Adly, Yeghen Pasha. Egyptian statesman, died in Paris, France, Oct. 22, 1933. Born in 1865, he was educated in France and began his career in 1885 as private secretary to Nubar Pasha, Premier and Foreign Minister. Three years later he entered the provincial administration, rising to governor of Cairo in 1902. In 1913 he was appointed vice-president of the Legislative Assembly, and the following year received from Rushdy Pasha the portfolio of Foreign Affairs. He held the latter post for seven years. On becoming Premier in 1921 he headed a delegation which visited London in August of that year to demand of the British government enlarged powers of self-government and virtually complete independence. The conference failed because the Egyptians felt that the maintenance of British troops constituted pure and simple occupation of their country. They objected also to the plan for controlling the foreign policy of the country through the British High Commissioner who must be consulted before Egypt could enter into an agreement with a foreign power. Adly Pasha resigned the premiership at the close of 1921, but accepted this office again in June, 1926, retaining it until constant opposition of the Wafdists forced his resignation the following spring. He acted as head of a neutral government for three months in 1929, making way after the Wafdist victory in the national election for Nuhass Pasha.

Adorée, Renée (Renée de la Fontaine). French-American motion picture actress, died at Sunland, Calif., Oct. 5, 1933. Born in Lille, France, about 1900, she began her career at the age of 10 as a circus performer. A few years later she joined a company of pantomimists and on the outbreak of the World War was appearing as a ballet dancer in Brussels. Fleeing from there with other refugees she landed in England where she played in a number of musical comedies. She then embarked for the United States and was seen in New York in *Oh Uncle, O What a Girl*, and *The Dancer and Sunny*. She began her motion picture career in 1921 when she was given a part in the picture *The Strongest*. It was in 1925, however, when she played the rôle of Mélisande in *The Big Parade* that she attained her greatest success. She later had leading parts in *La Bohème*, *Mr. Wu*, *The Corsicans*, *The Pagan*, *Redemption*, etc. Her last picture was *Call of the Flesh* in which she supported Ramon Novarro in 1930.

Aguero Betancourt, Aristides de, died June 21, 1933. Aiken, E. Clarence American lawyer, died at Auburn, N. Y., July 6, 1933. He was born at Scipio, Cayuga Co., N. Y., May 6, 1856, and was graduated from the University of Rochester in 1877. Admitted to the New York bar in 1879, he practiced thereafter in Auburn and was mayor of that city from 1906 to 1907 and president of its Chamber of Commerce from 1909 to 1912. From 1915 to 1931, while State Deputy Attorney General, Mr. Aiken had charge of appeals in Workmen's Compensation cases, being responsible for the increase in the maximum payment of compensation from \$20 to \$25 as a result of his testimony before the State Industrial Survey Commission in 1926.

Albert, François, died Nov. 23, 1933.

Aldrich, Perley Dunn. American baritone, died in Philadelphia, Pa., Nov. 20, 1933. Born at Blackstone, Mass., Nov. 6, 1863, he attended the New England Conservatory, studying also with Sbrighia in Paris, and in 1885 was appointed professor of music at the University of Kansas. From 1889 to 1891 he was at the Utica Conservatory and from 1891 to 1903 taught singing in Rochester. He then removed to Philadelphia where on the organization of the Curtis Institute of Music in 1924 he was appointed head of the vocal department. After relinquishing that post he continued his private teaching in

Philadelphia and New York City. Mr. Aldrich was director of the Motette choir and former director of the Little Opera Company (Opéra-Comique). Besides giving many unique recitals, he composed about 25 songs and the cantatas *La Belle Dame sans Merci* (1895) and *Sleeping Wood Nymph* (1896).

Allen, Frederic Winthrop. American banker, died in New York City, Nov. 25, 1933. He was born at Walpole, Mass., May 26, 1877, and was graduated from Yale University in 1900. Entering the employ of the Simmons Hardware Co. of St. Louis, Mo. in 1901, he rose to the position of assistant secretary and director. In 1910, he was elected vice-president of the Mechanics and Metals National Bank of New York, holding that post until 1915 when he became a member of the banking firm of Lee, Higginson and Co. He was chairman of the board of directors of the North American Reassurance Co., the American Enka Corp., and the Dunlop Tire and Rubber Co., and a director of numerous other financial and industrial concerns, including the Chase National Bank, International Telephone and Telegraph Co., International Investment Co., International Match Co., and Shell Union Oil Co. For a time after Ivar Kreuger's suicide in 1932 Mr. Allen was president of the International Match Co. It was under his direction that thrift and war savings stamps were sold in New York City during the World War.

Allen, Brig.-Gen. James, U. S. A., Ret. American soldier, died in Washington, D. C., Feb. 19, 1933. He was born at La Porte, Ind., Feb. 13, 1849, and was graduated from the United States Military Academy in 1872. His first service was with the 3d Cavalry on Indian campaigns in the West, where he rose from 2d lieutenant to captain. In 1890 he entered the Signal Corps, served with distinction in the Spanish-American War and in the Filipino insurrection, and became chief signal officer in 1906, retiring in 1913 with the rank of brigadier-general. He directed the laying of the first submarine cables for telegraph and telephone lines from Seattle to Hawaii and from Seattle to Alaska, and in 1908, in signing the contracts for the construction of the first army aeroplanes after the successful trial flights by Orville Wright at Fort Myer, Va., founded the Army Air Service.

Allen, Percy Stafford, died June 16, 1933.

Almon, Edward Berton American congressman and lawyer, died in Washington, D. C., June 22, 1933. He was born at Moulton, Lawrence Co., Ala., Apr. 18, 1860, and was graduated from the University of Alabama in 1883. Admitted to the Alabama bar in 1883, he began his practice in Tusculumbia. From 1892 to 1896 he served in the Senate of the Alabama Legislature. He was a Presidential Elector in 1896, and two years later became judge of the 11th Judicial Circuit of Alabama, holding office until 1906. In 1910 he was again elected to the Alabama Legislature, and served as Speaker of the House of Representatives in the following year. Almon sponsored the bill that resulted in the creation of the State Highway Commission. He represented the eighth district of Alabama in the House of Representatives where, as chairman of the Committee on Roads, he helped to obtain the allotment of \$400,000,000 for highway construction under the public works programme of the Industry Control Bill. Also, he was one of the chief sponsors of the Federal government's hydro-electric power plant at Muscle Shoals, Ala.

Ames, Adelbert, died Apr. 13, 1933.

Anderson, Rear Admiral Edwin Alexander, U. S. N., Ret., died Sept. 23, 1933.

Anderson, John G. American golfer, died in Columbus, Ohio, June 15, 1933. He was born at Clinton, Mass., Apr. 22, 1884, and was graduated from Amherst in 1905, receiving an M.A. from Columbia University in 1915. In 1907 and 1911 he won the golf championship of Massachusetts. In 1913, and again in 1915, he reached the finals in the national amateur matches losing the first to Jerome D. Travers and the second to Robert Gardner. He won the French amateur title in 1924 and again in 1926, and in 25 years of golf was credited with 53 titles in sectional, district, and national play and with seven "holes-in-one."

Anderson, Melville Best, died June 22, 1933.

Angelopoulos, The Rt. Rev. Christos. Greco-American ecclesiastic, died in Atlantic City, N. J., Jan. 8, 1933. He was born at Argos, Greece, Mar. 22, 1867, and was trained for priesthood at the theological seminary of the Orthodox Eastern Church at Tripoli, Greece. After ordination in 1894, he was sent in 1903 to the United States to assist in the organization of churches of the Greek rite, ultimately becoming archimandrite of the archdiocese of North and South America. Under his influence 14 monastic communities, congregations, and schools were organized in the eastern United States, among them being the Church of St. Spyridon in New York City.

Anglin, Francis Alexander, died Mar. 2, 1933.

Apponyi, Albert, Count, died Feb. 7, 1933.

Arbuckle, Roscoe Conkling, "Fatty." American motion picture comedian, died in New York City, June 29, 1933. Born at Smith Center, Kan., Mar. 24, 1887, he started

his screen career in 1913, being featured in several Mack Sennett productions. In 1917 he became associated with Joseph M. Schenck of the Famous Players Lasky Corporation for the release of his own comedies through that company. From 1920 to 1921 he served as vice-president and director of the Comique Film Corporation. To innate humor and great bulk may be attributed his great popularity which waned when he was accused of causing the death of Virginia Rappe in 1921. On being placed on trial, two of the juries disagreed and he was acquitted by the third. This tragedy led to the banning from the screen of the pictures in which he had taken part. Among his popular films were *His Wife's Mother*, *A Reckless Romeo*, *His Wedding Night*, *Moonshine*, *The Sheriff*.

Armitage, Sir Cecil Hamilton, died Mar. 10, 1933.

Arnold, Harold De Forest, American physicist, died at Summit, N. J., July 10, 1933. He was born at Woodstock, Conn., Sept. 3, 1883, and was graduated from Wesleyan University in 1906, receiving the Ph.D. degree from Chicago University five years later. From 1911 to 1924 he was associated with the Western Electric Co., New York City, as research engineer, and after 1925 was director of research for the Bell Telephone Laboratories. As a result of his development of the three-electrode high vacuum thermionic tube, Dr. Arnold received the John Scott medal in 1928. He served as captain in the Signal Corps of the United States Reserves during the World War and won renown for his invention of a submarine-detector apparatus.

Ashton, William Easterly, American physician and surgeon, died in Philadelphia, Pa., Mar. 30, 1933. He was born in Philadelphia, June 5, 1859, and was educated at the University of Pennsylvania medical school and at Jefferson Medical College, serving on the faculty of the latter institution for eight years after receiving his degree in 1884. From 1892 to 1916 he was gynecologist to the hospital and professor of gynecology at the Medical-Chirurgical College and, thereafter, professor of gynecology at the graduate school of medicine of the University of Pennsylvania. In 1917, with the rank of major, he was attached to the 309th Field Artillery of the 78th Division as regimental surgeon, and took part in the St. Mihiel and Meuse-Argonne offensives, receiving the Distinguished Service Cross in 1918. Dr. Ashton was the inventor of various surgical instruments and was the author of *Essentials of Obstetrics* (1888) and of the textbook *The Practice of Gynecology* (1905).

Austin, Oscar Phelps, American statistician, died in New York City, Jan. 6, 1933. Born at Newark, Ill., in 1848, he received a public school education and served for several years as reporter, editor, and Washington correspondent for metropolitan dailies. In 1898 he was appointed chief of the Bureau of Statistics of the Treasury Department, and when that bureau was merged in 1912 with the Bureau of Foreign and Domestic Commerce of the Department of Commerce and Labor, became its assistant chief. From 1903 to 1914 he served also as professor of commerce and statistics at George Washington University. In 1914 he moved to New York City when until 1925 he was statistician of the foreign trade department of the National City Bank. For 32 years Mr. Austin had been a member of the board of trustees of the National Geographic Society, serving as the secretary of the society after 1904. He was also the author of a series of historical novels for boys, including *Uncle Sam's Secrets*, *Uncle Sam's Soldiers*, *Uncle Sam's Children*, and *Uncle Sam's Boy at War*, and served as statistical editor of the *New International Encyclopedia*.

Aylesworth, Barton Orville, American educator, died in Denver, Colo., July 1, 1933. Born at Athens, Ill., Sept. 5, 1860, he was graduated from Eureka College in 1879. Ten years later he was elected president of Drake University, serving in that capacity until 1897. He then assumed the pastorate of the Central Church of Christ in Denver, but in 1899 returned to the educational field as president of the faculty and professor of political economy and logic at the Colorado State Agricultural College. On his resignation in 1909 he took up the fight for woman suffrage, being an organizer and lecturer for the National American Woman Suffrage Association.

Aznar, Admiral Juan Bautista, died Feb. 19, 1933.

Babbitt, Irving, died July 15, 1933.

Babbott, Frank Lusk, American manufacturer and philanthropist, died in Brooklyn, N. Y., Dec. 7, 1933. Born at Waterville, N. Y., Aug. 14, 1854, he was graduated with the A.B. degree from Amherst College in 1878, receiving two years later the LL.B. degree from Columbia University. In 1883 he embarked upon his industrial career with the Chelsea Jute Mills, later becoming a director and officer of that organization. On his retirement in 1901 he interested himself in various civic and educational enterprises. During 1902-04 he was vice-president of the New York Board of Education, having previously served for seven years as a member of the Brooklyn Board of Education. He was also president of the Packer Collegiate Institute after 1911 and of the Brooklyn Institute of Arts and Sciences during 1920-28. As vice-president of the Brooklyn Art Commission after 1920, Mr. Babbott was especially interested in the devel-

opment of the Brooklyn Museum, donating many valuable objects to its Oriental and Renaissance collections. He received the decoration of Chevalier of the Legion of Honor from the French government in 1925, while the Danish government in 1929 made him a commander, second degree, of the Order of Dannebrog. In 1932 he received the award of the Neighborhood Club of Brooklyn for his services toward advancing the city's cultural and civic life.

Baetjer, Frederick Henry, American röntgenologist, died July 17, 1933, in Baltimore, Md., where he was born Aug. 7, 1874. He was graduated from Johns Hopkins University with the M.D. degree in 1901, and later took a post-graduate course at the University of Berlin. During 1901-02 he was resident house officer of the Johns Hopkins Hospital. In 1903 he began his private practice in Baltimore and was consulting röntgenologist of the Union Memorial Hospital, the Church Home and Infirmary, Hospital for the Women of Maryland, the Children's Hospital School, and professor of röntgenology and röntgenology at Johns Hopkins University and Hospital. Not only a pioneer but also a martyr to science, Dr. Baetjer suffered the loss of all of his fingers and serious injury to an eye.

Bailey, Edgar Henry Summerfield, American chemist, died at Lawrence, Kan., June 1, 1933. Born at Middlefield, Conn., Sept. 17, 1848, he was graduated from Yale University in 1873, receiving the Ph.D. degree from the Illinois Wesleyan University 10 years later. He studied also at the Universities of Straßburg and Leipzig. After serving as instructor in chemistry at Lehigh University from 1874 to 1883, he was called to the University of Kansas as professor of chemistry and metallurgy acting also after 1900 as director of its chemical laboratory. At the time of his death he was professor emeritus. Dr. Bailey had been chemist for the Kansas State Board of Agriculture after 1885 and had served in the same capacity on the State Board of Health in 1899. For the Kansas Geological Survey he wrote reports on gypsum and mineral waters. He was also the author of *Laboratory Guide to Study of Qualitative Analysis* (with H. P. Cady, 1901); *Sanitary and Applied Chemistry* (1906); *The Source, Chemistry, and Use of Food Products* (1914); *Laboratory Experiments on Food Products* (1915); and *Food from Afar* (with H. S. Bailey, 1922).

Baines, Sir Frank British architect, died at St. Keverne, Cornwall, England, Dec. 26, 1933. He was born in 1877 and was tutored privately. Previous to his appointment in 1927 as architectural consultant with the Imperial Chemical Industries, Ltd., he had been director of the Office of Works, supervising the preservation of the royal palaces, Houses of Parliament, and various public and historic buildings. Among the palaces which he restored were Hampton Court and Westminster Hall. In 1929 he was commissioned to remodel Olympia, London's exhibition hall, and in 1932 visited Istanbul as adviser to Mustapha Kemal on the modernization of that city. He was created a member of the Royal Victorian Order in 1911, being dubbed Commander in 1923 and Knight Commander in 1928. Knighthood was conferred on him in 1918.

Baird, Dorothea, British actress and welfare worker, died at Broadstairs, Kent, England, Sept. 24, 1933. At the age of 18 she made her stage début and for 18 years thereafter was associated with the theatre. In 1895 she created the rôle of Trilby in the dramatization of Du Maurier's novel at the Haymarket Theatre, London. She acted as understudy to Ellen Terry in Shakespearean productions, and was with Seymour Hicks in *A Court Scandal*. Among her later rôles were Mrs. Darling in *Peter Pan*, Sophia in *Olivia*, Margaret in *The Wedding Guest*, and Acte in *Nero*. In 1896 she was married to Henry Brodribb Irving, son of Sir Henry Irving, and toured with her actor husband in America and Australia. On her retirement from the stage in 1912 she served as honorary secretary of the National Baby Week Council and of other organizations interested in the welfare of women and children.

Baker, Benjamin, American economist and editor, died at Hartsdale, N. Y., July 4, 1933. Born at Melrose, Mass., May 18, 1872, he was graduated from Harvard in 1897. He began his career as a special writer for the *Boston Transcript* with which he remained for almost two decades. During 1906-08, however, he was in Washington, as editor of the *Navy Magazine*, which treated of naval and other governmental affairs. In 1916 he moved to New York where he served as editor of *Russia*, a trade publication. After the failure of this magazine the following year, Mr. Baker became a free lance writer for newspapers and magazines, contributing particularly to the *Independent*. He was also a produce market reporter for the *Journal of Commerce*. In 1925, three years after he became associated with the *Annalist*, he was made its editor, winning international renown for his comments on financial affairs.

Baker, Elbert H., American newspaper man, died in Cleveland, Ohio, Sept. 26, 1933. Born at Norwalk, Ohio, July 25, 1854, he received a public school education, and began his newspaper career as an advertising solicitor.

tor on the Cleveland *Herald* in 1877. From 1882 to 1897 he was advertising manager for the Cleveland *Leader*. On acquiring with Charles E. Kennedy a leasehold on the Cleveland *Plain Dealer*, he served as its general manager from 1898 to 1920. When Liberty E. Holden died in 1913 he was elected president of the Plain Dealer Publishing Co., retaining that office until 1929 when he became chairman of the board of directors. He was also joint owner with his son, Frank S. Baker, of the Tacoma (Wash.) *Ledger* and the Tacoma *News-Tribune*, and with his son, Alton Baker, of the Eugene (Ore.) *Register-Guard*. Mr. Baker had been a director of the Associated Press after 1916 and of the American Newspaper Publishers Association during 1907-24, holding the office of president of the latter organization during 1912-14. He was one of the staunchest advocates among American publishers of an unbiased presentation of political and other news. He was also keenly interested in Cleveland's civic development, backing in 1925-29 the construction of the City Hall, County Court House, Public Auditorium, Federal Building, Main Library, Federal Reserve Bank Building, and Plain Dealer Building on the Mall, the heart of Cleveland's business section.

Baker, Sam (uel) A. American educator and administrator, died at Jefferson City, Mo., Sept. 16, 1933. Born at Patterson, Wayne Co., Mo., Nov. 7, 1874, he attended the Cape Girardeau (Mo.) State Teachers College and the Missouri Wesleyan College and began his career as a teacher in 1895 at Bethel, Mo. After serving as superintendent of schools at Piedmont, Mo., he was chosen in 1899 principal of the Jefferson City high school and in 1905 of the Joplin high school. From 1910 to 1913 he was superintendent of schools at Richmond, and from 1913 to 1919 at Jefferson City. In the latter year he was chosen State superintendent of the schools of Missouri, holding the office until 1923 when he entered politics. He was elected governor of Missouri for the term 1925-28. In June, 1927, he commissioned Charles A. Lindbergh a colonel in the Missouri National Guard.

Baldwin, Evelyn Briggs American Arctic explorer, died in Washington, D. C., Oct. 25, 1933. Born at Springfield, Mo., July 22, 1862, he was graduated from Northwestern College, Naperville, Ill., in 1885. After teaching in the public schools of Kansas, he was appointed in 1892 observer in the United States Weather Bureau. Subsequently he became an inspector-at-large in the Signal Corps of the United States Army. During 1893-94 he was meteorologist of the Peary Expedition to North Greenland, and in a similar capacity accompanied in 1898 the Walter Wellman Expedition to Franz-Josef Land. He built and named Fort McKinley and discovered and explored Graham Bell Land in May, 1899. In 1901 he organized the Baldwin-Ziegler Polar Expedition, which sailed under his command for the discovery of the North Pole via Franz-Josef Land. The expedition returned in 1902, having deposited several caches of provisions in Franz-Josef Land as bases for a proposed dash to the North Pole and three "safety stations" on the northeast coast of Greenland for use on the return march. Baldwin wrote, for periodicals, several articles dealing with Arctic life.

Baldwin, Leonard De Witt American lawyer and philanthropist, died in Brooklyn, N. Y., Jan. 25, 1933. He was born near Cortland, N. Y., in 1866, and graduated from Cornell University in 1892. Upon admission to the bar he and his brother, Arthur J. Baldwin, opened a law office in North Tonawanda, N. Y., and in 1897 removed to New York City. In 1903 the firm of Griggs, Baldwin and Baldwin was established and continued thereafter as specialists in corporation law. In 1928 the brothers jointly gave \$1,500,000 to Drew University (formerly Drew Theological Seminary), of which \$1,000,000 was for endowment and \$500,000 for the erection of new buildings. The college of liberal arts, which was added to this institution, was named Brothers College in their honor.

Balg, Gerhard Hubert, died Sept. 28, 1933.

Ball, Lewis Heisler, died Oct. 18, 1933.

Bancroft, Hugh. American lawyer and publisher, died at Cohasset, Mass., Oct. 17, 1933. Born in Cambridge, Mass., Sept. 13, 1879, he was graduated from Harvard University in 1897 and the following year served during the Spanish-American War as 1st lieutenant and adjutant with the 6th Massachusetts Infantry. He received the LL.B. degree from Harvard in 1901 and on his admittance to the Massachusetts bar, became assistant district attorney for Middlesex County in 1902 and district attorney in 1907. After 1908 he was junior partner of the Boston law firm of Stone, Dallinger, and Bancroft. From 1911 to 1914 he was chairman of the board of directors of the Port of Boston. Mr. Bancroft then turned to the financial publishing field, serving as president of the Boston News Bureau Co., and of Dow, Jones and Co., publishers of the *Wall Street Journal*. He published also *Barron's Weekly* and the *Philadelphia Financial Journal* and at the time of his death was president of the Financial Press Companies of America. In 1909, after being promoted through the various ranks of the Massachusetts

Volunteer Militia, he was retired as major general. He wrote *Inheritance Taxes for Investors* (1911) and *Inheritance Taxes* (with A. W. Blakemore, 1912).

Barry-Doyle, The Rt. Rev. Mgr. Richard, died Mar. 8, 1933.

Barton, George Hunt. American geologist, died in Cambridge, Mass., Nov. 25, 1933. Born at Sudbury, Mass., July 8, 1852, he was graduated from the Massachusetts Institute of Technology in 1880. He served as assistant in drawing at the latter institution during 1880-81 and then went to Honolulu as an assistant on an Hawaiian government survey during the next two years. It was here that he obtained a working knowledge of volcanoes. He then returned to the Massachusetts Institute of Technology as an assistant professor of geology, holding the same post until 1904 at the University of Boston. He was also connected with the United States Geological Survey as an assistant geologist and in 1896 was a member of Peary's sixth expedition to Greenland. After 1904 Professor Barton was director of the Teachers' School of Science, an extension unit of Harvard College. He lectured on geology at Boston University in 1915 and at Wellesley College during 1921-22. He was honorary president of the Children's Museum of Boston, and wrote *Outline of Elementary Lithology* (1900).

Basewood, Herbert, died June 5, 1933.

Beach, Charles Lewis. American educator, died at Storrs, Conn., Sept. 15, 1933. He was born at White-water, Wis., Apr. 6, 1866, and was graduated from the University of Wisconsin in 1886. From 1896 to 1906 he served successively as instructor and professor of dairy husbandry at the Connecticut Agricultural College. He was then called to the University of Vermont as professor of dairy husbandry and director of the Vermont Experimental Station. In 1908 he returned to the Connecticut Agricultural College as its president, retaining that office until his retirement as president emeritus in 1928. During his administration the student enrollment was increased from 200 to 500. The institution was later renamed the Connecticut State College.

Beach, Harlan Page, died Mar. 4, 1933.

Beard, Lina (Mary Caroline). American author and illustrator, died at Flushing, N. Y., Aug. 13, 1933. Born in Cincinnati, Ohio, in 1853, she attended Wesleyan College, Cincinnati, and the Art Students League, New York City. In 1910 she founded the Girl Pioneers of America, the equivalent for girls of the Boy Scouts of America, established by her brother, Daniel Carter Beard, from whose programme that of the Girl Scouts, Camp Fire Girls of America, and other movements for the 'teen-age girl was developed. In addition to writing and illustrating numerous articles and short stories for magazines and newspapers, she was the author of *Recreation for Girls*, *Things Worth Doing*, *Mother Nature's Toy Shop*, *What a Girl Can Make and Do*, *An Outdoor Book for Girls*, and *Girl Pioneers of America Manual*.

Beaton, Sir George Thomas. British surgeon, died in Glasgow, Feb. 18, 1933. He was born at Trincomalee, Ceylon, May 26, 1848, and was educated at King William's College, Isle of Man, at Clare College, Cambridge, and at the University of Edinburgh. His offices included that of consulting surgeon to the Glasgow Western Infirmary, senior surgeon of the Glasgow Cancer Hospital, former examiner in surgery to the University of Edinburgh, and honorary physician to Queen Mary. He was knighted in 1907, and was also an officer of the French Legion of Honor and of the Order of the Crown of Belgium, and an honorary associate of the Order of St. John of Jerusalem. Besides a number of monographs on the origin and nature of cancer, Sir George wrote *Ambulance Handbook: The Red Cross and the Right to Use It as a Distinctive Badge*; and *The Knights Hospitallers in Scotland and Their Priory at Torphichen*.

Bechtel, Warren A., died Aug. 28, 1933.

Behn, Hernand, died Oct. 7, 1933.

Bell, John C. American lawyer and Congressman, died at Grand Junction, Colo., Aug. 12, 1933. He was born at Sewanee, Tenn., Dec. 11, 1851, and attended private schools in that State. Following his admission to the Tennessee bar in 1874, he removed to Colorado and began his practice at Sagache, where for two years (1874-76) he was county attorney. He then removed to Lake City, where he was county clerk for several years and was elected mayor in 1885. He next practiced law in Montrose, being appointed judge of the seventh judicial district of Colorado in 1888. From 1893 to 1903 he was a Democratic member of the House of Representatives from the old second Colorado district, his most important work being in connection with land reclamation and reforestation and in obtaining appropriations for the Uncompahgre irrigation project in Colorado which, it is said, resulted in the drawing up of the Federal Reclamation Code. After his defeat for reelection to Congress in 1902 Mr. Bell resumed his law practice in Montrose, serving during 1913-15 as judge of the Colorado Court of Appeals. He wrote *The Pilgrim and the Pioneer* (1905).

Bell, Robert Anning. British painter, died Nov. 27, 1933, in London where he was born Apr. 14, 1863. He received his art education at the Westminster School of

Art, the Royal Academy Schools, and in the atelier of Aimé Morot, the French historical and portrait painter. The influence of Morot was exhibited in Bell's famous canvas, "Mary in the House of Elizabeth," in the Tate Gallery. He was also represented by figure paintings and landscapes in the National Gallery of British Art in London, the Luxembourg in Paris, the National Gallery of New South Wales in Sydney, and the Liverpool and Bradford Art Galleries. It was in the field of decorative art, however, especially stained-glass and mosaic work, that Bell achieved his greatest reputation. The last stained glass which he designed was the Shakespeare memorial window in the Manchester Reference Library. Notable examples of his mosaic work were the tympanum over the main entrance and the altar-piece of the Lady Chapel in Westminster Cathedral and the panels in St. Stephen's Hall in the House of Parliament. For many years he was professor of design at the Royal College of Art in South Kensington and of decorative art at the Glasgow School of Art. He was elected an associate of the Royal Academy in 1914 and an academican in 1922.

Belmont, Alva E. Smith, died Jan. 26, 1943.

Benedict, Alfred Barnum, American lawyer, died in Cincinnati, Ohio, Oct. 16, 1933. Born in Rochester, N. Y., Apr. 2, 1856, he was graduated from the University of Cincinnati with the A.B. degree in 1878 and the LL.B. degree from the Cincinnati Law School in 1880. Upon his admittance to the Ohio bar in the latter year, he practiced in Cincinnati. In 1897 he was appointed professor of law at the Cincinnati Law School and on the reorganization of this school as the College of Law of the University of Cincinnati in 1918 was made dean. He complied with Rufus B. Smith *Statute Law of Ohio* (1890).

Benson, Stella, died Dec. 7, 1933.

Berger, Francesco, died Apr. 26, 1933.

Berget, Alphonse, Baron French scientist, died in Paris, Dec. 29, 1933. Born at Schlestadt, Department of Bas-Rhin, Nov. 24, 1860, he attended the Faculty of Sciences of the University of Paris and soon after obtaining his degree of Doctor of Physical Sciences was appointed professor at the Oceanographic Institute. On the jubilee of Foucault's invention of the gyroscope in 1902 he demonstrated at the Panthéon in the presence of a group of ministers and savants the rotation of the earth on its axis by the diurnal rotation plane of oscillation of a long pendulum with a heavy weight. In 1910 he headed the International Commission for the Scientific Exploration of the Mediterranean. Professor Berget's works, many of which were published under the pseudonym Tiger, include *Leçons de physique générale* (1899); *Physique du globe et météorologique* (1904, crowned by the Academy of Sciences); *Les Problèmes de l'atmosphère* (1914); *La Vie et la mort du globe* (1917, crowned by the Academy of Sciences); *Les Problèmes de l'Océan* (1920); *Le Ciel* (1923); *L'Aviation* (1924); *L'Air* (1927), and *Leçons d'océanographie physique* (1931).

Besant, Annie, died Sept. 20, 1933.

Bethell, Union Noble died Jan. 13, 1933.

Bevan, Anthony Ashley, British Orientalist, died at Stapleford, near Cambridge, England, Oct. 16, 1933. He was born at Barnet, Hertfordshire, May 19, 1859, and attended Trinity College, Cambridge, and the University of Strassburg. Until a short time before his death he acted as Lord Almoner lecturer in Arabic at Cambridge University and was a Fellow of Trinity College. His publications include *A Short Commentary on the Book of Daniel* (1892); *The Nakā'id of Jarir and al-Farazdaq* (3 vols., 1905-12); and an essay on Historical Methods in the Old Testament in the *Cambridge Biblical Essays* (1909). He contributed to the *Encyclopædia of Religion and Ethics* and the *Encyclopædia Biblica* and prepared a supplementary volume to Sir Charles Lyall's edition of the *Mufaddaliyat*.

Biggers, Earl Derr, died Apr. 5, 1933.

Biles, Sir John Harvard, died Oct. 27, 1933.

Billings, Sherrard American educator, died at Groton, Mass., May 9, 1933. He was born at Quincy, Mass., Apr. 21, 1859, and was graduated from the Episcopal Theological School at Cambridge in 1884. The same year, with Endicott Peabody and William Amory Gardner, two fellow students, he organized the Groton School for boys, of which he was senior master at his death.

Birrell, Augustine, died Nov. 20, 1933.

Bisling, Henry Singlewood, American painter, died at Ledyard, Conn., Nov. 25, 1933. Born in Philadelphia, Pa., Jan. 31, 1849, he attended the Pennsylvania Academy of Fine Arts and later studied under F. de Vullieffroy in Paris and J. H. L. de Haas in Brussels. Specializing in the painting of animals and of pastoral scenes, he scored an immediate success for the clarity and accuracy of his work. He received a third class medal at the Paris Salon in 1891 and on his return to the United States the following year was the recipient of the Temple Gold Medal awarded by the Pennsylvania Academy of Fine Arts. He received also medals from the World's Columbian Exposition in 1893 and the Paris Exposition Universelle of 1900, and in 1902 was made a Chevalier of

the French Legion of Honor. His summers were generally spent at Etaples, France, or Zwolle, the Netherlands, where he drew inspiration for his rural subjects. His work is found in art galleries in Berlin, Paris, Nantes, and Mülhausen, as well as in the Pennsylvania Academy of Fine Arts in Philadelphia.

Black, Maj.-Gen. William Murray, U. S. A., Ret., died Sept. 24, 1933.

Blake, Henry Nichols, American jurist, died Nov. 29, 1933, in Boston, Mass., where he was born June 5, 1838. He was graduated from the Harvard Law School in 1858 and on his admittance to the bar began his practice in Boston the following year. During the Civil War he fought with the 11th Massachusetts Volunteers, being promoted to the rank of captain. Mr. Blake then removed to Montana and from 1869 to 1871 was United States attorney for that territory. He was also a Supreme Court reporter during 1869-75, and district attorney for the first district of Montana during 1871-73 and again during 1884-86. Appointed to the Territory Supreme Court as an associate justice in 1875, he held that office until 1880. He then became a member of the Territorial Legislature, and in 1889, the year of Montana's admission to the Union, was chosen chief justice of the Supreme Court. He retained the latter post for four years. He was elected president of the Montana Bar Association in 1888.

Blodgett, Mary Eliza (Sherwood), American philanthropist, died in New York City, May 11, 1933. She was born at Greene, N. Y., Mar. 7, 1840, the daughter of John Hinman Sherwood, and removed to New York City with her parents in 1848. In 1870 she married J. Jarrett Blodgett, a Boston textile manufacturer, and at his death in 1888 turned over his estate to his other relative. From the fortune inherited from her father in 1885, Mrs. Blodgett made many donations to the Protestant Episcopal Church for religious, charitable, and educational purposes, the total being estimated at nearly \$3,000,000.

Boardman, Russell, American aviator, died in Indianapolis, Ind., July 3, 1933. Born near Middletown, Conn., Jan. 22, 1898, he had a colorful career that included motorcycling, auto-racing, speed-boating, and aviation. After he learned to pilot an airplane in 1921, he proceeded to set numerous records. He also entered the commercial field, taking over the management of the Hyannis Airport at Cape Cod and organizing the Boardman Aviation Corp., which operated seaplanes between Boston and Hyannis. In July, 1931, Russell Boardman and John Polando flew from New York to Istanbul in 49 hours and 19 minutes, establishing thereby a world's non-stop distance record. He was the victim of a speed-boat explosion and several airplane crashes, escaping all but the disaster which occurred on his take-off from the Indianapolis airport during the transcontinental air race. See AERONAUTICS.

Bond, Oliver James, American educator, died in Charleston, S. C., Oct. 1, 1933. Born at Marion, S. C., May 11, 1865, he was graduated from The Citadel (the military academy of the South), in 1886, receiving the Ph.D. degree from the Illinois Wesleyan University in 1895. After serving successively as assistant professor of mathematics and as professor of mechanical drawing and astronomy at The Citadel, he was chosen in 1908 president of the institution, succeeding greatly in re-establishing the prestige which it had had before the Civil War. On his retirement in 1931 Colonel Bond was made dean. He was the author of a novel, *Amzi* (1904).

Bonfilis, Frederick G., died Feb. 2, 1933.

Bonin-Longare, Lelio, Count Italian diplomat, died in Rome, Dec. 22, 1933. Born at Vicenza, in July, 1859, he was graduated in law from the University of Padua but abandoned that career for diplomacy. In 1884 he was appointed an attaché at the Italian embassy in Vienna and in 1887 went to Paris in the same capacity. In 1892 he was elected to the Italian Chamber as representative for Vicenza, and four years later became Under-Secretary of State in the Foreign Ministry. After serving as Minister to Belgium from 1904 to 1910 he became Ambassador to Spain. In 1917 he was transferred to France as Ambassador, remaining there until 1922. Count Lelio was a member of the Italian war debt commission to the United States in 1925, and the following year was appointed a member of the Italian delegation to the League of Nations. At the time of his death he was vice-president of the Italian Senate.

Bottomley, Horatio William, British journalist, died in London, May 26, 1933. Born Mar. 23, 1860, he attended Mason's College, Birmingham, and after some years spent in business turned to journalism, founding the *Financial Times* and the *Sun*. On the failure of the famous Hansard Union which involved a loss to shareholders of £1,000,000, he ably defended himself in the prosecution instituted by the Crown and won his acquittal. Bottomley then went to Australia where he made a fortune in the gold mining field. After his return to England he founded in 1906 the sensational *John Bull*, which by its sedulous cultivation of the popular majority, attained an enormous circulation. This periodical enabled him also to make

himself one of the most feared of Englishmen. In Parliament he represented South Harkney, as a Liberal, from 1906 to 1912 and again from 1918 to 1922. Bottomley's career was cut short in the latter year, however, when he was found guilty of misusing the great funds subscribed in various lotteries to his private patriotic organizations. Sentenced to penal servitude for seven years, he was paroled in 1927 and thereafter made his home at Hailsham, Sussex.

Bourne, Gilbert Charles, British zoologist and oarsman, died at Abingdon, England, Mar. 9, 1933. Born in 1861, he was educated at Eton and at New College, Oxford, receiving a B.A. degree in 1885 and an M.A. in natural science in 1888. He served for several years as director of the laboratory of the Marine Biological Association at Plymouth and then returned to Oxford where he was made Tutor and Fellow of New College and received the D.Sc. degree. From 1906 to 1921 he was Linacre professor of comparative anatomy and Fellow of Merton College, Oxford, and in 1924 became Fellow of Winchester College. He served after 1927 as a member of the Water Pollution Research Board and was chairman of the advisory committee on fisheries of the Development Commission. He was also elected a Fellow of the Royal Society and of the Linnæan Society. In 1898-99, as lieutenant-colonel, Dr. Bourne commanded the Oxford University Rifle Volunteers, and in 1903-06 the fourth battalion of the King's Shropshire Light Infantry. A keen oarsman in his college days, he coached the Oxford crew at varying periods from 1885 to 1927. His writings include *Introduction to the Study of the Comparative Anatomy of Animals* (1900) and *A Text-Book of Oarsmanship* (1925).

Bowker, Richard Rogers, died Nov. 12, 1933.

Bowser, William John, Canadian lawyer and administrator, died in Vancouver, B. C., Oct. 25, 1933. Born at Rexford, N. B., Dec. 3, 1867, he attended Dalhousie University and was admitted to the New Brunswick bar in 1890. The following year, however, he removed to British Columbia and on being admitted to its bar, practiced in Vancouver. He was created Queen's Counsel in 1900. Three years later he was elected to the Provincial Parliament as member for Vancouver, retaining this seat until 1924. In addition to serving as Minister of Finance in the provincial cabinet of Sir Richard McBride during 1909-10, he held the post of Attorney General from 1907 to 1916 and was himself premier during 1915-16. At the time of his death, he had again entered politics, being a candidate on the Independent-Nonpartisan ticket to represent Vancouver Centre and Victoria.

Brade, Sir Reginald Herbert, British statesman, died at Ockley, Surrey, England, Jan. 5, 1933. He was born Aug. 15, 1864, and was educated at St. Andrew's College, Bradford. His entire public career was spent in the War Office which he entered as clerk in 1884. After service as private secretary to Lords Sandhurst and Monckswell and to Powell Williams, he was Secretary of the War Office Council from 1901 to 1904. For the next 10 years he was Assistant Secretary in the War Office, and throughout the World War held the office of Secretary, resigning in 1920 on account of ill health. He received his knighthood in 1914, and was Commander in the French Legion of Honor and the Belgian Order of the Crown.

Brand, Charles Hillyer, American lawyer and Congressman, died at Athens, Ga., May 17, 1933. He was born at Loganville, Ga., Apr. 20, 1861, and graduated from the University of Georgia in 1881. Admitted to the Georgia bar in 1882, he began the practice of law at Lawrenceville. After serving as State Senator during 1894-95, he was elected solicitor general for the western judicial circuit of the State in 1896 and was reelected in 1900. In 1906 he was appointed judge of the Superior Court of Georgia and was elected three times, serving until 1917 when he was elected as a Democrat to the national House of Representatives. He represented the Eighth Georgia District in the 65th to 72d Congresses and was a member of the House's banking and currency committee.

Branson, Eugene Cunningham, American educator and sociologist, died at Chapel Hill, N. C., May 13, 1933. He was born at Moorehead City, N. C., Aug. 6, 1861, and was educated at Trinity College (later Duke University) and at the Peabody Normal College, Nashville, Tenn. He was successively principal of Raleigh high school, superintendent of schools at Wilson, N. C., and Athens, Ga., professor of pedagogy at the Georgia Normal and Industrial School, and from 1900 to 1912 president of the State Normal School of Georgia. After 1914 he was head of the department of rural economics and sociology at the University of North Carolina. In addition to various text-books on teaching methods, he wrote *County Government and County Officers in North Carolina* (1918) and *Farm Life Abroad* (1925).

Brayden, William Henry, Irish journalist, died in Dublin, Dec. 17, 1933. Born in 1865, he attended University College, Dublin, and began his career as a reporter in the gallery of the House of Commons during 1885-87. Three years later he became editor of the

Dublin *National Press*, but relinquished that position in 1892 to become editor of the *Freeman's Journal*, the official organ of Dublin Castle, the court of the Lord-Lieutenant of Ireland. He served in this capacity until 1916. During 1911-29, when he was a correspondent for the Associated Press, he dispatched to the United States news of important events in Ireland. Mr. Brayden was a member of the council of the Royal Dublin Society, a governor of the Royal Irish Academy of Music, and a trustee of the National Library of Ireland.

Breck, Joseph, American art director, died at Villars sur Ollon, Switzerland, Aug. 2, 1933. Born at Allston, Mass., Feb. 3, 1885, he was graduated from Harvard in 1907, studying art in Europe for a year, and doing graduate work at Harvard during 1908-09. He was then appointed assistant curator in the department of decorative arts at the Metropolitan Museum, New York City. In 1914 he accepted the appointment as director of the Minneapolis Society of Fine Arts, but in 1917 returned to the Metropolitan Museum as curator of the department of decorative arts and as assistant director. Mr. Breck installed the J. Pierpont Morgan collection of Romanesque, Gothic, and Renaissance art in the wing of the museum built for that purpose. His greatest work, however, was in the development of The Cloisters, the branch devoted to Gothic art which John D. Rockefeller, Jr., acquired for the museum from George Gray Barnard, the sculptor, in 1925 and of which he was made director in 1932. He was decorated by the Swedish government with the Royal Order of the North Star in 1927.

Bredin, R. Sloan, American painter, died in Philadelphia, Pa., July 17, 1933. He was born at Butler, Pa., Sept. 9, 1881, and attended the New York School of Fine Arts, studying under Chase, Beckwith, and Du Mond. He specialized in landscape, figure, and portrait painting and exhibited his work in various art centres of the United States. He was awarded the second Hallgarten Prize by the National Academy of Design in 1914 and the Maynard portrait prize by the same institution seven years later. He received also a bronze medal from the Panama-Pacific Exposition in San Francisco (1915), Vezin prize from the Salmagundi Club of New York (1923) and a bronze medal from the Sesqui-centennial Exposition in Philadelphia (1926). Mr. Bredin's most famous paintings are "By the River" and "Midsummer," the latter being on permanent exhibition in the Minneapolis Institute of Arts. Several of his murals may be seen in the New Jersey State Museum in Trenton. In 1921 he was elected an associate of the National Academy of Design.

Brémont, Abbé Henri, died Aug. 17, 1933.

Brewer, Robert Paine, American banker, died in Tulsa, Okla., June 14, 1933. He was born at Muskogee, Okla., Dec. 3, 1876, and graduated from Southwestern University in 1898. Shortly after graduation he went to Checotah, Okla., where he organized a local bank, became its assistant cashier and later its president. In 1902 he organized the First National Bank of Quinton, Okla., serving as cashier, manager, and later president. From 1908 to 1916 he was president of the First National Bank of McAlester, Okla. Mr. Brewer then went to Kansas City, Mo., as senior vice president of the Commerce Trust Co., where he remained until 1921 when he became chairman of the board and president of the Exchange National Bank of Tulsa. In 1924 he was made president of the First National Bank of Tulsa, remaining there until 1929 when he was called to New York to become a director and vice president of the Chatham Phoenix National Bank and Trust Co. Upon the merger of that bank in 1932 with the Manufacturers Trust Co., he became senior vice president of the latter.

Broderick, Sir John Joyce, British diplomat, died in London, June 2, 1933. Born Apr. 24, 1862, he was educated at Blackrock College, Dublin, and at the Royal University of Ireland. The first member of the British Commercial Diplomatic Service to be promoted to the rank of Ambassador, he began his diplomatic career by serving in various capacities from 1901 to 1908 in the British Customs Service. Entering the Consular Service, he was successively Vice-Consul and acting Consul General in New York City (1909-13) and Consul in Amsterdam, the Netherlands (1913-15). Retrained to New York City, he was acting Consul there for a short time and was then sent to the British Embassy in Washington where he was assistant commercial adviser (1915-19), commercial secretary (1919-20), and commercial counselor (1920-31). In 1931 he was appointed Minister to Cuba and was also Consul General there. A few months previous to his death announcement was made of his appointment as Ambassador to Argentina. Sir John was created a Knight Commander of the Order of the British Empire in 1927.

Brook, David, British Methodist minister, died in London, Mar. 23, 1933. He was born at Eiland, Yorkshire, England, Sept. 27, 1854, and was educated at Owens College, at the Free Methodist College in Manchester, and at Oxford University, where later he had the distinction of being the only Nonconformist minister to obtain the degree of Doctor of Civil Law. He served as

pastor of United Methodist Free Churches in London, Liverpool, Bristol, and other large cities of England, and previous to the formation of the United Methodist Church in 1907 by the union of the United Methodist Free Church, the Methodist New Connection, and the Bible Christians was president of the United Methodist Free Churches and of the National Council of Free Churches and moderator of the Federal Council of Free Churches. For some years he was also principal of United Methodist Colleges.

Browne, J(ohn) Lewis. American musician, died in Chicago, Ill., Oct. 23, 1933. Born in London, May 18, 1866, he was brought to the United States in childhood. He received his musical education under his father, William Browne, a distinguished organist, F. Archer, and S. P. Warren. He gained renown as an organ soloist at the Louisiana Purchase Exposition in St. Louis, and the Jamestown Tercentennial Exposition and made several hundred appearances in the larger cities of the United States. During 1908-10 he was organist at Wanamaker's Egyptian Hall in Philadelphia, and after 1912 was organist and choir-master at St. Patrick's Roman Catholic Church, Chicago. He was also supervisor of the theory department of the Fine Arts Conservatory of Music, and at the time of his death was director of music for the Chicago public school system. Dr. Browne was elected a distinguished member of the Royal Philharmonic Academy in Rome in 1914 and during 1916-19 was dean of the Illinois chapter of the American Guild of Organists. His opera *La Coreana*, which won recognition in the Sonzogno Concorso in Milan in 1902, was produced at the Chicago Playhouse in 1923. In addition to compositions for the organ, piano, and orchestra, he wrote more than 60 songs, both sacred and secular, and *Missa Solemnis*, *Ecce Sacerdos Magnus*, sung in the Vatican by Paulist Choristers in 1912, and *Missa Immaculatae Conceptionis*. The latter was written in honor of the 100th anniversary in 1921 of the establishment of the Diocese of Cincinnati.

Bruce, Philip Alexander. American historian, died at Charlottesville, Va., Aug. 16, 1933. He was born at Staunton Hill, Charlotte Co., Va., Mar. 7, 1856, and was graduated from the University of Virginia in 1876 and from Harvard with the LL.B. degree in 1879. Instead of practicing law, however, he devoted himself, with the exception of a brief period (1890-92) when he was associate editor of the *Richmond Times*, to historical research and writing. His greatest work was the series on colonial Virginia: *Economic History of Virginia in the Seventeenth Century* (1895); *Social Life of Virginia in the Seventeenth Century* (1907); *Institutional History of Virginia in the Seventeenth Century* (1910), and *History of Colonial Virginia, 1606-1764* (1923). He also wrote *The Plantation Negro as a Freeman* (1888), *Short History of the United States* (1903); *Rise of the New South* (1905); *Life of General Robert E. Lee* (1907); *Pocahontas and Other Sonnets* (1912); *Brave Deeds of Confederate Soldiers* (1916); *History of the University of Virginia* (1920-21); *Rebirth of the Old Dominion* (1929); and *The Virginia Plutarch* (1929). During 1892-98 Bruce was corresponding secretary of the Virginia Historical Society and was founder and editor of the society's quarterly, *The Virginia Historical Magazine*.

Brum, Baltasar Uruguayan statesman, died in Montevideo, Mar. 31, 1933. Born June 18, 1883, he attended the University of Montevideo from which he received the degree of Doctor of Jurisprudence in 1908, and practiced law for several years in Salto. In 1913 he was appointed Minister of Public Instruction, in 1915 of the Interior, and in 1916 of Foreign Affairs. While holding the latter portfolio he headed two important missions to Brazil and the United States. He was elected president of Uruguay in 1919, being the first executive to serve under Uruguay's amended constitution. This provided that the executive power should be vested in a president, elected for four years with control over the departments of foreign affairs, interior, war, and marine, and in a national administrative council, composed of six members from the majority party and three from the largest minority. Besides being a member of the National Council of Administration at the time of his death, Dr. Brum had been editor for the previous 10 years of *El País*, a Montevideo newspaper.

Brush, Edward Nathaniel, died Jan. 10, 1933.

Bryant, Lorinda Munson. American author, died in New York City, Dec. 13, 1933. Born at Granville, Ohio, Mar. 21, 1855, she was graduated from the Granville Female College in 1872 and three years later was married to Charles W. Bryant. After his death in 1886 she decided to take up his occupation, pharmacy, and attended the Chicago College of Pharmacy, becoming the first woman registered pharmacist in Ohio. From 1890 to 1899 she taught science at the Ogontz School near Philadelphia, and then removed to South Orange, N. J., where she was principal of the Montrose School until 1905. Mrs. Bryant then turned to writing and two years later published her first book, *Pictures and Their Painters*. Among her aids to the tourist were *What Pictures to See in Europe in One Summer* (1910); *Famous Pictures of*

Real Boys and Girls (1912); *What Sculpture to See in Europe* (1914); *What Pictures to See in America* (1915); *American Pictures and Their Painters* (1917); *Famous Pictures of Real Animals* (1918); and *French Pictures and Their Painters* (1922). She wrote also a number of books for children on celebrated sculpture, buildings, bridges, towers, American landmarks, European landmarks, legends, religious pictures, and animal pictures.

Buell, Marcus Darius. American theologian, died at Winter Park, Fla., Nov. 24, 1888. Born at Wayland, N. Y., Jan. 1, 1851, he was graduated from New York University in 1872 and later attended Cambridge, Berlin, and Heidelberg universities. Ordained to the Methodist Episcopal ministry in 1875, he held charges in Brooklyn, N. Y., until 1879 and in Hartford, Conn., until 1884. Dr. Buell was then called to the school of theology of Boston University where he held the chair of New Testament Greek and Exegesis until 1922, serving also as assistant dean from 1885 to 1889 and as dean from 1889 to 1904. After 1922 he was professor and dean emeritus of that institution. He lectured on Biblical subjects in China and Japan in 1916, and from 1912 to 1924 served as a trustee of the Board of Education of the Methodist Episcopal Church. He wrote *Studies in the Greek Text of the Gospel of Mark* (1890) and *Autographs of St. Paul* (1912).

Bundy, John Elwood. American landscape painter, died in Cincinnati, Ohio, Jan. 18, 1933. He was born in Guilford Co., N. C., May 1, 1853, and was mainly self-taught in art. From 1880 to 1888 he taught drawing and painting at Earlham College, Richmond, Ind. His preferred theme was woodland scenes and he was especially noted for his treatment of beeches. His paintings were exhibited in some of the most important galleries of the United States, including the Pennsylvania Academy of Fine Arts, the National Academy of Design, and the Art Institute of Chicago. Among his more notable canvases are "Blue Spring" and "Old Farm in Winter" in the Public Gallery, Richmond, Ind., and "Wane of Winter" and "Beech Woods in Winter," purchased by the Art Association of Indianapolis.

Burdick, Clinton De Witt. American financier, died in Brooklyn, N. Y., Apr. 11, 1933. He was born at Smyrna, N. Y., July 24, 1863, and was graduated from Wesleyan University in 1886. From 1887 until his death he was connected with the Title Guarantee and Trust Co., New York City, and ultimately became its president. He was also president and general manager of the Bond and Mortgage Guarantee Co., Brooklyn. He served on the board of directors of many commercial and philanthropic institutions, and was for 26 years a trustee and the treasurer of Wesleyan University.

Burgess, Brig.-Gen. Harry. American military engineer, died at Hot Springs, Ark., Mar. 18, 1933. He was born at Starkville, Miss., Feb. 22, 1872, and, after studying at the Mississippi Agricultural and Mechanical College, attended the United States Military Academy from which he was graduated in 1895. Commissioned 2d lieutenant in the Engineers Corps, he attended the United States Engineering School of Application and taught engineering at West Point from 1898 to 1900. He was successively in charge of improvement work on the Ohio River, at Louisville, 1900-04; of the New Orleans district of the Mississippi River Commission, 1904-07; of surveying and designing for the Muscle Shoals (Ala.) power development project, 1907-16; and of lake improvements and surveys at Detroit, 1916. During the World War he served as colonel with the 16th and 30th Engineers of the American Expeditionary Force and participated in the Lys defensive operations and in those for the Meuse-Argonne offensive. On his return to the United States in 1920 he was again assigned to the Mississippi River Commission as director of the Rock Island (Ill.) district and in 1922 became engineer of the 8th Corps Army Area, with headquarters at Fort Sam Houston, Texas. In 1924 General Burgess was appointed engineer in charge of maintenance of the Panama Canal, and four years later became Governor of the Canal Zone. He retired in 1932.

Burk, W(illiam) Herbert, died June 30, 1933.

Burleson, The Rt. Rev. Hugh Latimer, died Aug. 1, 1933.

Burmester, Willy. German violinist, died in Hamburg, Germany, Jan. 16, 1933. He was born in the same city, Mar. 16, 1869, and studied violin under Joachim. In 1890 he was connected with the Conservatory of Sonderhausen as professor and concert director. He then went to Weimar as an orchestral leader and after further study in Helsinki he settled in Berlin where he became a successful teacher. His first American appearance, in 1898, was with the Boston Symphony Orchestra in Carnegie Hall, New York City. Thereafter he toured the world several times before his second visit to the United States in 1923. Burmester was best known for the particular brilliancy of his renditions of the compositions of Paganini. He adapted for the violin numerous works of the old masters.

Burnham, Harry Lawson Webster Lawson, 1st Viscount, died July 20, 1933.

Bustamante, Daniel Sanchez de, died Aug. 5, 1933.

Butler, Lady (née Elizabeth Thompson). Irish painter, died at Gormanston Castle, Co. Meath, Oct. 2, 1933. Born in Lausanne, Switzerland, in 1851, she studied painting in Florence under Bellucci and on her return to England in 1878 became an annual exhibitor at the Royal Academy. Of special note were her military subjects, such as "Royal Artillery, Missing" (1873); "Roll Call" (1874), proclaimed "the picture of the year"; "Balacava" (1876); "Listed for the Connaught Rangers" (1879); "The Remnants of an Army; Defence of Rorke's Drift" (1881); "Scotland for Ever" (1881); "Tel-el-Kebir" (1885); "To the Front" (1889); "The Camel Corps" (1891); "Halt in a Forced March" (1892); "The Dawn of Waterloo" (1895); "Steady, the Drums and Fife" (1896); "The Morning of Talavera" (1898); "The Colors" (1899); "Tent-Pegging in India" (1902), and "Rescue of Wounded" (1905). These won high praise from military experts for their fidelity to detail and from art connoisseurs for their technical excellencies. In 1877 she was married to Lieut.-Gen. Sir William Francis Butler. She was the author of *Letters from the Holy Land* (1903); *From Sketchbook and Diary* (1909), and *An Autobiography* (1923).

Byers, Samuel Hawkins Marshall. American soldier, diplomat, and author, died in Los Angeles, Calif., May 24, 1933. He was born at Pulaski, Pa., July 3, 1838, the family moving to Iowa in 1852. He abandoned his law studies to enlist in the Union Army at the outbreak of the Civil War, and while a prisoner wrote the words of *Sherman's March to the Sea*. He escaped in time to rejoin General Sherman's staff and carried the message of victory in the Carolinas to General Grant and President Lincoln. From 1867 to 1884 he was American Consul in Zurich, Switzerland, he was then appointed Consul General to Italy, and was later returned to Switzerland in the same capacity, being retired by President Cleveland in 1887. Major Byers wrote many magazine articles and several volumes of verse. His most notable poetic work, *The Bells of Capistrano*, appeared in 1917. He also wrote *Switzerland and the Swiss* (1875); *The Happy Isles* (1884); *The March to the Sea* (1896); *Twenty Years in Europe* (1900); *With Fire and Sword* (1911); *A Layman's Life of Jesus* (1912); *The Pony Express and Other Poems* (1925); and *In Arcady* (1929).

Cahill, Marie. American actress, died in New York City, Aug. 23, 1933. Born in Brooklyn, N. Y., in 1874, she made her stage debut there in *Kathleen Mavourneen* in 1888. Her first New York appearance was the following year in *C. O. D.* After playing in Paris at the Galté and in London in *Morocco Bound* she returned to New York in 1897, appearing in minor rôles in musical comedies until she attained stardom in *The Wild Rose* (1902). This was followed by the popular *Sally in Our Alley* (1902), *Nancy Brown* (1903), and *Molly Moonshine* (1905). She created the rôle of Mary Montgomery in *Marrying Mary*, which ran during 1906-07, and played the part of Betty Barbeau in *The Boys and Betty* in 1908. Her later successes were in *Judy Forgot* (1910); *The Opera Ball* (1912), *Ninety in the Shade* (1915); *Just Around the Corner* (1919); and *Merry-Go-Round* (1927). Her last appearance on the stage was in the *New Yorkers* (1930). She was married to Daniel V. Arthur, her manager, in 1903.

Calmette, Leon Charles Albert, died Oct. 29, 1933.

Campbell, Admiral Sir Henry Hervey, died Feb. 12, 1933.

Campbell, James A. American manufacturer, died in Youngstown, Ohio, Sept. 20, 1933. Born in Ohiotown, Ohio, in 1854, he was educated at Hiram College and served his business apprenticeship in the coal and ice business. In 1890 he entered the iron and steel business as general superintendent of the Trumbull Iron Co. and seven years later was elected president of the Mahoning Iron Co. His next venture, after the merger of the latter company with the Republican Iron and Steel Co., was the organization in 1901 of the Youngstown Sheet and Tube Co. He served as its president from 1906 to 1930, watching its expansion through the operation of additional properties at South Chicago, Ill., and Indiana Harbor, Ind., and the increase in its capitalization from \$1,600,000 to \$300,000,000 in less than three decades. At the time of his death it ranked third among the steel companies of the United States. In 1930 Mr. Campbell was in favor of the merging of this company with the Bethlehem Steel Corp., but was forestalled by the minority stockholders and the decision handed down by Judge David S. Jenkins of the Youngstown Court of Common Pleas. He retired in 1932 with the title of chairman emeritus of the board of directors.

Canfield, George Folger. American lawyer and educator, died Nov. 15, 1933, in New York City where he was born Aug. 21, 1854. He was graduated from Harvard University in 1875 with the A.B. degree and received the LL.B. degree from the Law School of that institution five years later. He also attended the Universities of Göttingen and Heidelberg during 1875-77,

studying law and history. Upon his admittance to the New York bar in 1881, he began his practice in New York where he was at first associated with William N. Wilmer and Harlan F. Stone, later justice of the United States Supreme Court. After 1912 his partner was Herbert L. Satterlee. He was also a member of the law faculty of Columbia University, being lecturer from 1892 to 1894 and professor from 1894 to 1930. Mr. Canfield was president of the Atlanta and Charlotte Air Line Railway Co., vice-president of the Morris Plan Co., and a director of the Dun-Bradstreet Co. A leader in welfare activities, he was president for 22 years of the State Charities Aid Association.

Cannon, Frank Jenné, died July 25, 1933.

Carhart, Paul Worthington, died Oct. 27, 1933.

Carnegie, Hon. Sir Lancelot Douglas. British diplomat, died in London, Oct. 15, 1933. Born Dec. 26, 1861, he was educated at Eton and Christ Church, Oxford. He began his diplomatic career in 1887, being attached to the British embassies in Madrid, St. Petersburg, Berlin, Peking, Vienna, and Paris as counselor of embassy. He was ministerial envoy at Paris during 1911-13 and held the same post at Lisbon during 1913-24, being credited with securing the enlistment of 40,000 Portuguese troops with the British Expeditionary Forces in France during the World War. Troops were likewise dispatched to Africa so as to protect the Portuguese colonies on that continent. He maintained also the traditional friendliness of the two countries, despite the fact that Portuguese republican leaders resented the royal honors bestowed on ex-King Manoel and his mother during their exile in England. In 1924 he was made Ambassador, holding that post for four years. Sir Lancelot was decorated with the Grand Crosses of the Order of Christ and of the Order of San Tiago da Espada, and in 1916 was created Knight Commander of the Order of St. Michael and St. George, and in 1917 Knight of the Grand Cross of the Royal Victorian Order. After 1924 he was a Privy Councillor.

Carr-Cook, Madge. See Cook, Madge Carr.

Carrier-Belleuse, Pierre Albert Gérard, died Jan. 1, 1933.

Carter, George Robert. American administrator, died at Kailua, Oahu, T. H., Feb. 11, 1933. He was born in Honolulu, Dec. 28, 1866, and was graduated from Yale in 1888. His first business connection was with the Seattle National Bank, in whose employ he remained until 1895. In that year he returned to Honolulu and became connected with C. Brewer & Co., sugar factors, and other Hawaiian business houses, holding directorates in several until his retirement in 1913. Mr. Carter served in the Hawaiian Senate in 1901. While Secretary of the islands in 1902 he was appointed Governor by President Theodore Roosevelt and served in that capacity until 1907. He was the second Governor of the Territory.

Cermak, Anton Joseph, died Mar. 6, 1933.

Cerretti, Bonaventure, Cardinal, died May 8, 1933.

Chambers, Robert W. (William), died Dec. 16, 1933.

Chaplin, Sir (Francis) Drummond (Percy). British industrialist and legislator, died in Cape Town, South Africa, Nov. 16, 1933. Born Aug. 10, 1866, he attended Harrow and University College, Oxford, and in 1891 was admitted to Lincoln's Inn as a barrister. Six years later he went to South Africa where he served as correspondent for the *London Times*. During 1899-1900 he was representative for the *Morning Post* in St. Petersburg, but the following year returned to Johannesburg as manager of the Consolidated Goldfields of South Africa, Ltd. He became a prominent figure in the mining industry, serving also during 1905-06 as president of the Transvaal Chamber of Mines. On his election in 1907 to the Transvaal Legislative Assembly he made his entry into politics. During 1910-14 he was a member of the House of Assembly of the Union of South Africa and again during 1924-29. Sir Drummond won his greatest distinction, however, as administrator of Southern Rhodesia from 1914 to 1923 and of Northern Rhodesia from 1921 to 1923. He was also a director of the British South Africa Company, under whose administration these protectorates were. In addition to being a Knight of Grace of the Order of St. John, he was created Knight Commander of the Order of St. Michael and St. George in 1917 and Knight of the Grand Cross of the Order of the British Empire in 1923.

Chapman, John Jay, died Nov. 4, 1933.

Chase, Frederick Lincoln. American astronomer, died near Boulder, Colo., Nov. 8, 1933. Born at Boulder, Colo., June 28, 1865, he was educated at the University of Colorado and Yale University, receiving the Ph.D. degree from the latter in 1891. He became assistant astronomer at the Yale Observatory in 1891, serving for three years previous to his retirement in 1915 as acting director. Besides articles in the *Astronomical Journal*, he wrote "Helium Triangulation of the Victoria Comparison Stars" in *Annals of the Cape Observatory* (1897); and for *Transactions of the Yale University Observatory*, "Triangulation of the Principal Stars of the Cluster in Coma Berenices" (1896); "Parallax Investigations on 163 Stars Mainly of Large Proper Motion" (1906); "Parallax Investigations on 35 Selected Stars"

(1910); and "Parallax Investigations on 41 Southern Stars Mainly of Large Proper Motion" (1912).

Chastelain, Emile Louis Marie. French author, died in Paris, Nov. 26, 1933. Born in Montrouge, Department of the Seine, Nov. 25, 1851, he attended the French School in Rome, and after serving as a member of its faculty became secretary and then director of the Practical School of Higher Learning in Paris. He was also conservator of the library of the University of Paris. In addition to being made a Chevalier of the Legion of Honor, he was elected to membership in the Académie des Inscriptions et Belles-Lettres of the Institute de France, and at one time was laureate of that body. His works include *Les Secrets des vieilles reliures* (1906) and *Catalogue des reproductions de manuscrits qui se trouvent à la Bibliothèque de l'Université de Paris* (1910). He edited the *Revue de Philologie* and the *Revue des Bibliothèques*.

Chelmsford, Frederic John Napier Thesiger, 1st Viscount, died Apr. 2, 1933.

Chen, General Chung-Ming. Chinese military leader, died in Hongkong, Sept. 23, 1933. Born at Haifeng, Kwangtung, in 1875, he attended the Kwangtung Law School. After the Revolution he was appointed military governor of Kwangtung, being also appointed in 1913 Minister of War of the Southwestern Military Government. On the orders of Dr. Sun Yat-sen he succeeded in 1920 in overthrowing the Kwangsi militarists in Kwangtung and was rewarded the following year by being made civil governor of the province and commander-in-chief of the Kwangtung forces. In 1922, however, he was dismissed by Sun Yat-sen for insubordination and in retaliation drove out Dr. Sun and his associates from Canton. After meeting with reverses General Chen was forced into hiding at Waichow. He made two attempts to retake Canton but was finally severely routed by Chiang Kai-shek. After 1924 he lived in retirement in Dairen. In August, 1933, however, he was charged with conspiracy against the Nationalist government, by instigating uprisings in Fukien ports, and a warrant was issued for his arrest.

Chesterfield, Edwyn Francis Scudamore-Stanhope, 10th Earl of, British peer, died in London, Jan. 24, 1933. Born Mar. 15, 1854, he was educated at Eton and at Brasenose College, Oxford, and on the death of his father in 1887 succeeded to the title. Under Queen Victoria he served as treasurer to the Royal Household (1892-94) and as captain of the Corps of Gentlemen-at-Arms (1894-95). Under George V he was Lord Steward of the Royal Household (1910-15) and Master of the Horse (1915-22). He was created Knight of the Grand Cross of the Royal Victorian Order in 1911 and Knight of the Order of the Garter in 1914.

Chiara, Edward, died June 21, 1933.

Child, Clement Dexter. American physicist, died in Rochester, N. Y., July 15, 1933. Born at Madison, Ohio, May 15, 1868, he was graduated from the University of Rochester in 1890 and from Cornell University with the Ph.D. degree in 1897. He then attended the Universities of Berlin and Cambridge, and after 1898 was professor of physics at Colgate University. Dr. Child was the author of *Electric Arcs* (1913), which embodied the results of his research in that field. He was also an authority on X-rays and on electrical discharges caused by spraying flames and hot bodies with certain salts.

Childs, Arthur Edward. American electrical engineer and financier, died in Boston, Mass., Nov. 9, 1933. Born in Montreal, Quebec, Canada, Sept. 16, 1869, he was graduated from McGill University in 1888. Embarking upon his career as a wireman with the Canadian General Electric Co., he later became assistant to Dr. Coleman Sellers in the development of the water power of Niagara Falls. Coming to the United States in 1893, he was district engineer for the Westinghouse Electric and Manufacturing Co. of Philadelphia for two years and then removed to Boston where he was manager for the New England district of the Electric Storage Battery Co. In 1896 he organized the Light, Heat and Power Corp. which acquired plants in various cities of the eastern States. He held directorates in the New England Power Association, International Hydro-Electric System, and New England Power Engineering and Service Corp. Among the companies of which Mr. Childs was president were the Columbian National Life Insurance Co., American Investment Securities Co., Hotel Somerset Co., Massachusetts Lighting Companies, and Massachusetts Utilities Investment Co. In connection with the latter he was also chairman of the board of directors.

Clark, Charles W(alker). American copper magnate, died in New York City, Apr. 8, 1933. He was born at Deer Lodge, Mont., Nov. 3, 1871, and was graduated from Yale University in 1893. Thereafter he was identified with the mining interests of his father, William A. Clark (see vol. 5, the NEW INTERNATIONAL ENCYCLOPEDIA), and in 1922 became general manager of the United Verde Copper Co., at Jerome, Ariz., serving after 1921 as president of the corporation. Mr. Clark was an enthusiast in horse racing, and was at one time

president of the Golden Gate Thoroughbred Breeders Association of California.

Clark, L. Pierce. American physician, died in New York City, Dec. 3, 1933. He was born at Ingleisle, N. Y., June 15, 1870, and received his M.D. degree from the medical college of New York University in 1892. The year after his graduation he became consulting neurologist to the Manhattan State Hospital and the Craig Colony for Epileptics, holding both posts until his death. He served also for nearly 40 years as visiting neurologist to the Randalls Island Hospital and the School for Mental Defectives. Dr. Clark was president of the following organizations: New York Neurological Society (1911); New York Psychiatric Society (1916); National Association for the Study of Epilepsy (1919); and American Psychopathological Association (1923). Besides editing *Archives of Psychoanalysis* during 1926-27, he wrote *Clinical Studies in Epilepsy* (1900); *Diagnosis of Organic Nervous Diseases* (with Christian A. Herter, 1907); and *Neurological and Mental Diagnosis* (with A. Ross Diefendorf, 1908). During his latter years Dr. Clark became noted for his psychobiographies, including those of Lincoln, Alexander the Great, and other famous historic characters.

Clearwater, Alphonso Trumbour, died Sept. 23, 1933. Coffey, Robert Calvin. American surgeon, died near Portland, Ore., in an airplane crash, Nov. 9, 1933. He was born in Caldwell Co., N. C., Oct. 20, 1869. On graduating from the Kentucky School of Medicine in Louisville, in 1892, he started his medical practice at Moscow, Idaho, and from there removed to Portland, Ore., in 1900. He established the Dr. Robert C. Coffey Clinic and Hospital serving as its chief surgeon. He was connected in the same capacity with the Portland Surgical Hospital and held the chair of clinical surgery at the medical school of the University of Oregon. In addition to being a past president of the Western Surgical Association and the Pacific Coast Surgical Association, he was vice-president during 1911-12 of the American Medical Association. Dr. Coffey was best known for his contribution toward the eradication of cancer. In the field of abdominal surgery he devised the "hammock operation," and was credited with being the first surgeon to remove experimentally the head of the pancreas, implanting the remaining part into the intestine. He devised also a method of abdominal expansion or contraction. To Binnie's *Regional Surgery*, he contributed the chapter on "Diseases of the Pancreas."

Coffin, William Sloane, died Dec. 16, 1933.

Colgate, Gilbert. American manufacturer, died in New York City, Jan. 5, 1933. He was born at Orange, N. J., Dec. 15, 1858, a grandson of William Colgate who founded the soap works that has since achieved international fame. He was graduated from Yale in 1883, and entered Colgate & Co. In 1919 he became president of the company, and later was chairman of the board. Upon the organization of the Colgate-Palmolive-Peet Co., he was a director of the company. Mr. Colgate had also served as president of the Travelers Aid Society, the Child Welfare Association, the American Waldensian Aid Society, the Presbyterian Union, and the American Perfumers Association.

Collier, James William. American congressman, died in Washington, D. C., Sept. 28, 1933. Born near Vicksburg, Miss., Sept. 26, 1872, he was graduated from the University of Tennessee with the LL.B. degree in 1894. On his admission to the bar he practiced for a short time in Vicksburg. His political career began in 1895 on his election to the Mississippi House of Representatives. From 1899 to 1908 he acted as circuit clerk for Warren Co., resigning this office on his election as Democratic representative from the 8th Mississippi District to the 61st Congress. Through reelection he continued to represent this district until 1933 in each of the succeeding 12 congresses. He originated the bill authorizing 3.2 per cent beer and in 1932 was chairman of the House Ways and Means Committee. At the time of his death he was a member of the United States Tariff Commission.

Collins, Maj.-Gen. Edgar Thomas, U. S. A. American soldier, died in Washington, D. C., Feb. 10, 1933. He was born at Williamsport, Pa., Mar. 7, 1873, and was graduated from the United States Military Academy in 1897. During the Spanish-American War he participated in the engagements of El Caney and San Juan Hill, and at the siege of Santiago, and served in the Philippines throughout the insurrection, receiving his captaincy in 1902. On his graduation from the Army Staff College in 1911, he was assigned as inspector-general to the Wisconsin National Guard, and was transferred to duty in Panama with the 10th Infantry in 1913. During the World War General Collins served as chief of staff, first of the 78th Division at Camp Dix, N. J., then of the 85th Division at Camp Custer, Mich., and later of the 6th Army Corps in France, taking a prominent part in the St. Mihiel and Meuse-Argonne offensives, for which he was awarded the Distinguished Service Medal. In 1924 he was appointed brigadier-general, and in 1932 was promoted to the rank of major-general, having been

previously made assistant chief of staff for operations and training.

Connett, Albert Neumann, died Jan. 1, 1933.

Conway, Robert Seymour, died Sept. 28, 1933.

Cook, Madge Carr, British-American actress, died at Syosset, N. Y., Sept. 20, 1933. She was born in Yorkshire, England, June 28, 1856. After considerable success with a provincial touring company, she made her first London appearance in 1882 in *It's Never Too Late to Mend*, later appearing that year with Madame Ristori, as Lady Annie Burleigh in *Elizabeth*. She again went on tour in 1883, playing the rôle of Ellen in *Pluck* and later appearing with Charles Cartwright and Henry Hamilton in *Mothers* and *No Coronet*. She came to the United States in 1887, her greatest success being as Corsine in *The Beautiful Star* which played at Niblo's Gardens, New York, in 1891. The following year she joined Daniel Frohman's Lyceum stock company and played parts in *Americans Abroad*, *The Guardsmen*, and *A Sheep in Wolf's Clothing*. During 1896-97 Mrs. Cook appeared with T. D. Frawley's stock company in San Francisco and from there went to Honolulu with the same company. In 1900 she returned to New York as Mrs. Hunter in *The Climbers*, and three years later gained her greatest popularity through the rôle of Mrs. Wiggs in *Mrs. Wiggs of the Cabbage Patch*. She continued to appear in this play on the New York and London stage until shortly before her retirement in 1909. Her last rôle was that of Mrs. Jim in *If I Had Money*. Her first husband was Charles Robson, and her second, Augustus Cook.

Cook, William Wallace, American author, died July 20, 1933, at Marshall, Mich., where he was born Apr. 11, 1867. He received his education in the schools of Ottawa, Kan., Lafayette, Ind., and Cleveland, Ohio. Prior to 1900 he had been court reporter in Detroit and free lance contributor to various newspapers and magazines. His publications include mostly adventure stories for boys. They are *His Friend the Enemy* (1903); *Wilbur's Dan* (1904); *A Quarter to Four* (1909); *New Fiction Series* (1909-11); *Around the World in Eighty Hours* (1925); *As the Sparks Fly Upward* (1925-26); and *The Skylark* (1925-26). His *Plotto A New Method of Plot Suggestion for Writers of Creative Fiction* (1927) contained 1800 skeleton plots for stories.

Coolidge, Calvin, died Jan. 5, 1933.

Coolidge, Cora Helen, American educator, died in Pittsburgh, Pa., Mar. 12, 1933. She was born at Westminster, Mass., and was graduated from Smith College in 1892, studying later at the Universities of Chicago and Göttingen. From 1906 to 1917 Dr. Coolidge was dean of the Pennsylvania College for Women, returning in 1922 on her election as president. In the five-year interval she served in Washington as national chairman of the Bureau of Occupations.

Corbett, James J., died Feb. 18, 1933.

Correns, Karl, died Feb. 15, 1933.

Costa, Pasquale Mario, Italian composer, died in Monte Carlo, Sept. 27, 1933. He was born at Taranto, Italy, July 26, 1856, and attended the Naples Conservatory. During the '80s he removed to London where he soon became recognized as a composer of chamber music and popular songs, mostly in the Neapolitan dialect. Among these were *Luna Nova*, *Oje Carulli*, *Serenata Medievale*, *A Napolitana*, *Catalani*, *Un organetto suona per la vie* and *Scetate*. His greatest success, however, was the pantomime *L'Histoire d'un Pierrot*, produced in Paris in 1893 and reproduced in musical centres in all parts of the world. He wrote also three operettas. *Il Capitano Fracassa* (produced in Turin in 1909); *Posillipo* (in Rome, 1921); and *Scugnizza* (in Rome, 1923). During his declining years he made his home in Rome.

Cotton, Henry Andrews, died May 8, 1933.

Courtenay, William, American actor, died at Rye, N. Y., Apr. 20, 1933. He was born in Worcester, Mass., June 19, 1875, and attended Holy Cross College. He began his stage career in 1892, attracting notice after 1896 as a member of Richard Mansfield's company in such parts as Lorenzo in *The Merchant of Venice*, the Rev. Mr. Brudenell in *The Devil's Disciple*, and Reginald Courtney in *Beau Brummell*. After supporting Virginia Harned (whom he later married) in *Iris*, *Oamille*, and *The Light That Lies in Woman's Eyes*, he became recognized as one of the best portrayals of romantic rôles. Outstanding among these were the Duke of Charmance in *Arsène Lupin* (1909), Stephen Baird in *Ready Money* (1912), and Bishop Armstrong in *Romance* (1913). Mr. Courtenay's later engagements were in *Under Cover*, 1914, *Under Fire*, 1915; *Pals First*, 1917; *General Post*, 1917; *The Maid of the Mountains*, 1918; *Cuppy Rucks*, 1919; *Civilian Clothes*, 1920; *Honors Are Even*, 1921; and *The Harem*, 1924.

Coward, Edward Fales, American playwright, died at Oteora Park, N. Y., Aug. 28, 1933. Born in New York City, Sept. 6, 1862, he attended the Lyons Collegiate Institute and was graduated from Columbia with the LL.B. degree in 1883. During a long period of active interest in amateur dramatics he played more

than 200 parts. For two years he was dramatic editor and critic of the *New York Evening Sun*, and for more than six years, of the *New York World*. Among Mr. Coward's 80 acted plays and sketches were *Hearts Are Trumps*, a comedy, *King Stephen*, an historical drama in seven tableaux completed from John Keats' fragment, and *Klytemnestra*.

Cowdray, Weetman Harold Miller Pearson, 2nd Viscount, of Midhurst, British industrialist, died in London, Oct. 5, 1933. Born Apr. 18, 1882, he attended Rugby and Christ Church, Oxford, and from 1906 to 1918 was Liberal representative for the Eye Division of Suffolk in the House of Commons. He was also owner of the *Westminster Gazette*, the organ of the Liberal party, until its merger with the *Daily News* in 1928. On the death of his father in 1927 he not only succeeded to the title but acquired a controlling interest in S. Pearson and Son, Ltd., the public utility contracting firm founded by his great-grandfather in 1875.

Craib, William Grant, British educator, died at Kew, Surrey, England, Sept. 1, 1933. Born Mar. 10, 1882, he attended the University of Aberdeen and then went to India as officiating curator of the herbarium and library of the Royal Botanic Garden in Calcutta. On his return he was attached to the Royal Gardens at Kew as assistant for India. He was later called to the University of Edinburgh as lecturer on forest botany and Indian forest trees and at the time of his death held the Regius Professorship of Botany in the University of Aberdeen. He was also curator of the Cruickshank Botanic Garden at Old Aberdeen and a fellow of the Linnean Society, of the Royal Horticultural Society, and of the Royal Society of Edinburgh. He published several monographs on the flora of Siam, India, and southwest China.

Craig, Sir James, died July 12, 1933.

Crawley, Edwin Schofield, American educator, died at Chestnut Hill, Philadelphia, Pa., Oct. 17, 1933. Born in Philadelphia, July 31, 1862, he attended the University of Pennsylvania from which he received the B.S. degree in 1882 and the Ph.D. degree 10 years later. After serving as instructor in civil engineering at that institution during 1882-85, he was appointed instructor in mathematics in 1885, assistant professor in 1889 and Thomas A. Scott professor of mathematics in 1899, holding the latter chair until his retirement in 1933. Dr. Crawley's publications include *Elements of Plane and Spherical Trigonometry* (1889, 1896, 1907, 1914); *Tables of Logarithms* (1899); *Short Course in Plane and Spherical Trigonometry* (1902); *One Thousand Exercises in Trigonometry* (1914); *Analytic Geometry* (1918), and *Trigonometry* (1922). In the preparation of the latter two he was assisted by Prof. H. B. Evans.

Crim, John William Henry, died July 3, 1933.

Cruce, Lee, American lawyer and administrator, died in Los Angeles, Calif., Jan. 16, 1933. He was born in Crittenden Co., Ky., July 8, 1863, and attended Vanderbilt University. Admitted to the bar in 1887, he practiced in Ardmore, Indian Territory (later Oklahoma), until 1901 and then became associated with the Ardmore National Bank, of which he was successively cashier and president. In 1910 he was elected Governor of Oklahoma on the Democratic ticket serving until 1915. He was one of the first of several gubernatorial executives of the Southwest to oppose capital punishment.

Cruppi, Jean, died Oct. 17, 1933.

Cuno, (Carl Joseph) Wilhelm, died Jan. 3, 1933.

Currie, Sir Arthur William, died Nov. 30, 1933.

Curtis, Cyrus H(erman) K(otzschmar), died June 7, 1933.

Custer, Elizabeth Bacon, American writer, died in New York City, Apr. 4, 1933. She was born at Monroe, Mich., Apr. 6, 1842, and married General George A. Custer, famous Indian fighter, in 1864. She accompanied her husband through the closing campaigns of the Civil War and in many of his expeditions against the Indians. After his death in the battle of Little Big Horn in 1876, she wrote in defense of his memory, *Boots and Saddles, or Life with General Custer in Dakota* (1885); *Tenting on the Plains* (1887); and *Following the Gun* (1890).

Da Costa, (John) Chalmers, American surgeon, died in Philadelphia, Pa., May 16, 1933. He was born in Philadelphia, Nov. 15, 1863, was graduated from the Towne Scientific School of the University of Pennsylvania in 1882 and from Jefferson Medical College in 1885. In addition to his connection with several Philadelphia hospitals he served at different times on the surgical faculty of Jefferson Medical College, becoming in 1901 the first Samuel D. Gross professor of surgery. He was also after 1895, surgeon to the Philadelphia Hospital and after 1896 to St. Joseph's Hospital, and held the rank of Commander in the U. S. Naval Reserve. Dr. Da Costa's demonstrations of surgical practice and his addresses to his students received much attention in the medical field and attracted prominent surgeons of the world to see and to listen. His *Manual of Modern Surgery*, first written in 1895 and revised through ten editions to 1925, has been the authoritative work on the subject.

Dale, Porter Hinman, died Oct. 6, 1933.

D'Alte, Joseph Francis de Horta Michado de Franca, Viscount, Portuguese diplomat, died at Bar Harbor, Me., Oct. 3, 1933. Following in the steps of his brother, father, and grandfather before him, he chose a diplomatic career, serving first as Assistant Secretary of Foreign Affairs for Portugal in 1898. He assumed the title viscount some time before he came to the United States in 1902 in the capacity of Minister from Portugal. He retained the latter post for 31 years, the longest term of any envoy. On his resignation in May, 1933, he was made honorary Counselor of the Portuguese Legation.

Dalton, Charles, Canadian administrator, died at Charlottetown, P. E. I., Dec. 9, 1933. Born June 9, 1850, he attended Tighish Academy and was successively engaged as a farmer, merchant, and finally breeder of foxes, organizing in 1912 the Charles Dalton Silver-Black Fox Co. Elected to the Legislative Assembly in 1911 as representative for the First District, he served also in the government as Minister without Portfolio. He was reelected for the term 1915-19. In 1930 he was appointed Lieutenant-Governor of the province. A liberal donor to St. Dunstan's College and other Roman Catholic institutions, he was made in 1917 Knight Commander of the Order of St. Gregory the Great.

Dame, Frank Libby, American electrical engineer and public utility executive, died at Garden City, L. I., N. Y., Dec. 30, 1933. He was born in Boston, Mass., Mar. 21, 1867, and was graduated from the Massachusetts Institute of Technology in 1889. He began his career as engineer with the Portland (Ore.) office of the Westinghouse Co. During 1891-92 he was superintendent of the Vancouver (B. C.) Railway and Light Co., and during 1892-93 engineer with the local office of the General Electric Co. After having charge of the railway property of Tacoma, Wash., from 1893 to 1901, he became engineer for the General Electric Co. there. In 1909, on his election as vice-president of the Electric Bond and Share Co., he entered the financial field. He served until 1924 as an official of various public utility companies, including the Central States Electric Corp. Mr. Dame became president of the North American Co., in 1921, serving also during 1932-33 as chairman of the executive committee. At the time of his death he was chairman of the board of the Cleveland Electric Illuminating Co., North American Edison Co., and Wired Radio, Inc.; president of the Edison Securities Co., North American Utilities Securities Corp., and Western Power Corp.; and vice-president of the Union Electric Light and Power Co.

Dana, Richard Henry, American architect, died in New York City, Nov. 29, 1933. Born in Cambridge, Mass., Sept. 1, 1879, a descendant of the author of *Two Years before the Mast*, he was graduated from Harvard University in 1901 and from Columbia University in 1904, studying also during the next two years at the Ecole des Beaux Arts in Paris. Establishing his practice in New York City in 1906, he was associated until 1921 with Henry Murphy, thereafter pursuing the profession alone. During 1908-16 he lectured at the School of Architecture of Yale University. Among the buildings which Mr. Dana designed were the Loomis Institute at Windsor, Conn., the Dalton School in New York City, St. Margaret's School in Waterbury, Conn., and the Christian Science Church in Cambridge, Mass. He was also an authority on colonial architecture, contributing to such works as *Great Georgian Houses of America* (1933).

Davis, Arthur Powell, died Aug. 7, 1933.

Davis, Charles H(arold), died Aug. 5, 1933.

Davis, Stephen Brooks, died Feb. 24, 1933.

Dawson, Brig.-Gen. Sir Douglas (Frederick Rawdon), British soldier and diplomat, died in London, Jan. 19, 1933, where he was born Apr. 25, 1854. Educated at Eton, he joined the Coldstream Guards in 1874 and later attended the Army Staff College, being assigned to special service in the Egyptian campaign of 1882-83. He participated with the Mounted Infantry in the battles of Mahuta, Kassassin (where his horse was shot from under him), and Tel-el-Kebir and was in command of the forces in the capture of Cairo. In 1884 he served with the column, commanded by Sir Herbert Stewart, which was sent to the relief of Gordon at Khartum, and three years later received the Jubilee Medal for his bravery on that occasion. Entering the diplomatic service in 1890, Sir Douglas acted until 1901 as military attaché in various European capitals, including Vienna, Bucharest, Belgrade, Paris, Brussels, and Berne. In 1903 he became attached to the Royal Household as Master of Ceremonies and in 1907 became comptroller in the Lord Chamberlain's department. During the World War he was inspector of vulnerable points at the general headquarters of the Horse Guards. From 1920 to 1924 he was State Chamberlain. In addition to being a Knight Commander of the Bath he served as secretary to that Order and to the Order of the Garter. He wrote *A Soldier Diplomat* (1927).

Day, Rear Admiral Benjamin Franklin, U. S. N., Ret. American naval officer, died at Buena Vista, Va., July 3, 1933. Born at Plymouth, Ohio, Jan. 16, 1841, he at-

tended the United States Naval Academy from 1858 to 1861 and served during the Civil War with the West Gulf (1862-64) and North Atlantic blockading squadrons (1864-65), attaining the rank of lieutenant commander at its close. He was assigned to the *Tuscarora* (1865-68), *Contocook* (1868-70), *Ticonderoga* (1871), and *Congress* (1871-74). On being promoted to commander in 1876 he took charge of the *Manhattan*. He was stationed at the Norfolk Navy Yard during 1879-80 and served as lighthouse inspector of the eighth district during 1881-84. He then became commander of the *Mohican*. While on shore duty at the Boston Navy Yard during 1889-92 he was made captain. The last ships that he commanded were the *Boston* (1892-93) and the *Baltimore* (1894-96). During 1896-97 Admiral Day was president of the steel board, which played an important part in modernizing the navy, and during 1897-1900 was a member of the Naval Examining and Retiring boards. Commissioned rear admiral in 1899, he retired from active service the following year.

De Angella, Jefferson, died Mar. 20, 1933.

Decker, Rear Admiral Benton Clark, U. S. N., Ret. American naval officer, died at Riverside, Calif., Mar. 22, 1933. Born at Lima, N. Y., Dec. 28, 1867, he was graduated from the United States Naval Academy in 1887. He was appointed an ensign in 1889 and was promoted through the grades, reaching the rank of temporary rear admiral in 1918. During the World War he acted as naval attaché at Madrid, and was also in charge of the Intelligence Service of the United States Embassy. In 1919 he refused the award of the Navy Cross, saying it was not sufficient recognition for his service in counteracting German propaganda and in restraining Spain from entering the war against the Allies. Previous to his retirement in 1923, Admiral Decker had been stationed at the 1st Naval District in Boston. Congress conferred the regular rank of rear admiral on him in 1930.

Dering, Sir Herbert Guy, British diplomat, died at Tonbridge, Kent, May 29, 1933. Born Nov. 13, 1867, he attended Eton and in 1892 entered the diplomatic service as attaché at the British embassy in Berlin. Four years later he was transferred to Constantinople as third secretary and from there went to Peking in 1899 as second secretary, receiving a medal and clasp for his services in defending the British Legation during the Boxer Rebellion. Assigned to Washington in 1902, he was transferred from there to Stockholm in 1905 where he became first secretary of the British embassy. Advanced to diplomatic counselor in 1909, Sir Herbert served in that capacity at the British embassy in Rome from 1911 to 1915. While in Rome he represented Great Britain and her dominions on the Permanent Committee of the International Institute of Agriculture. After serving as Minister to Siam from 1915 to 1919, he became High Commissioner in Bulgaria for the year 1919-20 and served thereafter until his retirement from the diplomatic service in 1926 as Minister to Rumania. He received the Grand Cross of the Order of the Star of Rumania. In addition to being made a member of the Royal Victorian Order in 1908, he was created a Knight Commander of St. Michael and St. George in 1917 and a Knight Commander of the Indian Empire in 1919.

Dewey, Richard (Smith), American psychiatrist, died at La Canada, Calif., Aug. 4, 1933. Born at Forestville, N. Y., Dec. 6, 1845, he was graduated with the M. D. degree from the University of Michigan in 1869. During the Franco-Prussian War, he was a volunteer assistant surgeon at the field hospital at Pont à Mousson, France, and at the Reserve Hospital, Hesse-Cassel, Germany. Part of 1871 he spent in study under Virchow in Berlin. On his return to the United States in 1872 he was appointed assistant physician at the State Hospital for the Insane in Elgin, Ill. While medical superintendent of the State Hospital at Kankakee, Ill., during 1879-93 he introduced the detached ward or cottage plan in housing the insane. From 1895 to 1921 Dr. Dewey was head of the Milwaukee Sanitarium. He held also the chair of mental and nervous diseases at the Chicago Post-Graduate Medical School from 1893 to 1909. In 1896 he was president of the American Medico-Psychological Society (now the American Psychiatric Association).

Dewey, Stoddard, American newspaper correspondent, died in Paris, France, July 30, 1933. He was born in New York City, Apr. 20, 1853, and received his education at schools in France and Belgium. During the '80s he wrote on Italian matters for the *Speaker*, a London Liberal weekly later known as the *Nation*, and contributed to the *Westminster Review*, the *Atlantic Monthly*, and the *New York Tribune*. After 1892 he served as Paris correspondent to the *New York Evening Post* and the *Nation*, and after 1895 wrote on foreign financial matters for the *New York Journal of Commerce*. He served in 1892 as secretary to the United States Treasury Commission to France, Spain, and Portugal, and in 1897 compiled, under the title of *Tarif Relations between France and the United States*, statistical tables which were published in English and French and dis-

tributed to Congress and the French Parliament by the American Chamber of Commerce of Paris. In 1900 he made the necessary preparatory arrangements for 105 international congresses of learned societies which met in Paris and the following year received in recognition of his services the rosette of a Chevalier of the Legion of Honor. He wrote *Four French Adventurers* (1912) and lectured hundreds of times in camps of the American Expeditionary Forces during the World War. He was president of the Anglo-American Press Association in Paris in 1920 and in 1932 was raised to the rank of Officer of the Legion of Honor.

De Windt, Harry, died Dec. 1, 1933.

Dickens, Sir Henry Fielding, British jurist, died in London, Dec. 21, 1933. Born Jan. 16, 1849, a son of Charles Dickens, the novelist, he attended Trinity Hall, Cambridge, and in 1873 was admitted to the bar. His early practice was confined to the Kent Sessions and the Home Circuit. On his appointment as King's Counsel in 1892 he was made Recorder of Maidstone. In 1899 he removed to London where he was a bencher of the Inner Temple and from 1917 to 1932, Common Sergeant of the City of London. Knighthood was conferred on him in 1922. Sir Henry published *Memoirs of My Father* (1928), a delectable collection of anecdotes. After his death, his family decided to allow Charles Dickens's unpublished *Life of Our Lord*, which he had written for his own children, to be given to the children of the world.

Dickey, Paul, American playwright, died in New York City, Jan. 8, 1933. Born in Chicago, Ill. in 1884, he attended the University of Michigan. He began his career as an actor, appearing first with a Chicago vaudeville company, and later with Robert Edson in *Strongheart* and Henrietta Crossman in *Sham*. The World War interrupted his career and he served as a lieutenant in the air force, being assigned to a bombing squadron. On his return he served as stage director for the productions *Rose Marie* and *The Shannons of Broadway*. With Charles Goddard he wrote *The Ghost Breaker* (1913); *Miss Information* (1915); and *The Broken Wing* (1920), and with Mann Page *The Backslapper* (1924). After 1927 he spent most of his time in Hollywood as a scenario writer.

Dickie, James Francis, American clergyman and author, died in Detroit, Mich., May 28, 1933. Born at Kilmarnock, Scotland, Nov. 13, 1848, he was educated at Edinburgh and Berlin Universities. Ordained to the Presbyterian ministry in 1869, he served for two years as assistant pastor at St. Thomas' Church, Greenock, and then migrated to Canada where for eight years he was pastor of St. Andrew's Church, Berlin. In 1879 he was called to the Central Presbyterian Church of Detroit, Mich., where from 1887 to 1894 he was also lecturer on church history at the University of Michigan. His last pastorate was that of the American and British Union Church in Berlin, Germany. The edifice of the latter church was built with the funds which Dr. Dickie collected in America. On his retirement in 1909 he settled in Detroit. Dr. Dickie's publications include *Oberammergau and the Passion Play* (1900); *John Wüther- spoon, Patriot* (1902); *In the Kaiser's Capital* (1910); *Picturesque Germany* (1911); and *In the Balearic Isles* (1914).

Dillon, Emile Joseph, died June 9, 1933.

Dixon, James Main, died Sept. 27, 1933.

Doak, William Nuckles, died Oct. 23, 1933.

Dodd, Lee Wilson, died May 16, 1933.

Doddson, John Milton, American physician and editor, died in Chicago, Ill., Aug. 15, 1933. Born in Berlin, Wis., Feb. 17, 1859, he was graduated from the University of Wisconsin in 1880 and with the M.D. degree from Rush Medical College, Chicago, in 1882 and Jefferson Medical College, Philadelphia, in 1883. He also took a post graduate course in medicine at Berlin in 1896. In addition to his practice in Chicago he was connected with the Rush Medical College as lecturer and demonstrator of anatomy (1889-92); as professor of physiology and demonstrator of anatomy (1892-98); and after 1899 as professor of pediatrics. He held also the post of dean at Rush Medical College and the University of Chicago from 1901 to 1924. Dr. Doddson was director of the Bureau of Health and Public Instruction of the American Medical Association; a major in the Medical Corps of the United States Army and medical aide to the governor of Illinois (1918-19); and editor for many years of *Hygien*, the health magazine.

Donald, Sir Robert, died Feb. 17, 1933.

Dougherty, Raymond Philip, American Assyriologist, died suddenly in New Haven, Conn., July 13, 1933. Born at Lebanon, Pa., Aug. 5, 1877, he was graduated from Lebanon Valley College, in 1897. After serving as principal of the normal department of Leander Clark College, Toledo, Iowa, he was ordained in 1904 to the ministry of the United Brethren in Christ and for the next 10 years was a missionary for that denomination in its West African district. In addition to serving as principal of the Albert Academy in Freetown, Sierra Leone, he acted as American vice consul there for two terms

(1905-06 and 1912-18). On his return to the United States he studied for his Ph.D. degree at Yale University and in 1918 was appointed professor of Biblical literature at Goucher College. After 1926 Dr. Dougherty held the William M. Laffan chair of Assyriology and Babylonian literature at Yale University. He acted also during 1925-26 as annual professor at the American Schools of Oriental Research in Jerusalem and Baghdad, conducting during the latter year an archaeological survey in southern Babylonia (Iraq). He was curator of the Yale Babylonia collection, a member of the executive committee of the American Schools of Oriental Research, and chairman of the committee on Mediterranean antiquities of the American Council of Learned Societies. His publications include *Records from Erech, Time of Nabonidus* (1920); *The Shirkutu of Babylonian Deities* (1923); *Archives from Erech, Time of Nebuchadnezzar and Nabonidus* (1923); *Cuneiform Parallels to Solomon's Provisioning System* (1925); and *Nabonidus and Belshazzar* (1929).

Drake, Durant, died Nov. 25, 1933.

Duca, Ion Gheorghe, died Dec. 29, 1933.

Duff, Admiral Sir Alexander (Ludovic), British naval officer, died in London, Nov. 22, 1933. Born Feb. 20, 1862, he entered the navy about 1882 and in 1884 was made lieutenant of the royal yacht. Promoted through the ranks, he became assistant to the Third Sea Lord in 1905 and from 1911 to 1914 held the post of director of naval mobilization on the Admiralty War Staff. Assigned to the command of the Fourth Battle Squadron with the rank of rear admiral, he served with distinction at the battle of Jutland Bank in 1916. The following year he was appointed director of the Admiralty's anti-submarine division, which played a skillful part in averting further submarine destruction and in successfully bringing into port ships laden with food and munitions. During 1918-19 he acted as assistant chief of the Naval Staff, holding the rank of vice admiral and in 1921 was promoted to the rank of admiral. After the War Admiral Duff was in charge of the China squadron for three years as commander-in-chief. He retired in 1925. Besides being created Companion of the Bath in 1916, he was dubbed Knight Commander of the Bath in 1918, Knight Commander of the Royal Victorian Order in 1922; Knight of the Grand Cross of the Order of the British Empire in 1924; and Knight of the Grand Cross of the Order of the Bath in 1926. Among the decorations which he received from other countries were commander of the Legion of Honor (France); St. Stanislas, first class (Russia); Striped Tiger, first class (China); Rising Sun, second class (Japan); and the Distinguished Service Medal (U.S.A.).

Duffy, James O. G., American editor, lawyer, and author, died in Wilmington, Del., Jan. 9, 1933. He was born in Strabane, County Tyrone, Ireland, Jan. 4, 1864. After coming to the United States he began his newspaper career with the *Philadelphia Press*, serving successively as Sunday editor (1891-96); dramatic editor and critic (1893-1911); literary editor and principal reviewer (1896-1911), associate editor (1911-13); and dramatic and associate editor (1914-20). He was connected with the *Philadelphia Evening Bulletin* in the capacity of editorial writer after 1920. Admitted to the Pennsylvania bar in 1897 following his graduation from the law school of the University of Pennsylvania, he became general counsel for an allied group of corporations in 1900 and acted as consulting counsel from 1913 to 1918. Mr. Duffy was the author of the novels *Glass and Gold* (1901) and *Sting of Death* (1916), and the plays *Hohenzollern*, in collaboration with Cyrus Townsend Brady (1902), *The Golden Fleece* (1913); and *Brenda's Elopement* (1914).

Duke, Victor LeRoy, American educator, died at Redlands, Calif., Mar. 3, 1933. Born at Rosetta, Henderson Co., Ill., Feb. 11, 1874, he attended Shurtleff College, Alton, Ill., where following his graduation in 1897 he taught mathematics. In 1909 he accepted a professorship of mathematics at the newly-founded University of Redlands, and during 1912-15 also acted as dean of the liberal arts college. In 1915 he was elected the university's president. He served as president of the Southern California Baptist Convention during 1920-21 and of the board of education of the Northern Baptist Convention during 1928-30.

Dunn, The Most Rev. John Joseph, American Roman Catholic bishop, died Aug. 3, 1933, in New York City where he was born Sept. 1, 1870. He was graduated from St. Charles College, Ellicott City, Md., in 1890 and from St. Joseph's Provincial Seminary, Troy, N. Y., in 1896. Following his ordination in 1896 he served as curate at the Church of St. John the Evangelist in New York City. In 1904 he was appointed director of the New York branch of the Society for the Propagation of the Faith on Cardinal Farley's elevation to the archbishopric. Through all his promotions in ecclesiastical office, foreign missions remained a paramount issue with him. In 1914 he was made Chancellor, and seven years later was consecrated auxiliary bishop of the Archdiocese of New

York. On being named titular Bishop of Camuliana he was transferred to the Church of the Annunciation as irremovable rector. After 1922 he served as treasurer of the archdiocese, and as vice-president of the Catholic Charities of New York City. He was also the supreme spiritual director of the Holy Name Society and grand prior of the American chapter of the Knights of the Holy Sepulchre.

Dunwoody, Brig.-Gen. Henry Harrison Chase, U. S. A., Ret., died Jan. 1, 1933.

Easterbrook, Edmund Pepperell. American army chaplain, died at Fortress Monroe, Va., Jan. 18, 1933. Born at Torquay, England, Dec. 22, 1865, he attended the public college there and on coming to the United States studied at Drew Theological Seminary. Ordained to the ministry of the Methodist Episcopal Church in 1889, he was pastor for the next ten years of several Methodist Episcopal Churches in the Troy (N. Y.) Conference. During the Spanish-American War he served as chaplain with the United States Army and, on receiving a commission in the regular Army in 1900, was transferred to duty in the Philippines where he remained until ordered to join the Cuban Army of Occupation in 1905. During the World War he was detailed to a regiment of the United States Artillery and from 1919 to 1923 was senior chaplain of the American Forces in Germany. On his return to the United States Colonel Easterbrook was stationed at Fortress Monroe, Va., during 1923-27 and at Fort Sam Houston, Texas, during 1927-28. Appointed chief of chaplains of the United States Army, he served as such until his retirement in 1930. He was a member of the French Legion of Honor.

Eaton, James Shirley. American railway specialist, died at Warner, N. H., Aug. 13, 1933. Born in Nashville, Tenn., Aug. 1, 1868, he was graduated from Marietta College in 1889 and for several years was traveling auditor for the Southern Railway. He served as expert in the adaptation of the electric tabulating machine for railroad accounting, and from 1899 to 1903 was statistician for the Lehigh Valley Railroad. He then served for two years as railroad editor of the *Wall Street Journal* and was lecturer on railway transportation at New York University and Dartmouth College. During 1917-20 he was examiner for the Federal Trade Commission and during 1921-22 statistician and economist for the Bureau of Economics and Engineering of the National Association of the Owners of Railway Securities. He wrote *Railroad Operations* (1900); *Education for Efficiency in Railroad Service* (1910); and *Railroad Expense Handbook* (1911).

Edwards, William Franklin. American scientist, died at Englewood, N. J., Jan. 12, 1933. Born at Rock Island, Ill., Feb. 13, 1858, he was graduated from the University of Michigan in 1880. After serving for five years as instructor in chemistry at that institution, he was called to Washington University in St. Louis as professor of physics and chemistry. In 1897 he was elected president of the University of Washington in Seattle, continuing his research work, however, as professor of metallurgy. In 1900 he retired from the educational field to serve as director of research for the Guggenheim Foundation. He lectured on chemistry at Rice Institute during 1912-16 and then became director of research of the laboratory of four great automobile concerns in Detroit where steps were taken toward the development of high-strength alloy steels. After 1919 Dr. Edwards was director of research for the United States Testing Co., Inc., of New York. In this connection he conducted courses of study in rayon and silk testing.

Eland, John Shenton. British-American painter, died in New York City, Jan. 7, 1933. Born at Market Harborough, England, Mar. 4, 1872, he received his art education at the Royal Academy Schools and following the acceptance of his first picture in 1894 was an annual exhibitor at the Royal Academy. Previous to settling in the United States in 1914 he was for 11 years (1897-1908) principal of the Henry Blackburn School of Drawing for the Press. He was best known, however, for his portraits, among which were those of Princess Victoria of Schleswig-Holstein, Princess de Braganza, Cardinal Gibbons, the Duke of Hamilton, Mrs. Andrew Carnegie, and other prominent members of British, Continental and American society. His favorite medium was pastel (colored crayon on vellum), which he was said to have been the first to introduce. As an etcher, Mr. Eland won fame with the series entitled "Arcadian Rhythms." He wrote and illustrated *Flower Legends for Children* and *Willy Wind and Jock and the Cheeses*. Previous to his death he prepared *The Younger Generation* which contained reproductions of some of his portraits of children.

Elkin, William Lewis. American astronomer, died in New Haven, Conn., May 30, 1933. He was born in New Orleans, La., Apr. 29, 1855, and was educated at the Royal Polytechnic School in Stuttgart, Germany, and at the University of Strassburg, receiving his Ph.D. degree from the latter in 1880. During 1881-83 he was associated with Sir Daniel Gill at the Royal Observatory, Cape of Good Hope, investigating the parallaxes of southern stars. This work was supplemented in 1887-88 by

his determination, while astronomer of the Yale University, of the parallaxes of a number of the brightest northern stars. From 1896 to 1910 he was director of the Yale Observatory, retiring as emeritus in the latter year. Dr. Elkin received the Lalande prize from the Paris Academy of Sciences in 1908. He was said to have been the first astronomer to photograph meteor showers.

Ellerman, Sir John Reeves. British shipping magnate, died at Dieppe, France, July 17, 1933. Born May 15, 1862, he established a successful practice as an accountant but during the early '90s became interested in shipping, joining the firm of Frederick Leyland and Co. In 1893 he became chairman of the board of directors of the Leyland line and previous to the sale of its Atlantic services to the International Mercantile Marine in 1902 was its principal owner. He retained, however, control of its Mediterranean services and later acquired the Papsayanni, Westcott, Lawrance, and Wilson lines. At the time of his death he was controlling owner of the Ellerman and Bucknall lines, engaged in world-wide shipping, and of the City and Hall lines, whose routes were via the Mediterranean to Egypt and India. These lines represented a gross tonnage of 1,500,000 tons. Sir John was also owner of considerable real estate in London and at one time held controlling interests in numerous newspapers, including the *London Times* and Associated Newspapers, Ltd., and in the "quality" group of British periodicals, which numbered the *Illustrated London News*, *The Sketch*, *The Sphere*, *The Tatler*, and *Eve*. In addition to being created a baronet in 1905, he was made a Companion of Honor in 1921. He was reputed to be the richest man in England.

Emmons, Charles Demoss. American transportation official, died in New York City, Feb. 2, 1933. Born at Lafayette, Ind., Feb. 13, 1871, he was graduated from the Western University of Pennsylvania (now the University of Pittsburgh) with the C.E. degree in 1892. He began his career in the engineering department of the Pennsylvania Railroad, working there until 1901 when he became general superintendent of the Lafayette (Ind.) Street Railway Co. After 1903 he served successively as general manager of the Fort Wayne and Wabash Valley Street Railway Co. (1903-11) and of the Chicago, South Ben and Northern Indiana Railway Co. (1912-16), second vice-president and general manager of the Boston and Worcester Street Railway Co. (1916-18), and general manager of the Boston Elevated Railway Co. (1918-19). In 1919 he became president of the United Railways and Electric Co. of Baltimore, also holding the office of president of the Baltimore Coach Co., of the Baltimore, Halethorpe and Elkridge Railway Co., and of the Maryland Electric Railway. He was president after 1930 of the Hudson and Manhattan Railroad Co., between New York City and Hoboken, Jersey City, and Newark, N. J. During 1922-23 he was president of the American Electric Railway Association.

Erskine, Albert Russel. American automobile executive, died suddenly in South Bend, Ind., July 1, 1933. Born at Huntsville, Ala., Jan. 24, 1871, he received his education in public and private schools. He was connected with the American Cotton Co. as general auditor and manager from 1898 to 1904, first in its St. Louis office and then in its New York office. He was then elected treasurer of the Yale and Towne Co., manufacturers of locks, and in 1910 became vice-president of the Underwood Typewriter Co. The following year he joined the Studebaker Corp. as treasurer and member of the executive committee, rising to the vice-presidency in 1913 and the presidency in 1915. Mr. Erskine was also chairman of the board and president of the Pierce Arrow Motor Car Co.; director of the Federal Reserve Bank of the Seventh District (Chicago) during 1918-22; and president of the board of lay trustees of the University of Notre Dame.

Ewart, John S(kirving), died Feb. 21, 1933.

Fairchild, Blair, died Apr. 23, 1933.

Fairchild, Charles G. American educator, died at Roslyn Heights, L. I., N. Y., Jan. 20, 1933. Born at Berea, Ky., about 1845, he began his studies at Oberlin College, but left there on the outbreak of the Civil War to serve with the commissary department of the Union Army. After the war he resumed his studies at Oberlin and on his graduation became an instructor in Greek and Latin at Berea College, of which his father, Henry F. Fairchild, was president. Dr. Fairchild was called to Oberlin in 1870 as professor of physics and chemistry, holding the chair until his election in 1895 as president of Rollins College. In 1899 he returned to Oberlin as financial secretary in which position he remained until his retirement in 1927. He was a Congregational minister.

Farnam, Henry Walcott, died Sept. 5, 1933.

Farrington, Oliver Cummings, died Nov. 2, 1933.

Farrington, Wallace Rider, died Oct. 6, 1933.

Feisal, King of Iraq, died Sept. 8, 1933.

Fleming, Robert. British financier, died at Bridge of Orchy, Argyllshire, Scotland, July 31, 1933. Born in 1845, he began his career as a clerk in the employ of the Dundee banking firm of Baxter Bros. Sent to the

United States in 1870 on a business trip, he returned with the firm conviction that, due to the depreciation of United States currency as a result of the Civil War, that country was an important field for the investment of British capital. After serving as secretary of the Scottish American Investment Trust, he organized in 1888 the Investment Trust Corp. and the firm of Robert Fleming and Co., merchant bankers, 21 years later. Mainly due to his support the Atcheson, Topeka, and Santa Fe and the Denver and Rio Grande Railroads in the United States were reconstructed and the Cuba Railroad was completed. The Anglo-Persian Oil Co. was another important industrial development in which his firm was interested. Mr. Fleming served on the Financial Facilities Committee during the World War and was well known for his philanthropies.

Fletcher, Sir Walter Morley, died June 7, 1933.

Follett, Mary (Parker), American author and civic leader, died in Boston, Mass., Dec. 18, 1933. Born at Quincy, Mass., she was graduated from Radcliffe College in 1898 and studied also at the University of Paris and Newnham College, England. From 1900 to 1916 she was engaged principally in vocational guidance and civic education, establishing in the capacity of vice-president of the National Community Centre Association, social centres in Boston school buildings which were later administered by the city. She also represented the public on the Minimum Wage Commission in Massachusetts. Miss Follett wrote *The Speaker of the House of Representatives* (1896), *The New State* (1918), and *Creative Experience* (1924), the latter being considered one of the most stimulating books in the field of adult education. As an expert on personnel problems she contributed to *Scientific Foundation of Business Administrations* (1926); *Business Management as a Profession* (1927), and *Psychological Foundations of Management* (1927).

Ford, Simeon, American hotel proprietor, died at Rye, N. Y., Aug. 30, 1933. Born at Lafayette, Ind., Aug. 31, 1855, he studied for the bar but abandoned that career to go into hotel management with Samuel L. Shaw, his brother-in-law. From 1881 to 1914 he was owner of the Grand Union Hotel in New York City, being one of the few proprietors to acquire a national reputation for his hospitality. He was also president of the Official Hotel Red Book and Directory Co., of the Zealand Realty Co., and of the Apollinaris Agency. Widely known for his after-dinner speeches, he published some of these, together with addresses, as *A Few Remarks* (1903).

Fortescue, Sir John William, British historian, died at Cannes, France, Oct. 23, 1933. Born Dec. 28, 1859, he attended Harrow and Trinity College, Cambridge, of which he later became honorary fellow. He studied for the bar but soon abandoned that career to serve as private secretary to Sir William Robinson when the latter went to Barbados. On his return to England, he was praised for the articles he had contributed to *Macmillan's Magazine*, and was urged to write a history of his brother Lionel's regiment published as *History of the 17th Lancers* (1895). Its success led the Macmillan Co. to ask him to prepare a popular *History of the British Army*, on whose 13 volumes he was engaged between 1899 and 1929. His other works included *Dundonald* (1896), *The Story of a Red Deer* (1897); *The Drummer's Coat* (1899), *The County Lieutenancies and the Army* (1909); *The Three Pearls* (1916); *My Native Devon* (1924); *Wellington* (1925); *Six British Soldiers* (1928); *The Empire and the Army* (1928); *Historical and Military Essays* (1928), *A Short Account of Cannons in the British Army* (1928), *The Royal Army Service Corps* (vol. 1, 1930); *Following the Drum* (1931); and *Marlborough* (1932). Sir John served also as librarian at Windsor Castle from 1905 to 1926 being created in recognition for his service a member of the Royal Victorian Order in 1907, Commander in 1917, and Knight Commander in 1926.

Fortier, Samuel, died Aug. 18, 1933.

Foster, William Wilson, American clergyman and educator, died in Albany, N. Y., Feb. 22, 1933. He was born at Moriah, N. Y., July 27, 1849, and attended the Drew Theological Seminary. Ordained to the Methodist Episcopal ministry in 1873, he had charges at Puttsford, Vt. (1878-79); Castleton, Vt. (1876-78); Ft. Edward, N. Y. (1879-80); Lowell, Mass. (1880-82); Bennington, Vt. (1883-84); Albany, N. Y. (1885-87); North Adams, Mass. (1888-92); and Amsterdam, N. Y. (1893-97). From 1898 to 1909 he was president of Rust University, Holly Springs, Miss., and from 1909 to 1910 of Beaver College, Jenkintown, Pa. In 1910 Dr. Foster accepted a pastorate in Johnstown, N. Y., and two years later was elected president of Clark University, Atlanta, Ga. On relinquishing that post in 1918 he was called to the Embury M. E. Church at Cambridge, N. Y., where he remained until his retirement in 1921.

Fournier d'Albe, Edmund Edward, died July 7, 1933.

Fowler, Henry Watson, British lexicographer, died at Hinton St. George, Somersetshire, Dec. 28, 1933. Born Mar. 10, 1858, he attended Rugby and Balliol

College, Oxford and during 1882-99 was assistant master at Sedburgh. He then retired to his birthplace, emerging only to serve as a private with the British Expeditionary Force in France during 1915-16. With his brother, F. G. Fowler, he published in 1906 *The King's English*; in 1911 *The Concise Oxford Dictionary of Current English*; and in 1924 *The Pocket Oxford Dictionary*. The aim of the latter two, adapted from the great *Oxford English Dictionary*, was to present as vivid a picture as the small dictionary could be made to give of the English that was being spoken and written at the time. Mr. Fowler later published *On Grammatical Inversions* (1922); *A Dictionary of Modern English Usage* (1926); *Some Comparative Values* (1929); *If Wishes Were Horses* (1929); and *Rhymes of Darby to Joan* (1931).

Fowler, William Hope, British radiologist, died in Edinburgh, Oct. 5, 1933. Born in 1876, he received the M.B. and Ch.B. degrees from the University of Edinburgh in 1897, being later appointed Heriot Research Fellow. Connected with the Royal Infirmary of Edinburgh from the days of his early practice, he served successively as resident house surgeon and non-resident house physician, clinical assistant in the medical electricity department, assistant medical electrician (1901-11), and radiologist (1911-26). During the World War he was consulting radiologist to the Admiralty and member of the War Office X-Ray Commission. At the time of his death Dr. Fowler was serving as consulting radiologist to the Royal Infirmary in Edinburgh and Perth; as radiologist to the Bangour Hospital; and as honorary radiologist to the Royal (Dick) Veterinary Hospital, Edinburgh. He lectured also on radiology at Surgeons' Hall, Edinburgh and for his brilliant and self-sacrificing work in this field was made in 1933 a Commander of the Royal Victorian Order.

François, Gen. Hermann von, German army officer and writer, died in Berlin, May 15, 1933. Born in Luxemburg, Jan. 31, 1856, he attended the Glogau gymnasium and then entered the Wahlstatt cadet corps. After receiving his commission as lieutenant of the regiment guard in 1889 he was promoted through the ranks to general at the outbreak of the World War. He rendered his most distinguished service as commander of the Seventh Army Corps before Verdun. True to his Junker traditions, General von François maintained a staunch anti-republican attitude after the war and was one of the principal advocates of guerrilla tactics in retaliation for the French occupation of the Ruhr. He wrote *Verwaltungsgeneralstabreisen* (1910); *Der Feldverpflegungsdienst bei den hohen Kommandobehörden* (2 vols., 1913); *Zusammenbruch grosser Heere* (1918); *Marneschlacht und Tannenberg* (1920); and *Gorlice 1915* (1922).

Franz, Shepherd Ivory, died Oct. 14, 1933.

Fraser, Abel McIver, American clergyman and educator, died at Staunton, Va., Nov. 18, 1933. Born at Sumter, S. C., June 14, 1856, he was graduated from Davidson College in 1876 and from the Columbia Theological Seminary in 1880. He was ordained to the ministry of the Presbyterian Church in the United States in 1881, serving successively as pastor at Walnut Hill and Bethel, Ky. In 1893 he became pastor of the First Presbyterian Church at Staunton, Va., remaining there until his retirement as pastor-emeritus in 1929. From 1923 to 1929 he was also president of Mary Baldwin College. He had previously declined on three occasions the office of president of the Columbia Theological Seminary. Dr. Fraser served as moderator of the Synod of Virginia in 1903 and as moderator of the General Assembly of the Presbyterian Church (South) in 1919. During 1919-22 he was chairman of that denomination's committees on closer relations with other churches and with other Presbyterian bodies.

Fraser, Donald, British missionary, died in Glasgow, Aug. 20, 1933. Born at Lochgilphead, June 1, 1870, he attended Glasgow University and the Free Church Theological College, and was one of the founders of the Student Christian Movement, traveling among the colleges of Great Britain, the Continent, America, and South Africa. In 1896 he went to Nyassaland as a member of the Livingstonia Mission where during the next 30 years he did notable work among the native Ngoni. He established also the Loudon Mission, named for Livingstone's medical associate, who rendered him valuable assistance during his early years in the mission field. In 1922 Dr. Fraser was elected moderator of the United Free Church and after conducting missionary campaigns in various parts of the British Empire, was chosen in 1925 joint foreign mission secretary of the United Free Church. He was also after 1929 chaplain to the King in Scotland, one of the few ministers outside the Church of Scotland to receive this honor.

Fraser, William Alexander, died Nov. 10, 1933.

Frontin, André Paulo Gustavo de, Brazilian engineer and statesman, died Feb. 15, 1933, in Rio de Janeiro, where he was born Sept. 17, 1860. He was graduated from the Polytechnicum of Rio de Janeiro with the C.E. degree in 1876 and the M.E. degree one year later. After

serving as chief resident engineer of the Franca Reservoir, borough of Santa Theresa, Rio de Janeiro, he became chief engineer of the city's water works, gaining special recognition in 1899 when he succeeded in spite of a serious drought in maintaining the city's water supply. As director of the Central Railroad of Brazil, a position to which he was twice appointed. Dr. de Frontin made many improvements in the line, such as the provision of double-track facilities for mountain tunnels. In 1896 he served as a member of the Rio de Janeiro Sanitation Commission, and in 1904 was chief of the commission which built the Avenida Rio Branco, the city's principal business thoroughfare. He represented the Federal District in the Senate in 1917, 1918, and 1920 and sat in the Chamber of Deputies in 1919. He was a papal count.

Fry, Alfred Brooks, died Dec. 4, 1933.

Fry, Franklin Foster, American clergyman, died in New York City, Dec. 13, 1933. Born at Carlisle, Pa., Nov. 1, 1864, he was graduated from Muhlenberg College in 1885 and from the Philadelphia Theological Seminary three years later. Following his ordination to the Lutheran ministry, he was made pastor of Grace Church at Bethlehem, Pa., in 1890. In 1901 he was transferred to the Church of the Reformation in Rochester, N. Y., where he remained until 1927. He then became executive secretary of the Board of American Missions of the United Lutheran Church in America, in whose organization he had played an important part. He served also as president of the Lutheran Synod of New York, and had held the same office in the Rochester Federation of Churches. In 1923 he was American delegate to the first world convention of Lutherans held at Eisenach, Germany.

Gallatin, Francis Dawson, American lawyer, died Dec. 23, 1933, in New York City where he was born Sept. 2, 1870. On his graduation from Columbia University in 1891 he spent several years in travel in Europe and South America, serving also during 1901-03 as attaché at the American embassy in Constantinople (later Istanbul). On his return to the United States he attended the law schools of Columbia and New York Universities, and after his admittance to the New York bar in 1909 became a member of the firm of Fay, Rubin and Gallatin. Previous to his service as commissioner of parks for the borough of Manhattan during 1919-27, he was for a short time a city magistrate. He held also the office of president of the park board of New York City. On his resignation in 1927 Mr. Gallatin resumed his law practice and proceeded to carry out plans for the construction of a \$1,000,000 building to house the Museum of the City of New York. This museum, which he had suggested and had helped to found in 1923, was the first of its kind in the United States.

Galloway, George, British theologian, died at Exmouth, England, Mar. 1, 1933. Born Nov. 11, 1861, he was educated at Madras College and the Universities of St. Andrews, Edinburgh, Göttingen, and Berlin. Licensed by the presbytery of Cupar in 1888, he was appointed assistant at St. Columba's Church, London, the following year and in 1891 became minister of Kelton parish, serving until 1915. He was then called to the University of St. Andrews where he acted as principal and primarius professor of theology at St. Mary's College, and as dean of the faculty of divinity. He was also philosophical examiner at St. Andrews during 1897-99 and again during 1910-11 and examiner for Part II of the Cambridge Theological Tripos in 1925 and 1926. The Baird lectures which he delivered during 1916-17 were later published as *The Idea of Immortality: Its Development and Value* (1919). His other works include: *Studies in the Philosophy of Religion* (1904); *Principles of Religious Development* (1909); *The Philosophy of Religion* (1914, the publication of which in the *International Theological Library* series made his reputation); *Religion and Modern Thought* (1922); *Faith and Reason in Religion* (1927); and *Religion and the Transcendent* (1930).

Galeworthy, John, died Jan. 31, 1933.

Gardner, Frederick Dozier, American administrator, died in St. Louis, Mo., Dec. 18, 1933. Born at Hickman, Ky., Nov. 6, 1869, he received a public school education. Upon his removal to St. Louis at the age of 17 he entered the employ of the St. Louis Coffin Co., becoming in 1899 sole owner of that concern which was later rated as one of the largest of its kind in the world. In 1898 he established the Memphis Coffin Co. and at the time of his death controlled four such organizations. In 1913 he entered politics serving as a member of the Board of Freeholders of St. Louis until 1915, and assisting in the drafting of the charter of that city. In November, 1916, he was elected Democratic Governor of Missouri for the term ending Dec. 31, 1920. His administration was noteworthy in that the State debt was cleared and a surplus of more than \$3,000,000 was accumulated in the treasury. There were also effected improvements in the State's penal and charitable institutions and its educational system and the construction of many miles of highway.

Geibel, Adam, American composer and organist, died at Germantown, Pa., Aug. 8, 1933. Born near Frankfort-on-the-Main, Germany, Sept. 15, 1855, he became blind at the age of nine days through a physician's mistake. Brought to the United States by his parents in 1862, he was graduated from the Pennsylvania Institution for the Instruction of the Blind in 1874. He studied harmony, counterpoint, orchestration, and composition under Dr. David D. Wood and received the Mus.D. degree from Temple University in 1911. After 1885 he was organist and Bible class teacher at the John B. Stetson Mission in Philadelphia. In 1897 he organized the music publishing firm of Geibel and Lehman, and in 1906 became president of the Adam Geibel Music Co. He composed the cantatas *The Nativity* (1904); *The Incarnation* (1907); *Light Out of Darkness* (1910); *Immanuel* (1910); *The Lord of Glory* (1911); *The Light of Life* (1914); *Resurrexit* (1917); *Heavenly Story* (1917); *Light and Glory* (1923); and arranged *Geibel's Collection of Part Songs* (for men's voices, 1906) and *Geibel's Collection of Part Songs* (for women's voices, 1906). He wrote also for the Sesquicentennial Exposition held in Philadelphia in 1926 *Sesquicentennial Ode* (for orchestra, organ, and chorus), and the Sunday-school songs, "Stand Up, Stand Up, for Jesus" and "Let the Gospel Light Shine Out."

Gémier, Firmin, died Nov. 26, 1933.

George, Stefan, died Dec. 4, 1933.

German, William Manley, died Mar. 31, 1933.

Gilbert, Clinton Wallace, American journalist, died in Washington, D. C., May 17, 1933. He was born at Hiltzville, L. I., N. Y., July 25, 1871, and was graduated from the University of Rochester in 1891. In this same year he began his newspaper career as a reporter for the *New York Press*, later being associated with other New York newspapers. He was associate editor of the *New York Tribune* from 1913 to 1918, when he became Washington correspondent of the *Philadelphia Evening Public Ledger* and covered the Versailles Peace Conference for this paper. He was a weekly contributor to *Collier's*, first under the title "The Gentleman at the Keyhole," and later under his own name. Besides numerous magazine articles, he wrote *The Mirrors of Washington* (in part, 1921, 1925); *Behind the Mirrors* (1922); *You Take Your Choice* (1924). The first two books were published anonymously.

Gilmore, George William, died Aug. 22, 1933.

Gilson, Roy Rolfe, American author and clergyman, died at Salisbury, Md., Aug. 2, 1933. Born at Clinton, Iowa, Aug. 12, 1875, he was graduated from the Benton Harbor (Mich.) College in 1895. He served for 15 years in various capacities on the staffs of the *Grand Rapids Herald*, the *Detroit Tribune and News*, and the *New York Commercial Advertiser*. During this period he also wrote several novels of an idyllic nature, including *When Love Is Young* (1901); *In the Morning Glow* (1902); *The Flower of Youth* (1904); *Miss Primrose* (1906); *Katrina* (1906); *The Wistful Years* (1909); *Ember Light* (1911); and *The Legend of Jerry Ludd* (1913). Mr. Gilson then decided to enter the ministry, being ordained a deacon in the Protestant Episcopal Church in 1913 and a priest the following year. He served as rector of several parishes of New Hampshire and Maine, and at the time of his death was rector of St. Peter's Church, Salisbury, Md.

Girdner, John Harvey, American surgeon, died at Islip, L. I., N. Y., Oct. 27, 1933. Born at Cedar Creek, Greene Co., Tenn., Mar. 8, 1856, he was graduated from Tusculum College, Tenn., in 1876, receiving the M.D. degree from the medical college of New York University three years later. During his early practice he was associated with Dr. Frank Hamilton, the distinguished surgeon, and with him attended President Garfield during the latter's 80-day struggle for life after he was shot by Charles J. Guiteau on July 2, 1881. He later became lecturer on surgery at the New York Post-Graduate Medical School and Hospital, and on anatomy at New York University. Dr. Girdner was said to be the first surgeon to succeed in grafting skin from a dead body onto a living one. He invented also the telephonic bullet probe, used widely before the discovery of the X-ray, and the phymosis forceps. Besides being a contributor to medical journals and various periodicals he wrote *NewYorkitis* (1909).

Gleason, Kate, American mechanical engineer, died Jan. 9, 1933, in Rochester, N. Y., where she was born Nov. 25, 1865. After attending the Sibley College of Mechanical Engineering at Cornell University she became associated with her father in the management of the Gleason Works, Inc., manufacturers of machine tools, serving for 25 years (1890-1915) as its secretary and treasurer. The firm owed its expansion during this period largely to the demand for automobile gears, and in recognition of her achievement as a gear designer Miss Gleason was elected in 1914 the first woman member of the American Society of Mechanical Engineers. In 1914 she was appointed receiver in bankruptcy for a Rochester machine shop, whose business she successfully reestablished, and during 1917-19 was president of the First

National Bank of East Rochester. She was the first woman in the United States to hold either of these offices.

Goff, Guy Despard, died Jan. 7, 1933.

Gómez, Don Juan Gualberto. Cuban journalist and revolutionist, died at Managua, near Havana, Mar. 5, 1933. He was born at Santa Ana, Province of Matanzas, July 12, 1854, and received his education in Paris, France. On his return to Cuba he edited the Havana newspaper *La Discusión*. Later going to Madrid, Spain, he spent several years there as editor of *El Pueblo*, *El Progreso*, and *La Tribuna*. The campaign for Cuban independence which he conducted with José Julián Martí in 1895 ended with his imprisonment in Morocco. Upon the formation of the Cuban republic, after the Spanish-American War, Gómez rose to political prominence. He bitterly opposed, however, any interference upon the part of the United States into Cuban affairs and, as a delegate to the Constitutional Assembly, fought against the adoption of the Platt Amendment. Elected a senator in 1912 he served until 1925. He was a supporter of President Gerardo Machado on the latter's election in 1924, but later withdrew from the Liberal party and joined the Nationalistas, who formed part of the opposition to Machado's despotic régime.

Gorham, Frederic Poole. American biologist and educator, died at Gloucester, R. I., June 4, 1933. Born in Providence, R. I., Apr. 29, 1871, he was graduated from Brown University in 1893, continuing with special studies in bacteriology at the Harvard Medical School. After serving as instructor in biology at Brown he became assistant professor in 1899 and associate professor in 1901. In 1913 he was made professor of bacteriology. He was also bacteriologist for the Providence Health Department after 1899, and bacteriologist and biologist for the Rhode Island Shellfish Commission after 1913. He successively held the offices of secretary, vice-president, and president (1911) of the Society of American Bacteriologists and published *Laboratory Course in Bacteriology* (1897).

Gorson, Aaron Henry. American painter, died in New York City, Oct. 11, 1933. Born in Kovno, Latvia, Russia, July 2, 1872, he came to the United States in 1889, attending the Pennsylvania Academy of Fine Arts in Philadelphia and studying later in Paris at the Académie Julian. On his return to the United States he opened a studio in Philadelphia and after making a study of the Pittsburgh steel industry decided to depict its operations. His work was exhibited at the Carnegie Institute, Corcoran Art Gallery, Pennsylvania Academy of Fine Arts, Art Institute of Chicago, and St. Louis Art Museum and was included in the permanent exhibitions of the Newark Museum and the Worcester Art Museum. Perhaps his most noted painting was that of "Tapping Steel at the Ford Plant," which was exhibited at the National Academy of Design and the Grand Central Art Galleries in New York City.

Gould, Edwin. American capitalist, died near Oyster Bay, N. Y., July 12, 1933. Born in New York City, Feb. 25, 1866, he studied for a time at Columbia College and then having displayed his financial acumen through his Wall Street operations, became associated with his father, Jay Gould. He served as secretary of the St. Louis, Arkansas and Texas Railroad from 1888 until it was reorganized as the St. Louis Southwestern in 1891, and afterward as vice-president, president and chairman of the board. In 1926 when he sold control of this railroad to the Rock Island System, he was senior vice-president. Mr. Gould organized also the Continental Match Co. in 1894 (consolidated with the Diamond Match Co. in 1899) and was president of the Bowling Green Trust Co. until its merger with the Equitable Trust Co. In addition he served as vice-president of the American Writing Paper Co., president of the Five Boroughs Realty Co., and director in many railroad and other corporations, including the Pine Bluff Arkansas River Railroad and the Paragould Southeastern Railroad. He established the Edwin Gould Foundation for Children and was prominent in the New York National Guard, serving as major of ordnance with the 1st Brigade during the World War.

Graves, William Phillips. American surgeon, died in Boston, Mass., Jan. 25, 1933. He was born at Andover, Mass., Jan. 29, 1870, and was graduated from Yale in 1891, receiving his medical degree from Harvard in 1899. In 1900 he began his practice in Boston, and served after 1907 as surgeon-in-chief of the Free Hospital for Women. From 1911 to 1933 he was professor of gynecology at the Harvard Medical School. He was president of the American Gynecological Society in 1931 and an honorary fellow of the British College of Obstetricians and Gynecologists, the first American to be thus honored. Besides many contributions to medical journals, his works include *Graves' Gynecology* (5 eds., 1916) and *Female Sex-Hormonology* (1931).

Greenleaf, James Leal. American landscape architect, died at Stamford, Conn., Apr. 15, 1933. He was born at Kortright, Delaware Co., N. Y., July 30, 1857, and was graduated from the Columbia University school of mines in 1880. Chosen special agent for the tenth United

States Census, Mr. Greenleaf made a survey during 1880-82 of water power in the Northwest. He then became an engineering instructor at Columbia, and later adjunct professor of civil engineering, serving until 1894. After engaging in private engineering practice he turned in the late '90s to landscape architecture, beautifying many large estates in the suburban area of New York City. In 1918 President Wilson appointed him a member of the National Commission of Fine Arts, and in this capacity he not only made suggestions concerning the landscape possibilities of the national parks but after the World War supervised the landscaping of the American cemeteries in France. In 1927 he retired from active practice. Mr. Greenleaf was a fellow of the American Society of Landscape Architects (president, 1924-27) and an associate member of the National Academy of Design.

Gregg, Hilda Caroline (Pen-name Sydney C. Grier). British novelist, died at Eastbourne, England, June 22, 1933. Born in Gloucestershire, England, June 20, 1868, she attended the University of London and for some years was engaged in teaching. Her tales of romantic adventure in various parts of the world include *In Furthest Ind* (1894); *His Excellency's English Governess* (1896); *An Uncrowned King* (1896); *Peace with Honour* (1897); *A Crowned Queen* (1898); *Like Another Helen* (1899); *Kings of the East* (1900); *The Warden of the Marches* (1901); *The Prince of the Captivity* (1902); *The Advanced-Guard* (1903); *The Great Proconcul* (1904); and *For Triumph or Truth* (1904). The *Letters of Warren Hastings to his Wife* which she edited in 1905 were received with interest. She later published *The Power of the Keys* (1907); *The Heritage* (1908); *The Path to Honour* (1909); *The Prize* (1910); *The Keepers of the Gate* (1911); *Writ in Water* (1913); *The Rearguard* (1915); *The Kingdom of Waste Lands* (1917); *The Princess's Tragedy* (1918); *Berenger of Bander* (1919); *The Strong Hand* (1920); *The Flag of the Adventurer* (1921); *Out of Prison* (1922); and *Two Strong Men* (1923).

Gregory, Thomas T(ingey) C(raven). American lawyer, died suddenly near Napa, Calif., June 5, 1933. Born at Suisun, Calif., Oct. 4, 1878, he was graduated from Stanford University in 1899. After studying law at that institution he became district attorney of Solano Co., Calif., in 1903, continuing in that capacity until 1907 when he began private practice in San Francisco. During the World War he served as a captain in the 144th Field Artillery with the American Expeditionary Forces in France. He was later associated with Herbert Hoover in the American Relief Administration, acting as director of the Administration's central European division, with headquarters in Vienna, as assistant to the director of relief of the Supreme Economic Council, and as American member of the Interallied Commission for the Austro-Hungarian and Yugoslavian empires. In addition to feeding the hungry millions of central and southeastern Europe, Mr. Gregory reinstated economic interchanges by establishing his own system of telephone and telegraph communications and by helping to form an interallied railway mission which later proved effective in stemming in Hungary the growing bolshevist and royalist forces, as represented respectively by Béla Kun and the Archduke Joseph. On his return to the United States in 1920 he became interested in commercial aviation, helping to found the Western Air Express and serving as its chief attorney until it became affiliated with the General Motors Co. He held directorates also in the General Aviation Co., Midcontinent Air Express and Varney Air Lines, and was president of the Bay Transport Co. and vice-president of the Pacific Dock and Terminal Co.

Gregory, Thomas Watt, died Feb. 25, 1933.

Grey of Fallodon, Edward Grey, 1st Viscount, died Sept. 7, 1933.

Grier, Sydney C. See Gregg, Hilda Caroline.

Griffin, Rear Admiral Robert Stanislaus, U.S.N., Ret., died Feb. 21, 1933.

Guerlac, Othon Goepp. Franco-American educator, died at Ithaca, N. Y., Jan. 16, 1933. He was born in St. Louis, Mo., Oct. 4, 1870, and was educated in France, receiving the degrees of M.A., 1893, and LL.B., 1897, from the University of Paris. For a time he served in the French Army, returning to the United States about 1904 to become assistant professor of French at Cornell University. At the outbreak of the World War Professor Guerlac was summoned to France, being mobilized in the 89th Territorial Regiment. He was later transferred to the Foreign Office as an attaché in the press bureau and as a member of the French High Commission visited the United States during 1917-19. On his discharge in the latter year he was made a Chevalier of the Legion of Honor and resumed his connection with Cornell University as professor of Romance languages and literature. Professor Guerlac contributed to American and French periodicals, and for 10 years was a correspondent of *Le Temps*, Paris. He edited *Selections from Standard French Authors* (1905), Anatole France's *Le Livre de Mon Ami* (1905), and E. Pailleron's *L'Étincelle* (1906)

and compiled *Les Citations Françaises* (1931). In 1903 he translated into French *Up from Slavery* (*L'Autobiographie d'un Nègre*) by Booker T. Washington.

Guinan, Mary Louise Cecelia (Texas). American night club hostess, died in Vancouver, B. C., Canada, Nov. 5, 1933. Born on a ranch near Waco, Tex., about 1882, she began her career at the age of 14 as a broncho rider in a circus. She later joined a vaudeville troupe and played minor rôles with various stock companies. During the early days of the movies she appeared as heroine in Western "thrillers" and finally drifted to New York City where, after spending several years in the choruses of various musical comedies, she established in 1923 that novel form of entertainment, the night club. As hostess, or mistress of ceremonies, she made use of a vernacular all her own, her so-called "wise-cracks" spreading from coast to coast. Among the revues which she produced were *Padlocks of 1927* and *Too Hot for Paris*, the latter being staged after the French Labor Ministry's refusal in 1931 to permit her to proceed to Paris and open a night club there. She was starred in 1928 in the motion picture, *Queen of the Night Clubs*.

Gulick, Louis Mason. American marine officer, died in Peiping, China, Dec. 23, 1933. Born in Florence, Italy, May 27, 1879, he was brought to the United States in childhood. After active service in the Spanish-American War he enlisted with the marines in 1899, rising to the rank of colonel in 1920. After serving as commanding officer of the American Legation Marine Guard in Peking in 1908, he participated in the capture of Vera Cruz in 1914 and during the World War was attached to the 2d Marine Brigade which participated so effectively in the Meuse-Argonne offensive of 1918. After the War Colonel Gulick was again sent to Peking as commandant of the marine detachment at the American Legation and on his return to the United States attended the Naval and Army War Colleges, graduating from the former in 1923 and the latter in 1925. In 1927 he was ordered to Nicaragua where, as commander of the 5th Regiment of Marines, he succeeded in putting down the revolt led by Gen. Augustino C. Sandino who had refused to accept the American plan of holding an impartial election. In 1928 he took command of the 1st Marine Brigade stationed at Port-au-Prince, Haiti from 1929 to 1931 he commanded the Marine Barracks at the Navy Yard in Philadelphia. At his retirement in May, 1933, he was stationed for a third time at the American Legation in Peking (Peiping). He received the United States Navy Cross and the Nicaraguan Medal of Merit.

Hadik, János, Count Hungarian statesman, died in Budapest, Dec. 10, 1933, aged 70. A landed proprietor most of his life, with the exception of the years 1906-09 when he was Under-Secretary of State in the Ministry of the Interior, he did not enter upon a government career until 1917 when he was appointed Minister of Food Supplies in the cabinet of Count Tisza, Premier of the Hungarian ministry. For a short period in 1918 he served as Prime Minister. Count Hadik was president of the National Agricultural Society and a delegate to the International Economic Conference of 1927. He was also a member of the Consultative Economic Committee of the League of Nations.

Haldeman, Isaac Massey. American clergyman, died in New York City, Sept. 27, 1933. He was born at Concordville, Pa., Feb. 13, 1845, attended the West Chester (Pa.) Academy and served with the emergency corps of the 29th Pennsylvania Regiment during the Civil War, participating in the Battle of Gettysburg and other engagements. Ordained to the Baptist ministry in 1870, he was pastor of the Brandywine Baptist Church at Chadd's Ford, Pa., from 1871 to 1875, being transferred in the latter year to the Delaware Avenue Baptist Church in Wilmington, Del., where he remained until 1884. He was then called to the First Baptist Church in New York City, holding that pastorate until his death. Dr. Haldeman gained a strong following among those who accepted a literal interpretation of the Scriptures, attacking with fervor the Modernist wing of his denomination and its spirit of liberalism. He wrote *Christian Science in the Light of Holy Scriptures* (9th edit. 1909); *The Signs of the Times* (1911); *How to Study the Bible* (9th edit., 1912); *Christ, Christianity and the Bible* (1912); and *Ten Sermons on the Second Coming* (1916).

Hale, Louise Closser, died July 26, 1933.

Hall, Fred, British Labor leader, died at Barnsley, Yorkshire, England, Apr. 18, 1933. Born in 1855, he started work at the age of nine in a Staffordshire coal mine, later removing to Yorkshire. In 1898 he was appointed treasurer of the Yorkshire Miners' Association, and from 1904 to 1919 held the office of agent for that organization. After 1906 he represented the Normanton division of Yorkshire in Parliament and in 1919 became Deputy Chief Whip of the Laborites. He served also as Lord Commissioner of the Treasury in the first Labor government of 1924.

Hallett, Sir Frederic. British medical administrator, died at Abingdon, Berkshire, England, Feb. 6, 1933. Born May 25, 1860, he was educated at Westminster and on the continent. In 1877 he entered the Royal Col-

lege of Surgeons as junior clerk and in 1882 was made assistant secretary. In 1886 he organized the examinations of the Conjoint Board of the Royal Colleges of Physicians and Surgeons and was appointed the board's first secretary, holding that position for 41 years. He assisted also in 1902 in founding the Imperial Cancer Research Fund, of which he was secretary until his retirement in 1932. Sir Frederic visited the United States in 1912 at the invitation of the Carnegie Foundation for the Advancement of Teaching to explain the methods of the Conjoint Board in conducting practical and clinical examinations in medicine and surgery. During the World War he was honorary secretary of the Statutory Committee of Reference, responsible for deciding which staff members of the London hospitals could be spared for service at the front. He was knighted in 1928 and was also made an officer of the Order of the British Empire.

Hand, John Pierce. Bermuda publicist, died in Hamilton, Bermuda, Jan. 13, 1933. He was born in Portsmouth, N. H., in 1883, but spent most of his life in British possessions, becoming a British subject in 1909. After attending St. Patrick's Hall in St. John's, Newfoundland, he entered the employ of a Bermuda commission firm, eventually settling in Hamilton where he became proprietor of three large hotels. As a member of the Bermuda Trade Development Board after 1922, he was especially active in stimulating Bermuda's tourist traffic which, through the cooperation of the Furness and other steamship lines, rose to more than 70,000 a year. He served also as president of the Bermuda Chamber of Commerce (1917-21), as chairman of the government Board of Trade (1919-22), and as member of the Board of Agriculture (1925-26) and of the Board of Health (1928-29). Appointed to his Majesty's Executive Council of Bermuda in 1921, Mr. Hand was a delegate in 1925 to the conference to develop trade among Canada, Bermuda, and the British West Indies, and in 1932 to the Empire Parliamentary Association, a preliminary to the Ottawa Conference. At the time of his death he was a member of the Colonial Parliament. He was made a member of the Order of the British Empire in 1918 and a Companion of the Order of St. Michael and St. George in 1927.

Hansbrough, Henry Clay, died Nov. 16, 1933.

Hardinge, Sir Arthur Henry, died Dec. 29, 1933.

Harker, Lizzie Watson. British novelist, died at Cirencester, England, Apr. 14, 1933. Born in Gloucester, she was educated at Cheltenham Ladies' College and started her career by writing short stories for *Outlook* and other magazines, and published her first novel, *A Romance of the Nursery*, in 1902. Considered one of the best modern writers on child life and romantic middle-age, she scored with *Miss Everance* and *Mr. Wycherly* (1908); *Allegra* (1919); *The Bridge Across* (1921); *The Really Romantic Age* (1922); *Concerning Tod and Peter* (1923); *The Broken Bow* (1924); *Hilda Ware* (1926); and *Black Jack House* (1929). With F. R. Pryor she wrote the plays *Her Proper Pride* and *Maragold*. The former was performed by John Drinkwater's Repertory Company in Birmingham in 1917, while the latter was at the Kingsway Theatre, London, during 1927-28. She was the widow of Prof. James Allen Harker of the Royal Agricultural College, Cirencester.

Harlan, James Elliott. American educator, died at Mt. Vernon, Ia., Dec. 13, 1933. Born in Muskingum Co., Ohio, June 25, 1845, he served as a private in Co. D of the 44th Iowa Infantry during the last year of the Civil War. On being graduated from Cornell College in 1869 he was appointed superintendent of public schools in Cedar Rapids, Ia., but in 1873 returned to Cornell as alumni professor of mathematics and astronomy, holding that chair until 1909. He served also as vice-president from 1881 to 1908, as chairman of the executive committee after 1883, and as financial secretary from 1893 to 1914. Elected president of the institution in 1908, Dr. Harlan succeeded during his six-year administration in increasing the endowment to more than \$900,000, while the student body at the time of his resignation numbered 750.

Harris, Walter B. British journalist and adventurer, died at Malta, Apr. 4, 1933. Born Aug. 26, 1866, he was educated at Harrow and Cambridge. During the early '80s he aroused admiration for his successful penetration, often in disguise, of the fanatical areas of Morocco, then closed to foreigners. In 1887, when he accompanied the mission of Sir William Kirby-Green to Marrakesh, he made his first contribution to the *London Times*, acting thereafter as its Morocco correspondent. Mr. Harris received several Moroccan decorations for his services to that country, including the promotion of British interest in Moorish art and architecture. He was also a member of the Académie des Sciences Coloniales and an officer of the Legion of Honor. He published: *The Land of an African Sultan, Travels in Morocco* (1888-89); *A Journey Through the Yemen and Some General Remarks about That Country* (1893); *Taflet, the Narrative of a Journey to the Oases of the Northwest Sahara* (1895); *Danovitch, and Other Stories* (1895); *From Batum to Bagdad* (1896); *Morocco*

That Was (1921); *France, Spain, and the Rif* (1927); and *East for Pleasure* (1929).

Harrold, Orville. American tenor, died at Norwalk, Conn., Oct. 23, 1933. He was born in Delaware Co., Ind., about 1878 and received a public school education. While appearing in vaudeville and musical comedy in New York City he was discovered by Oscar Hammerstein who urged him to prepare for opera. He then studied under Oscar Saenger and made his debut in 1907 at the Manhattan Opera House as Canio in *Pagliacci*. He appeared also during 1908-10 in various rôles at the Philadelphia Opera House, and when Hammerstein was obliged to abandon both the Manhattan and Philadelphia projects went to England where he was leading tenor at the impresario's London Opera House. He appeared during 1913-15 with the Century Opera Co., of which Milton Aborn (q.v.) was director. In 1919 Mr. Harrold was engaged by Giulio Gatti-Casazza, impresario of the Metropolitan Opera House, who considered his voice "one of the finest tenor voices America had ever produced." His most successful rôles were Wagnerian. After his retirement in 1924 he devoted himself to concerts.

Hart, George Overbury ("Pop"). American painter, died in New York City, Sept. 9, 1933. He was born at Cairo, Ill., May 10, 1868. Although he attended the Art Institute of Chicago and the Julien Academy in Paris for a few months, he was mainly self-taught in art. Choosing water color as his medium, he traveled extensively into remote parts of the world, such as the South Sea Islands, Egypt, the Caribbean, and Mexico for subjects for his sketches. Most of his life, however, was devoted to the more practical art of sign painting, and it was not until he had passed 50 that he gained public recognition. Almost over night there sprang up a "Pop" Hart cult that delighted in his remarkably suggestive drawing, drama of movement, and eye for significant detail. Outstanding among his water colors were "Court-yard, New Orleans" in the Metropolitan Museum of Art, New York City, "Old French Market, New Orleans" in the Brooklyn Museum; and "Carnival Scene, West Indies" in the Harrison Gallery, Los Angeles. About 1922 Mr. Hart turned to the medium of the lithograph, receiving a bronze medal for "Springtime, New Orleans" which was exhibited at the Sesquicentennial Exposition in Philadelphia in 1926. He was also awarded a prize for his water color landscape "Santo Domingo," which was exhibited at the Brooklyn Museum during 1923-24. In addition to the museums mentioned, his water colors, etchings, and lithographs are on permanent exhibition at the Smithsonian Institution in Washington, Art Institute of Chicago, Cleveland Museum, Cincinnati Museum, Newark Museum, Rochester Memorial Gallery, New York Public Library, National Museum of Mexico, and the South Kensington and British Museums in London. He was president of the Brooklyn Society of Etchers during 1925-26.

Haskell, Charles Nathaniel. American administrator, died in Oklahoma City, Okla., July 5, 1933. He was born in Putnam Co., Ohio, Mar. 13, 1860. After studying for the bar he was admitted in 1880 and began his practice at Ottawa, Ohio. In 1888 he became engaged in railway construction, this work carrying him in 1901 to Muskogee, Indian Territory. There he was active in interesting the Indians in the organization of single Statehood for their Territory and as a member of the Constitutional Convention was largely responsible for the terms of Oklahoma's constitution. Following the State's admission to the Union he was elected its first governor, on the Democratic ticket, for the term 1907-11. He was also instrumental, despite the protest of the citizens, in having the capital moved from Guthrie to Oklahoma City. He later organized and was chairman of the board of the Middle States Oil Corp. After the loss of his fortune in Wall Street Mr. Haskell returned in 1929 to Muskogee where he assumed the presidency of the Municipal Gas Co.

Haskell, Eugene Elwin. American civil engineer, died at Hamburg, N. Y., Jan. 28, 1933. He was born at Holland, Erie Co., N. Y., May 10, 1855, and was graduated in civil engineering from Cornell University in 1879. Appointed a member of the Mississippi River Commission for the St. Louis district in 1880, he was transferred in 1885 to the United States Coast and Geodetic Survey in Washington. There he distinguished himself through his invention of the Haskell current meter, used in making soundings off the Atlantic coast. From 1893 to 1906 he was stationed in Detroit, directing for the United States Lake Survey a survey of the Great Lakes basin. He then became dean of the college of civil engineering at Cornell University, retiring in 1921 as professor emeritus of hydraulic engineering. Dean Haskell also served during 1906-15 as a member of the American Section of the International Waterways Commission and during 1924-25 of the engineering board of review of the Sanitary District of Chicago.

Hatch, Edward, Jr. American merchant and sanitation expert, died at Willboro, N. Y., Jan. 24, 1933. He was born at Camden, N. J., May 28, 1858, and received his education at the Adelphi Academy and the Columbia

University school of mines. From 1889 to 1911 he was associated with the firm of Lord and Taylor, New York City, of which his father was president. For 20 years (1906-26) Mr. Hatch, as chairman of the pollution and sewerage committee of the New York Merchants' Association, devoted his efforts to insuring the purity of the city's water supply and an adequate disposal of its waste. From 1903 to 1910 he also conducted a successful campaign against the pollution of Lake Champlain by Vermont pulp mills, and subsequent to 1910 he sponsored the fight of the American Civic Association for the extermination of the house fly. In 1922 he presented to the New York Zoological Society the Four Brothers Islands in Lake Champlain, noted as a breeding ground for sea gulls and resting place for migratory birds. Mr. Hatch wrote many pamphlets on subjects dealing with sanitation.

Haugen, Gilbert N. American congressman, died at Northwood, Ia., July 18, 1933. Born in Rock Co., Wis., Apr. 21, 1859, he received a common school education and then removed to Northwood, where he became engaged in real estate promotion and banking. He served in the 25th and 26th General Assemblies of the Iowa Legislature. In 1888 he was elected Republican representative from the Fourth Iowa District to the 56th Congress and was reelected to each succeeding Congress. A staunch champion of farm relief, he acted during several terms as chairman of the House's committee on agriculture and was the author of the Haugen Packer Control and Stockyards Act.

Hawkins, Sir Anthony Hope (Pen name, Anthony Hope), died July 8, 1933.

Hay, Marion E. American administrator, died in Spokane, Wash., Nov. 21, 1933. Born in Adams Co., Wis., Dec. 9, 1865, he attended the district schools and the Bayless Commercial Business College, Dubuque, Ia. In 1888 he removed to Washington Territory, being engaged in the mercantile business with Charles Grutt at Davenport for two years. Previous to his removal to Spokane in 1908, he resided at Wilbur where he served as mayor for two terms. In Spokane the real estate firm, of which he was president, became incorporated as the M. E. and E. T. Hay, Big Bend Land Co. He was chairman of the Republican County Central Committee of Lincoln Co., Wash., from 1898 to 1902. In 1908 Mr. Hay was elected lieutenant-governor of Washington, and one year later on the death of Samuel C. Cosgrove succeeded to the governorship for the term ending 1913. His administration was marked by the adoption in 1910 of a constitutional amendment giving suffrage to women. There was also carried at the election of 1912 a measure providing for State-wide prohibition.

Hayden, Warren Sherman. American banker, died in Cleveland, Ohio, Mar. 14, 1933. He was born at Danbury, Conn., Oct. 20, 1870. On his graduation from Hiram College in 1892, he became a bond salesman with Lamprecht Bros. and Co. of Cleveland and was later appointed manager of the bond department. In 1903 he formed with Otto Miller the investment firm of Hayden, Miller and Co., which was influential throughout the mid-West. Mr. Hayden was president of the Cleveland Union Terminal Co. and a director in many railroads and corporations, among them being the New York Central Railroad and the New York and Harlem Railroad. He was also president of the Investment Bankers Association of America during 1917-18. In recognition of the financial advice and support which he gave to the Cleveland Community Fund, the Cleveland Chamber of Commerce conferred on him in 1932 its medal for conspicuous public service.

Heppenheimer, William Christian. American banker, died Sept. 16, 1933, in New York City where he was born Mar. 27, 1860. He received his L.L.B. degree from Columbia University in 1880 and upon his admittance to the New York bar the following year began his practice in New York City as a member of the firm of Russ and Heppenheimer. On his admittance to the New Jersey bar in 1883, he removed his practice to Jersey City. In 1895 he began his banking career by organizing the People's Safe Deposit and Trust Co., of which he was president. It was followed by the Trust Company of New Jersey in 1900 and the Bergen and Lafayette Trust Co. in 1902. In 1913 all three, together with the Carteret Trust, were consolidated under the single title, The Trust Company of New Jersey. He retained the presidency until 1929 when he became chairman of the board of directors. Mr. Heppenheimer's political career dated from 1887 when he was elected to the New Jersey General Assembly, serving as speaker in 1890. The following year he became comptroller of the treasury of New Jersey for a three-year term. In 1897 he was appointed president of the board of finance of Jersey City and served as city treasurer from 1898 to 1901. After 1928 he was a member of the Port of New York Authority which was concerned during the next five years with the construction of the Kill van Kull and other bridges linking New York and New Jersey. Mr. Heppenheimer was prominent in the New Jersey National Guard, attaining the rank of brigadier-general, as inspector-general dur-

ing 1889-95, and serving during the World War as chairman of the district board of New Jersey. He was also a past president and director of the New Jersey State Chamber of Commerce, chairman of the board of the Jersey City Chamber of Commerce, and past president of the New Jersey Bankers Association.

Herr, Herbert Thacker, died Dec. 19, 1933.

Hershey, Amos Shurtle. American political scientist, died at Madison, Ind., June 12, 1893. Born at Hershey, Pa., July 11, 1867, he was graduated from Harvard in 1892 and received the Ph.D. degree from the University of Heidelberg in 1894. On the faculty of Indiana University he served as assistant professor of political science during 1895-1900, as associate professor of European history and politics during 1900-05, and as professor of political science and international law after 1905. In 1914 he became head of the University's newly-created department of political science, and in 1920 was lecturer on government at Harvard University. He was also a member during 1918-19 of the American Commission to Negotiate Peace in Paris. Dr. Hershey wrote *The International Law and Diplomacy of the Russo-Japanese War* (1907); *The Essentials of International Public Law* (1912); *Modern Japan* (with Frank M. Anderson, 1919); *Handbook for the Diplomatic History of Europe, Asia, and Africa, 1870-1914* (1918); and *The Essentials of International Law and Organization* (1927).

Hess, Alfred Fabian, died Dec. 5, 1933.

Herts, Henry B. American architect, died in New York City, Mar. 27, 1933. He was born in the same city Jan. 23, 1871, and was graduated from the School of Mines, Columbia University, in 1893. Subsequently he spent seven years in Europe, studying at the École des Beaux Arts in Paris and at the Universities of Rome and Heidelberg. In 1900 he returned to New York City and organized the firm of Herts and Tallent, with which he remained until 1912. He designed several New York theatres embodying the principle of cantilever arch construction, which makes possible the building of balconies without supporting pillars. Among these are the New Amsterdam, Fulton, Shubert, Booth, and Longacre and in Brooklyn the Academy of Music. Mr. Herts was also the architect of the Polo Grounds, the baseball field owned by the New York Giants of the National League. For a time he served as an architect for the Playground Commission of New York City and aided the Fire Department in drafting part of the building code. He designed the Rice Memorial Playfield in Pelham Bay Park, and was consultant on the design of Yeshiva College. He designed the Ochs Memorial Chapel in Chattanooga, Tenn., which was completed in 1928. Shortly before his return to the United States in 1900 he exhibited his paintings in Paris, but the press of his architectural duties prevented his continuing work along this line.

Hibben, John Grier, died May 16, 1933.

Hickey, The Most Rev. William Augustine. American Roman Catholic bishop, died in Providence, R. I., Oct. 4, 1933. Born in Worcester, Mass., May 13, 1869, he was graduated from Holy Cross College in 1890, later attending the Seminary of St. Sulpice in Paris and St. John's Seminary at Brighton, Mass. Ordained to the priesthood in 1893, he served as assistant at various Roman Catholic churches in Massachusetts until 1903 when he became pastor of St. Aloysius Church at Gilbertville. In 1917 he was transferred to St. John's Church at Clinton, Mass. Consecrated coadjutor bishop of the diocese of Providence, R. I., in 1919, he was elevated two years later to the bishopric. In 1931 he declined the Archbishopric of St. Paul, Minn. As president of the Providence College Corp., Bishop Hickey inaugurated the ambitious building and endowment programme of that institution so that by 1933 it had an enrollment of more than 700 students. He was also president of La Salle Academy, St. Xavier's Academy, Rhode Island Catholic Orphan Asylum, and St. Vincent de Paul Infant Asylum.

Hillemecher, Paul Joseph Wilhelm. French composer, died at Versailles, Aug. 13, 1933. Born in Paris, Nov. 29, 1852, he studied with Bazin and was awarded the Prix de Rome for his cantata *Judith* in 1876. With his brother, Lucien, he received in 1882 the Prix de la Ville de Paris for their *Légende symphonique, Loreley*. The brothers collaborated on almost all of their compositions, signing the single name P. L. Hillemecher. Their symphonic works included *Héro et Léonore* (1894) and *La Cinquantaine* (1898). For the opera they wrote *Le Drac* (1886); *Saint Mégrin* (1886); *Le Régiment qui passe* (1886); *Aventure d'Arlequin* (1888); *Orsola* (1902); and *Othello* (1907). Among their oratorios were *La Passion* and *Sainte Geneviève* (1887). The only noteworthy work that Paul Hillemecher produced after his brother's death in 1909 was *Fra Angelico*, which was given at the Opera Comique in 1924.

Hillquit, Morris, died Oct. 7, 1933.

Hind, Arthur. American manufacturer and philatelist, died in Miami, Fla., Mar. 1, 1933. He was born in Bradford, England, Feb. 4, 1856, and came to the United States about 1898, establishing the Hind, Harrison Plush Co. He achieved distinction as a stamp collector in 1922

when he paid almost \$35,000 for the only known cent British Guiana stamp, 1856 issue. It was said to be the highest price ever paid for a postage stamp at public sale. His entire collection was estimated to be worth more than \$1,000,000. Mr. Hind was a Fellow of the Royal Philatelic Society of London and of the Collectors' Club of New York.

Hinkler, Herbert John Louis, died Jan. 8, 1933.

Hodgkin, Henry Theodore. British medical missionary and author, died in Dublin, Irish Free State, Mar. 26, 1933. Born at Darlington, England, Apr. 21, 1877, he attended King's College, Cambridge, and received his medical training at St. Thomas's Hospital, London. In 1905 he was sent to Chengtu, West China, as a medical missionary by the Friends Foreign Mission Association and on his return to London in 1910 served for 10 years as secretary of that society. From 1922 to 1929 he was again in China as secretary of the National Christian Council, with headquarters in Shanghai. In 1930 he came to the United States, helping to found at Wallingford, Pa., the Pendle Hill Graduate School, a Quaker institution for social and religious research. At the time of his death he was director of this school. Dr. Hodgkin wrote *Helps to the Study of the Epistles to the Hebrews* (1902); *Message and Mission of Quakerism* (with N. C. Braithwaite, 1912); *The Way of the Good Physician* (1915); *Friends beyond Seas* (1916); *Lay Religion* (1919); *China in the Family of Nations* (1923); *Christian Revolution* (1923); *The Way of Jesus* (1924); *Personality and Progress* (1929); *Jesus Among Men* (1930); and *Living Issues in China* (1932).

Hollick, Charles Arthur, died Mar. 11, 1933.

Holmes, Thomas Rice Edward. British historian, died in London, Aug. 4, 1933. Born in Co. Westmeath, Ireland, May 24, 1855, he was educated at Christ Church, Oxford, and became a school-master, teaching successively at Lincoln Grammar School (1878-80), Blackheath Proprietary School (1880-85), and St. Paul's School (1886-1909). On his retirement from the latter position he received a civil-list pension and was made an honorary life-member of the Old Pauline Club. He was also honorary vice-president of the Royal Historical Society, a fellow of the British Academy, and a member of the councils of the Classical Association (1903-06) and the Roman Society (1910-14). Dr. Holmes wrote an excellent *History of the Indian Mutiny* (1883) and *Four Famous Soldiers* (1889), but was even better known for his studies of Julius Caesar—*Cæsar's Conquest of Gaul* (1899), *Ancient Britain and the Invasions of Julius Cæsar* (1907), and an English version of *Cæsar's Commentaries on the Gallic War* (1908). Parts of the works on Caesar's campaigns in Gaul and Britain were translated into German as *Cæsars Feldzüge in Gallien und Britannien*, by W. Schott and Felix Rosenberg (Leipzig, 1913). He edited also with introduction and notes, *Cæsar's Commentarii de Bello Gallico* (1914). His later works included *The Roman Republic and the Founder of the Empire* (3 vols., 1923) and *The Architect of the Roman Empire* (2 vols., 1931).

Holmes, William Henry, died Apr. 20, 1933.

Hoogewerff, Rear Admiral John Adrian, U.S.N., Ret., died Feb. 13, 1933.

Howard, Henry. Australian-American clergyman, died in London, England, June 29, 1933. Born in Melbourne, Australia, Jan. 21, 1859, he attended Wesley College there and after his ordination to the Australasian Methodist Church about 1880 held pastorates in various parts of Australia for 40 years. His longest pastorate was in Adelaide where he remained 19 years. During 1921-26 he preached at the Hampstead Wesleyan Church, London, and after 1926 was co-pastor of the Fifth Avenue Presbyterian Church, New York City. In both these pulpits Dr. Howard distinguished himself for his tolerance, vigor, and spirituality. He wrote *The Raiment of the Soul* (1907); *The Summits of the Soul* (1910); *A Prince in the Making* (1915); *The Love That Lifts* (1919); *The Church Which Is His Body* (1923); *The Peril of Power* (1925); *The Threshold* (1926); *The Beauty of Strength* (1926); *Fast Hold on Faith* (1927); *Where Wisdom Hides* (1928); *The Shepherd Psalm* (1930); and *The Defeat of Fear* (1931).

Howell, Robert Beecher, died Mar. 11, 1933.

Hoynes, William. American lawyer and educator, died at South Bend, Ind., Mar. 28, 1933. He was born near Callan, County Kilkenny, Ireland, Nov. 8, 1846, and was brought to the United States by his parents in early childhood. Enlisting with the 20th Wisconsin Volunteer Infantry in 1862, he participated in the siege and capture of Vicksburg during the Civil War. Discharged from service on account of a wound, he later reenlisted with Co. D of the 2d Wisconsin Cavalry, with which he served throughout the War. After attending Notre Dame University and receiving the LL.B. degree from the University of Michigan in 1872 he became engaged in journalism being successively editor during the next 10 years of the New Brunswick (N. J.) *Daily Times* and the Peoria (Ill.) *Daily Transcript*. He also practiced law for a short time in Chicago, and in 1883 became professor of law and dean of the law faculty at Notre Dame

University. On his retirement as dean emeritus in 1918 the law building, then under construction, was named in his honor. In 1912 he was named a Knight of the Order of St. Gregory by Pope Pius X.

Hulbert, Archer Butler, died Dec. 24, 1933.

Hunt, Leigh S. J. American iron magnate, died at Las Vegas, Nev., Oct. 5, 1933. Born near Columbia City, Ia., about 1854, he received a public school education and after serving as teacher and principal became president of the Iowa State Agricultural College. In 1885 he entered the publishing field as owner and editor of the Seattle (Wash.) *Post-Intelligencer*, becoming interested at the same time in the development of iron ore mining and real estate operations in Seattle and Everett. When the fortune which he had amassed was swept away in the panic of 1893 Mr. Hunt went to Korea where he organized the Oriental Consolidated Mines, developing these properties on a large scale through the introduction of American machinery. He later went to the Anglo-Egyptian Sudan where, after obtaining large concessions from the British and Egyptian authorities he was credited with introducing the raising of cotton. The adventures which he recounted on his return inspired Pres. Theodore Roosevelt's African hunting trip of 1909-10. At the time of his death he was engaged in various mining enterprises near Boulder Dam.

Hurley, Edward Nash, died Nov. 14, 1933.

Huxley, Leonard. British editor and author, died at Hampstead, England, May 3, 1933. Born Dec. 11, 1860, the son of Thomas Henry Huxley, he was educated at University College School, St. Andrews University, and Balliol College, Oxford. Appointed assistant master at Charterhouse, in 1884, he held that position until 1901 when he entered the editorial field as reader for Smith, Elder and Co. He later became editor of the *Cornhill Magazine*, founded by that company. Dr. Huxley's most important works were *Life of Huxley* (1900), *Thomas Henry Huxley, a Character Sketch* (1920), and *Charles Darwin* (1921), in which he told anew his father's bold championship of Darwin's doctrine of organic evolution. He published also *Life of Sir Joseph Hooker* (1918), and *Anniversaries and Other Poems* (1920), translated Hausstrath's *New Testament Times*, part II, and *Time of the Apostles* (1895), and edited *Scott's Last Expedition* (1913); *Jane Welsh Carlyle, Letters to Her Family* (1924); and *Letters to Her Sister, from Elizabeth Barrett Browning* (1929). He was the father of Julian Huxley, the biologist, and Aldous Huxley, the novelist.

Hyde, Edwin Francis. American lawyer, banker, and music patron, died Mar. 18, 1933, in New York City, where he was born June 23, 1842. On graduating from the New York Free Academy (later the College of the City of New York) in 1861, he enlisted in the Civil War with the 22d New York Regiment, serving for a short time at Harper's Ferry, Va. He then attended the Columbia University law school and, on his admission to the bar in 1863, practiced in New York City as a consultant in corporation and banking litigation. In 1886 he was elected vice-president of the Central Trust Co. Mr. Hyde acted also from 1888 to 1901 as president of the Philharmonic Society of New York, being largely responsible for the orchestra's practice in inviting distinguished foreign musicians as guest conductors and concert artists. After his retirement in 1919 he devoted himself to the American Bible Society of which he had been a manager since 1894, serving as vice-president until 1924 and as president until 1930.

Ibañez, Maximiliano, died Dec. 27, 1933.

Ingenohl, Admiral Friedrich von, died Dec. 19, 1933.

Innes, Robert Thorburn Axton, died Mar. 13, 1933.

Irgoyen, Hipolito, died July 3, 1933.

Jatho, Karl. German aviator, died Dec. 8, 1933, in Hanover, Germany, where he was born Feb. 3, 1873. After attending the Hanover Real gymnasium he became interested in automobile racing and then in 1893 turned to the new experimental science of aviation. He was said to have been the first to construct in 1899 a biplane driven by a gasoline motor, and claimed to have made the first successful mechanical air flight of 25 kilometers on Aug. 18, 1903, four months before the one made by Orville and Wilbur Wright at Kitty Hawk, N. C., on December 17 of that year. The next successful flights which he conducted were in 1906 in a machine which, by shifting the angle of inclination of the body, utilized both planes as elevators in rising from the ground. In 1913 Herr Jatho established the Hanover Aeroplane Works, which during the next few years specialized in the development of steel monoplanes. He founded also at Hanover one of the earliest flying schools in Germany. In 1933 the National Socialists erected a monument to mark the site of his first flight.

Jay, Peter Augustus, died Oct. 18, 1933.

Jennings, Walter. American capitalist, died on Jekyll Island, near Brunswick, Ga., Jan. 8, 1933. He was born in San Francisco, Calif., Sept. 14, 1858, and was graduated from Yale University in 1880, taking his law degree at Columbia University in 1882. After practicing law for a few months he entered the em-

ploy of the Pratt Manufacturing Co., an affiliate of the Standard Oil Co. in New York City, and in 1886 went to its Oil City (Pa.) offices. In 1903 Mr. Jennings became a director of the Standard Oil Co. of New Jersey, and served as its secretary during 1908-11. From 1908 to 1919 he was also president of the National Fuel Gas Co.

Jerram, Admiral Sir (Thomas Henry) Martyn, died Mar. 19, 1933.

Johnson, Edwin S. American banker, lawyer, and United States Senator, died at Platte, S. D., July 19, 1933. Born near Spencer, Ind., Feb. 26, 1857, he attended the public schools of Osceola, Ia., and in 1876, became associated with his father in the clothing business. Removing to Grandview, S. D., in 1884, he established with his brother Homer the Citizens' Bank and two years later the Citizens' State Bank at Armour, Johnson Bros. Co. later opened banks at Geddes, S. D., and Horning, Ia., but in 1902 disposed of all these interests so as to concentrate on their real estate and loan business. In the meantime Edwin Johnson had been admitted to the South Dakota bar, serving as State's attorney for Douglas Co., during 1892-94. He was elected to the Senate of the South Dakota Legislature in 1894 on the Republican ticket but after 1896 pledged allegiance to the Democratic party, serving from 1904 to 1916 as member of the Democratic National Committee. In the latter year he was elected to the United States Senate. During his term he was active on such committees as agricultural and forestry, Indian affairs, public lands, and woman suffrage and was an advocate of the Eighteenth Amendment.

Johnson, Elias Finley. American judge, died at Palo Alto, Calif., July 31, 1933. Born at Van Wert, Ohio, June 24, 1861, he attended the National University, Lebanon, Ohio, and was graduated with the LL.B. degree from the University of Michigan in 1890. He served on the faculty of the University of Michigan as assistant and instructor in law (1890-94), assistant professor (1894-95), and professor (1895-1901). In 1901 he was appointed judge of the Supreme Court of the Philippine Islands, serving in Manila until his retirement in 1932. He was also interested in educational matters, being a member of the Michigan State Board of Education (1897-1901), and of the Board of Regents of the University of the Philippines. He was the author of *Johnson on Bills and Notes* and edited the second edition of *Norton on Bills and Notes* and the third edition of *Bass on Code Pleading*.

Johnston, Maj.-Gen. William Hartshorne, U.S.A., Ret., died Feb. 20, 1933.

Joly, John, died Dec. 8, 1933.

Jones, Sir Robert, died Jan. 15, 1933.

Jones, T(homas) Sambola. American editor, jurist, and diplomat, died in Baton Rouge, La., May 15, 1933. He was born at Jackson, La., Oct. 5, 1859, attended Centenary College, and received the LL.B. degree from Tulane University in 1880. Instead of practicing law he was appointed superintendent of schools in Baton Rouge and in 1886 became editor of *The State Journal*. He also edited *The Louisiana Educator* from 1888 to 1892. In 1901 he was appointed judge of the Inferior Criminal Court of Baton Rouge, on whose bench he sat for 10 years. Mr. Jones thrice served in the House of Representatives of the Louisiana Legislature, being elected in 1912, 1916, and 1924. In 1918 President Wilson appointed him Minister to Honduras. On his resignation in 1920 he was commended by the State Department for the part which he played in protecting American interests despite a pending revolution.

Julian, Camille, died Dec. 12, 1933.

Kajanus, Robert, died July 6, 1933.

Kellaway, Frederick George, died Apr. 13, 1933.

Kelly, James Edward. American sculptor, died May 25, 1933, in New York City, where he was born July 30, 1855. He studied at the National Academy of Design and at first devoted himself to wood engraving, being known principally until 1881 as an illustrator for *Scribner's*, *St. Nicholas*, *Harper's*, and other magazines. This tendency was carried over into his sculpture which, while full of spirit and often excellent in portraiture, was essentially illustration in bronze. He won the designation "the sculptor of American history" by his works, which include: "Sheridan's Ride" (1878); "Paul Revere" (1882); Monmouth Battle Monument (1883-85), with five historical panels, "Grant at Fort Donelson" (1886); the 6th New York Cavalry Monument at Gettysburg (1890); "Call to Arms" (1891); a colossal figure for the Troy (N. Y.) Soldiers' Monument; Gen. John Buford Monument at Gettysburg (1895); a colossal monument to commemorate the defense of New Haven (1909); "Leather Stocking and the Last of the Mohicans" (1926); "Destruction of the Bridge at Princeton in 1777" (1928); and "Isaac Sears Striking the First Blow for Liberty in 1770" (1931). Mr. Kelly executed a series of bronze busts from sittings given by 40 generals of the Civil War, including Grant, Sherman, Sheridan, and Hancock, and a similar series for the Spanish-American

War, including heads or panels of Roosevelt, Wheeler, Wood, Dewey, Sampson, Hobson, and others. Among his equestrian statues commemorating these conflicts were "General Sherman" and "Colonel Roosevelt at San Juan Hill." He executed also the bronze reliefs, "Battle of Harlem Heights" at Columbia University, "Washington at Valley Forge" on the Sub-Treasury Building in New York City, and "Cassius Rodney Declaring for Independence" and "Rodney's Arrival at Independence Hall" in Wilmington, Del. His friend, Thomas A. Edison sat for him on several occasions, the first being in 1879 when he designed a relief of the inventor with the first phonograph.

Kelly, Thomas Hughes. American capitalist and philanthropist, died in Paris, Jan. 22, 1933. He was born in New York City in 1865, and was graduated from Seton Hall College in 1888, and Columbia University law school in 1891. Although he never practiced, his legal knowledge proved useful in the handling of the property left him by his father, Eugene Kelly, founder of the banking firm of Eugene Kelly and Co. Mr. Kelly was a Papal Chamberlain for thirty years, serving under every Pope after Leo XIII. He was deeply interested in the Irish cause and in 1916 attempted, with the aid of Mrs. Kelly and Joseph Smith, to carry \$50,000 to the sufferers in the revolt, but they were unable to land. In 1932 the Irish Free State government offered him the post of Minister to Vatican City, but he refused. With his mother and a brother he was the donor of the Lady Chapel in St. Patrick's Cathedral, New York City. Among the papal honors bestowed upon him were the Grand Cross of the Holy Sepulchre, the rank of Prince of the Holy Roman Empire, and knighthood in the Orders of St. Gregory and of Malta.

Kemble, Edward Windsor. American illustrator, died at Ridgefield, Conn., Sept. 19, 1933. Born in Sacramento, Calif., Jan. 18, 1861, he studied a short time at the Art Students League, New York City, but was mainly self taught. During the '80s he began to draw for the *Daily Graphic*, then for the *Century*, *Life*, *Collier's*, *Harper's Weekly*, and other magazines, and rapidly made a name with his caricatures, sketches of old New England life, and Negro subjects. The latter were his specialty for many years. Volumes treating the various activities of "Kemble's Coons" appeared in 1898, 1899, and 1900, under the titles of *Comical Coons*, *A Coon Alphabet*, *Coon Calendar*, *Coontown's 400* and *A Pickaninny Calendar*. Among other books of drawings which he published were *Rosemary*, *Virginia Creeper*, and *Billy Goat and Other Comicalities*. He illustrated also *Uncle Tom's Cabin*, *Huckleberry Finn*, *Pudd'nhead Wilson*, and *Knickerbocker's History of New York*, being as clever in his delineation of Dutch burghers and adolescent youths of the frontier as he was in portraying the Negro.

Kendrick, John Benjamin, died Nov. 8, 1933.

Kenyon, William Squire, died Sept. 9, 1933.

Kester, Paul. American dramatist, died near Peekskill, N. Y., June 20, 1933. Born at Delaware, Ohio, Nov. 2, 1870, he achieved recognition with the production in 1892 of his first play, *The Countess Koudine*, starring Mrs. Fiske. He was especially noted for his adaptation to the stage of various novels, among which were *Guy Mannering* (1898); *When Knighthood was in Flower* (1901); *The Cavalier* (1902); *Dorothy Vernon of Haddon Hall* (1903); *Beak House (Lady Dedlock)*, (1923); and *Tom Sawyer* (1931). He wrote also *Sweet Nell of Old Drury* (1900); *Queen Flametta* (1902); *Mademoiselle Mars* (1903); *Friend Hannah* (1906); *Lily, the Bill Topper* (1910); *The Love of a King* (1917); and *The Woman of Bronze* (1920). Among the notable actors and actresses who starred in his plays were Madame Modjeska, Alexander Salvini, Madame Janauschek, Julia Neilson, Fred Terry, Ada Rehan, Julia Marlowe, E. H. Sotherton, Annie Russell, Marie Tempest, and Margaret Anglin.

Kilgour, Joseph. American actor, died at East Islip, L. I., N. Y., Apr. 20, 1933. He was born at Ayr, Ont., Canada, July 11, 1863. His first appearance in New York was in *Noabe*, Nov. 14, 1895. Mr. Kilgour supported Mrs. Fiske, Henrietta Crossman, and Mrs. Leslie Carter. His greatest success was with Frances Starr in *The Earliest Way*, produced by David Belasco in 1909. He specialized in portrayals of stage millionaires. His last appearance was in *Young Sinners* in Boston in 1930.

King, Brig.-Gen. Charles, U.S.A., Ret., died Mar. 17, 1933.

King, Maj.-Gen. Edward Leonard, U.S.A. American soldier, died at Fort McPherson, near Atlanta, Ga., Dec. 27, 1933. Born at Bridgewater, Mass., Dec. 5, 1878, he was graduated from the United States Military Academy in 1898 and after receiving his commission as second lieutenant with the 9th Cavalry was promoted through the grades to the rank of brigadier-general in 1922, and major-general in 1931. He served in the Spanish-American War, and while participating in the suppression of the Philippine Insurrection acted as aide-de-camp to Maj.-Gen. Henry W. Lawton. During

the World War he was chief of staff of the 28th Division of the American Expeditionary Forces, recruited from the Pennsylvania National Guard, which participated in the Marne defensive and Aisne-Marne offensive, and later commanded the 65th Infantry Brigade of the 29d Division in the Somme and Meuse-Argonne operations. He remained overseas with the American Army of Occupation in Germany for a year. On his return to the United States in 1919 he was assigned to the Naval War College as instructor and two years later was transferred to the Army War College as director. In 1923 he was detailed commandant of the Cavalry School at Fort Riley, Kan., and in 1925 of the General Service Schools at Fort Leavenworth. Appointed assistant chief of staff of the War Department in 1929, General King remained in Washington until 1932, when he became commander of the Fourth Corps Area. He received the Distinguished Service Cross for his exploits in the Philippines and the Distinguished Service Medal for his bravery in the World War. The French Government also conferred on him the Croix de Guerre with palm and the decoration of officer of the Legion of Honor.

King, Stoddard. American writer, died in Spokane, Wash., June 13, 1933. He was born at Jackson, Wis., Aug. 19, 1889, and after completing his high school education was a reporter for three years (1907-10) on the *Spokane Spokesman-Review*. He then entered Yale University, from which he was graduated in 1914. After serving for a short time as associate editor of *Harper's Weekly*, he returned to the *Spokesman-Review* in 1916 as editorial writer and conductor of a column entitled "Facetious Fragments." Stoddard King acquired a national reputation as a humorist on the lecture platform and through his books: *What the Queen Said* (1926), *Grand Right and Left* (1927), *Listen to the Mocking Bird* (1928); and *The Raspberry Tree* (1930). He also wrote the lyrics of songs, the best known of which was the war-time *There's a Long, Long Trail*.

King, William Joseph Harding. British explorer, died at Luppitt, Devonshire, England, Oct. 3, 1933. Born Apr. 28, 1869, he attended Jesus College, Cambridge. His explorations were confined almost entirely to the North African deserts. In 1900 and again in 1908 he traveled through the western Sahara, and from 1909 to 1912 explored the central portions of the Libyan Desert, contributing to the *Royal Geographical Journal* and other periodicals valuable papers on the sand dunes and ethnology of the region. With Orin Bates he conducted an archaeological expedition to Marmarica in 1913. Six years later he received the Gill Memorial from the Royal Geographic Society, of which he was a Fellow. He wrote *A Search for the Masked Twareke* (1903) and *Mysteries of the Libyan Desert* (1925).

Klauber, Adolph. American journalist and theatrical producer, died Dec. 7, 1933, in Louisville, Ky., where he was born Apr. 29, 1879. After attending the University of Virginia he began his career in 1900 as a reporter on the *New York Commercial Advertiser*, going over the following year to the *New York Tribune*. In 1904 he became Sunday editor of the *New York Times*. His interest in the theatre was stimulated not only by his early experience as a stock company actor but by his long service from 1906 to 1918 as dramatic critic for the *New York Times*. In 1919 Mr. Klauber made his first venture in the theatrical field, producing *Nightly Night*, a farce. He brought to Broadway from the Provincetown Theatre in Greenwich Village such early plays of Eugene O'Neill's as *The Emperor Jones* and *Diff'rent*, both produced in 1921, and was associated with his wife, Jane Cowl, in the production of her successes, *Lulu Time* and *Smilin' Through*. Assisted by Archibald and Edgar Selwyn he starred Miss Cowl in 1923 in *Romeo and Juliet*, *Pelleas and Melisande*, and *Antony and Cleopatra*. His last productions were *The Depths* (1925) and *Diversion* (1928).

Knight, Charles Landon. American editor and congressman, died in Akron, Ohio, Sept. 26, 1933. Born in Baldwin Co., Ga., June 18, 1867, he was graduated from Columbia University in 1889, receiving the LL.B. degree from that institution the following year. Admitted to the West Virginia bar, he practiced at Bluefield, where he mainly represented large coal interests. In 1896, however, he abandoned the law in favor of journalism being connected with the *Philadelphia Times* as chief editorial writer until 1900. After removing to Springfield, Ohio, he served as assistant editor and then editor-in-chief of the *Woman's Home Companion*. In 1902 he purchased with Maj. T. J. Kirkpatrick the *Akron Beacon Journal* and later acquired the *Massillon (Ohio) Evening Independent*. He relinquished his editorial duties in 1931 but over a period of three decades had exerted an influence on Ohio political thought, opposing as a supporter of Theodore Roosevelt and his Progressive platform, the election of Woodrow Wilson in 1912, the entry of the United States into the World War, and after the War, the proposed membership of that country in the League of Nations. Mr. Knight served several times on the Ohio Republican Central Committee

and was a delegate to the Republican National Conventions of 1916 and 1924. Elected to the 67th Congress in 1920 as representative from the 14th Ohio District, he continued his militant advocacy of Republican policies. In 1926 he served as Ohio commissioner for the Philadelphia Sesqui-centennial Exposition.

Koch, Felix John. American traveler and writer, died Dec. 27, 1933, in Cincinnati, Ohio, where he was born Jan. 15, 1882. After his graduation from the University of Cincinnati in 1904, he made his hobby, photography, a life profession in illustrating the articles which he wrote on strange, odd, and curious things. He visited also remote parts of the world in his effort to secure unique material, gaining thereby the sobriquet of "the Queer Corners Man." The valuable collection of photographs which Mr. Koch took as a witness of such important events as the coronation of George V, the investiture of the Prince of Wales, the Balkan Wars, the Mexican Revolution, the Dayton flood, and the Scopes trial were to go to the United States government and to the Cincinnati Historic Society after his death. He secured also for the War Department photographic records of American homeland activities during the World War. He was a member of the National Editorial Association, and once served as president of the Cincinnati branch of the American Folklore Society.

Kohut, George Alexander. Jewish scholar and author, died in New York City, Dec. 31, 1933. Born at Stuhlweissenburg, Hungary, Feb. 11, 1874, he was brought to the United States in childhood, later attending Columbia University and the Jewish Theological Seminary of America. From 1897 to 1900 he served as rabbi of the Congregation Emanu-El in Dallas, Tex., and during 1906-07 of the Sinai Congregation at Mount Vernon, N. Y. In 1909 he founded the Kohut School for Boys in New York City, serving for nine years thereafter as its principal. He then established the Columbia Grammar School for Boys, of which he was executive director at the time of his death. He was also executive director of the Children's University School and of the Dalton High School, New York City, from 1924 to 1926. Among the institutions which he established for the furtherance of Jewish cultural traditions were the Jewish Institute of Religion in New York City, the Society for the Furtherance of Jewish Learning in Berlin, and, in honor of his father, the Alexander Kohut Memorial Foundation, with subsidiary foundations at Yale University and at the Rabbinical Seminaries in Vienna and Budapest. Dr. Kohut served as editor of *Helpful Thoughts, The Jewish Home, New Era Illustrated Magazine*, and *Young Israel*. His publications included *The Court Jew Lippold* (1893), *Early Jewish Literature in America* (1895), *Erza Sides and the Jews* (1902), *Breide the Still Waters* (1912), *A Hebrew Anthology* (1915), and *Royal Hebraists* (1927).

Kotz, Daniel. American landscape painter, died at Park Ridge, N. J., Sept. 17, 1933. Born near South Bend, Ind., Mar. 21, 1848, he studied under Henry F. Spread and came to be well known for his depictions of autumn and winter scenes of the Pascack Valley of northern New Jersey. In such works as "Early Morning," "The Blizzard," "Beechwoods," "Clearing Up," "Corner of the Garden," and "Snowclad Hills," he showed a deep understanding of nature in all her varying moods. He was one of the founders of the Chicago Art League.

Kress, Brig.-Gen. John Alexander, U.S.A., Ret. American soldier, died in Washington, D. C., July 4, 1933. Born in Tioga Co., Pa., Nov. 4, 1839, he entered the United States Military Academy in 1858 but resigned in October, 1861, a few months after the outbreak of the Civil War to join the 25th New York Volunteer Infantry as 1st lieutenant and to serve as aide-de-camp to Gen. James S. Wadsworth. He rose to the rank of major of the 94th New York Volunteers in July, 1862, and a few months later to that of lieutenant colonel, commanding a regiment in the battle of Fredericksburg. On his transfer to the Ordnance Department he was commissioned chief ordnance officer of the Department of the James and inspector-general of the 25th Army Corps. After the War General Kress was assigned to arsenals in Rock Island, Ill. (1865); Pittsburgh, Pa. (1867); Vancouver, Wash. (1871); San Antonio, Tex. (1882); Indianapolis, Ind. (1883); St. Louis, Mo. (1886); Benicia, Calif. (1887); and again in St. Louis, Mo. (1890). In 1898 he was appointed chief ordnance officer of the United States Army, serving the same year after the outbreak of the Spanish-American War as chief ordnance officer of the 1st Army Corps and later as chief ordnance officer with the Cuban Army of Occupation. In 1899 he resumed command of the St. Louis Powder Depot, retiring in 1903 with the rank of brigadier-general.

Krobatin, Alexander. Count von. Austrian army officer and statesman, died in Vienna, Dec. 28, 1933. Born at Olmutz, Moravia, Sept. 12, 1849, he attended the Vienna Polytechnic Institute and in 1869 entered the Austrian army as a lieutenant of artillery. He held the

post of commandant of the Artillery Cadets School in Vienna, for several years and then in 1896 entered the government service as head of one of the War Office departments. He was commissioned a major-general in 1900 and four years later, after gaining recognition as a munitions expert, became chief of that section. In 1905 he was promoted to the rank of field marshal lieutenant and in 1910 became master of ordnance. Appointed Minister of War in 1912, he distinguished himself also in the field on the outbreak of the World War as commander of the Fourth Army on the Eastern Front. In 1917 he relinquished this portfolio to assume command as field marshal of the Tenth Army, operating in the Tyrol and Corinthia against the Italian forces.

Kurz, Selma. Austrian coloratura soprano, died in Vienna, May 10, 1933. Born at Biala, Galicia, in 1877, she made her debut at the Opera in Frankfort-on-Main in 1898. The following year she was engaged by Gustav Mahler, director of the Vienna Hofoper, to whom she owed her great advance, eventually becoming leading prima donna. Extensive leaves of absence enabled her to appear as guest at Covent Garden, London, the Paris Opera, and other leading European opera houses. In 1921 she made a coast-to-coast concert tour of the United States, arousing great enthusiasm everywhere through the natural beauty of her voice and the perfection of her art. Her husband was Dr. Halban, a Viennese physician.

Kyle, Melvin Grove, died May 25, 1933.

Lardner, Ring(gold) W(ilmer), died Sept. 25, 1933.

Laughlin, James Laurence, died Nov. 28, 1933.

Lee, David Russell. American educator, died at Evanston, Ill., Oct. 18, 1933. He was born at Hamilton, Ont., Canada, Aug. 20, 1869. Following his graduation from Albion College in 1895, he was ordained to the ministry of the Methodist Episcopal Church, successively holding charges at Robinson, Mich. (1897-98), Pentwater (1898-1900), and Grand Rapids (1901-03). He then resumed his studies, receiving the A.M. degree from Indiana University in 1905 and the Ph.D. degree from the University of Wisconsin in 1907. Called to Central College at Fayette, Mo., as professor of Greek and Latin in 1907, Dr. Lee remained there until 1909 when he became professor of classical literature at the University of Chattanooga. From 1916 to 1932 he was professor of Greek at the University of Tennessee. Dr. Lee was president of the Tennessee Philological Association during 1911-12 and its secretary during 1915-18. He served also in 1915 on the Rhodes Oxford Scholarship Committee for Tennessee. He was the author of *Child Life, Adolescence and Marriage in the Greek New Comedy and in the Plays of Plautus* (1920).

Lee, Elisha, died Aug. 6, 1933.

Leete, Alfred Chew. British illustrator and cartoonist, died in London, June 7, 1933. Born at Thorpe Achurch, Northamptonshire, in 1882, he attended the grammar school at Weston-super-Mare and began drawing for reproduction at the age of 15. Although self-taught, he acquired a bold technique and humorous touch that insured a welcome for his work by the leading periodicals. His most famous cartoon was the Kitchener cartoon, "Your King and Country Need You," used for recruiting purposes during the World War.

Legge, Alexander, died Dec. 3, 1933.

Lemieux, Sir François Xavier. Canadian jurist, died in Quebec, July 18, 1933. Born at Lévis, Que., Apr. 9, 1851, he was educated at Lévis College, the Quebec Seminary, and Laval University. After reading law with Gilbert La Rue, he became an attorney in 1872, conducting the defense in several well-known criminal cases, among which were those of Louis Riel, leader in 1884 of the rebellion of certain French half-breeds living near the forks of the Saskatchewan who attempted to force the government to settle their claims to certain land grants, and of Honoré Mercier, former premier of Quebec, who was tried in 1892 on charges of corruption in connection with the Baie de Chaleur Railway Scandal. During this period he was also prominent in the Nationalist movement in Quebec and sat in the Legislature as representative for Lévis from 1883 to 1894. In 1897 Lemieux was appointed puisne judge of the Superior Court of Arthabaska, being transferred to Sherbrooke in 1898 and to Quebec City in 1906. From 1911 to 1915 he was acting chief justice of the Superior Court of the Province of Quebec and after 1915 chief justice. Knighthood was conferred on him by King George in 1915. He was also a commander of the Papal Order of St. Gregory the Great.

Lévy, Raphaël-Georges, died Dec. 9, 1933.

Levygus, Georges Jean Claude, died Sept. 2, 1933.

Liaputcheff, Andreas, died Nov. 6, 1933.

Lilienthal, Gustav. German aviation pioneer, died in Berlin, Feb. 1, 1933. Born at Anklam, Prussia, Oct. 9, 1849, he attended the gymnasium there. During the '90s with his brother Otto, he attempted to develop a flying machine based on exact imitation of the flight of birds. His brother was killed in 1896 in one of their biplane glider experiments, but they succeeded in constructing a machine that, without propelling motors and screws, was able, if started from a height, to sail several hun-

dred feet even against the wind and to make turns to the right or left with considerable certainty. Gustav was later employed by the British government as an aviation adviser in both England and Australia but kept up his experimental work in Berlin.

Lindsay, Maj.-Gen. William Bethune. Canadian soldier and engineer, died in Toronto, Ont., June 27, 1933. Born at Strathroy, Ont., Nov. 3, 1880, he attended the Royal Military College at Kingston, and from 1900 to 1904 served as assistant engineer in the Department of Marine and Fisheries of the Dominion government. He then joined the Royal Canadian Engineers, organizing and training on the outbreak of the World War the 1st Canadian Divisional Engineers. Overseas he served as major and commanding officer of the 2nd Field Company of Canadian Engineers at Ypres, Festubert, and Givenchy, and in 1915 was commissioned lieutenant-colonel and Chief Royal Engineer of the 1st Canadian Division, designing the first plank road which was built by the Canadian Engineers in France. The following year he became chief engineer of the Canadian Army Corps with the rank of brigadier-general and in 1918 general commanding officer of all the Canadian engineer troops with the rank of major-general. In recognition of his services General Lindsay was made a Companion of the Order of St. Michael and St. George in 1916, of the Distinguished Service Order in 1918, and of the Bath in 1919. After his retirement in 1920 he resided at the Toronto Military Institute. He was a member of the Engineering Institute of Canada and of the Institution of Royal Engineers.

Lippitt, Henry Frederick. American manufacturer and former senator, died Dec. 28, 1933 in Providence, R. I., where he was born Oct. 12, 1856. After his graduation from Brown University in 1878, he became associated with the Manville Co., cotton manufacturers starting as a day operator in the bleaching and dyeing department and eventually being promoted to general manager. On the merger of the Manville Co. with the Jenckes Spinning Co. in 1923 he was elected president of the new organization, known as the Manville-Jenckes Co., and at the time of his death was chairman of the board of directors. Appointed United States Senator from Rhode Island in 1911 to fill the unexpired term of Nelson W. Aldrich, he failed of reelection in 1916 largely because of his intimate connection with the large manufacturing interests. He was continually demanding a higher tariff for "protective" purposes and was also an advocate of military preparedness. In 1889 he was president of the New England Cotton Manufacturers' Association, and at the time of his death vice-president of the Cotton Textile Institute, Inc.

Lively, Daniel O'Connell. American humanitarian, died at White Plains, N. Y., Nov. 30, 1933. Born at Galveston, Tex., Sept. 14, 1868, he was mainly self-educated, being engaged until 1904 as a cowboy, newspaper reporter, agricultural and livestock editor, and stockyard and oil operator. After engaging in the wholesale merchandise business in Panama for five years, he resumed his stockyard operations in Portland, Ore. In connection with the Panama Pacific International Exposition of 1915 he acted as chief of the department of live stock and as commissioner to South America. After the entry of the United States into the World War he was active in promoting the third and fourth Liberty Loans, and then decided to make a more vital contribution by going to Russia in the interests of the American Red Cross, General Pershing conferring on him at this time the military title of major. He was later transferred to Siberia, serving as chairman of the American Committee for the Repatriation of Prisoners of War and saving from starvation thousands of White Russian refugees. While in the Orient Major Lively was appointed Far East commissioner for the United States Department of Agriculture. Returning to the United States in 1924, he served as manager during the next four years of the State Chamber of Commerce of Washington. He then became national director of the China Famine Relief, raising in the United States over a period of four years \$1,650,000 for this purpose and on several occasions personally carrying supplies to the starving inhabitants of China's famine-stricken or flooded interior. He was also interested in the White Cross Anti-Narcotic Association, holding the office of vice-president in 1928.

Liveright, Horace Brisbin. American publisher and theatrical producer, died in New York City, Sept. 24, 1933. Born at Osceola Mills, Pa., Dec. 10, 1886, he attended the public schools of Philadelphia. After engaging in bond salesmanship for many years he established in 1911 a small company for the manufacture and sale of paper products. In 1917 Albert Boni interested him in starting *The Modern Library*, a collection of reprints of books that have lived down the ages or that the publishers felt would continue to live. On the incorporation of the firm as Boni and Liveright the following year he became president and during the 12 years that he was engaged in the publishing business helped to stimulate the interest of the reading public

in the works of Eugene O'Neill, Theodore Dreiser, Hendrik Van Loon, Ben Hecht, Emil Ludwig, and Ernest Hemingway. He retired in 1930, the firm, however, continuing under the name of Liveright, Inc., until its bankruptcy. In 1924 Mr. Liveright entered the theatrical field, producing during the next three years *The Firebrand*, *Hamlet in Modern Dress*, *An American Tragedy*, *Dracula*, and *The Dagger and the Rose*. He was also president of the Stonelea Players and the Authors' Royalties Co. and was a member of the executive committee of the Committee of 48. In 1924 he successfully opposed State censorship in the form of Justice Ford's Clean Books Bill before the New York General Assembly, and in his constant altercations with the Society for the Suppression of Vice, became noted for his tolerant stand on sex and other controversial subjects peculiar to general literature.

Lloyd, Nelson McAllister. American journalist and author, died at Mifflintown, Pa., Feb. 1, 1933. He was born in Philadelphia, Dec. 18, 1872. On his graduation from Pennsylvania State College in 1892 he joined the staff of the New York *Evening Sun*, remaining with that paper for 17 years and serving for a time as city editor. He was a contributor of numerous short stories and historical sketches to magazines, and published *The Chronic Loafer* (1900); *A Drone and a Dreamer* (1901); *The Soldier of the Valley* (1904); *The Robberies Company, Ltd.* (1906); *Six Stars* (1906); and *David Malcolm* (1913). He was also a member of the National Institute of Arts and Letters.

Lock, Walter. British theologian, died in London, Aug. 13, 1933. Born July 14, 1846, he was educated at Marlborough College and at Corpus Christi College, Oxford and became a fellow of Magdalen College in 1869. On the founding of Keble College in 1870 he was appointed tutor serving later as subwarden (1880-97), and as warden (1897-1920). During 1895-1919 he was also Dean Ireland's Professor of the Exegesis of Holy Scripture and during 1896-1919 a member of the Hebdomadal Council. In 1919 he was appointed canon of Christ Church and Lady Margaret Professor of Divinity, holding the latter incumbency until his retirement as professor-emeritus in 1928. Dr. Lock published a biography of John Keble (1892), annotated editions of *The Christian Year* (1895), and *Lyra Innocentium* (1899); *St. Paul the Master Builder* (1899); *The Bible and Christian Life* (1905); and *Oxford Memories* (1932). He was also general editor of the *Westminster Commentaries on the Revised Version*.

Loeb, James, died May 27, 1933.

Lord, Chester Sanders, died Aug. 1, 1933.

Lord, Livingston C. American educator, died at Charleston, Ill., May 15, 1933. He was born at Killingworth, Conn., Aug. 27, 1851 and was graduated from the State Normal School in New Britain, Conn., in 1871. After acting as principal in Terryville, Conn., Winnebago City, Minn., and Mankato, Minn., Dr. Lord was appointed in 1879 superintendent of schools at St. Peter, Minn. In 1888 he was elected president of the State Normal School at Moorhead, Minn., and in 1899 was called to the Eastern Illinois State Normal School at Charleston, Ill., in the same capacity. He held the latter position at the time of his death. He was president of the Minnesota Educational Association in 1880 and of the Illinois State Teachers Association in 1905.

Lounsbury, Ralph Reed. American lawyer and educator, died at Black Mountain, N. C., Oct. 16, 1933. He was born at Meriden, Conn., Nov. 3, 1871. On his graduation from Yale University in 1894 he was engaged in journalism, serving as State editor of the *Hartford Courant* in 1894 and as associate editor of the *Bridgeport Standard* during 1895-97. While serving as news editor of the *Chicago Daily News* he decided to attend the Chicago-Kent College of Law, receiving the LL.B. degree in 1900. On his admittance to the Illinois bar in the latter year, Mr. Lounsbury opened an office in Chicago and practiced there for 18 years. He then removed to New York City where as a member of the firm of Lounsbury, Ely and Fain he specialized in corporation law, being counsel for several national trade organizations. On his retirement in 1930 he was called to Rollins College as professor of government and political science and director of the Institute of Statesmanship. At the time of his death he was holding the positions of secretary and professor of government and public law at the newly established Black Mountain College. Mr. Lounsbury was active in politics after his removal to New York City, being a member of the Republican County Committee of Westchester Co. from 1922 to 1930 and a delegate to the New York State Republican Convention of 1924. He had also been a speaker for the Republican party in most of the national campaigns after 1896 and lectured on politics, the Constitution, and other subjects of national interest.

Lovatt, Maj.-Gen. Simon Joseph Fraser, 14th Baron. British soldier, died near Chipping Norton, Oxfordshire, England, Feb. 18, 1933. Born Nov. 25, 1871, he attended Magdalen College, Oxford, and succeeded to the title

on the death of his father in 1887. At the beginning of the Boer War he organized the corps of Lovat's Scouts which played a prominent part in suppressing the guerrilla tactics of that conflict. On his return to England in 1908 he raised two yeomanry regiments, which formed part of the Highland Territorial Mounted Brigade and of which he was lieutenant colonel. He served also as aide-de-camp to King Edward and to King George. During the World War, as brigadier-general, he commanded the Highland Territorial Mounted Brigade in the Gallipoli campaign and served later in France and Belgium. During 1927-28 Lord Lovat was Parliamentary Under-Secretary of State for Dominion Affairs, and during 1927-29 chairman of the Overseas Settlement Committee. At the time of his death he held the rank of honorary major-general in the Territorial Army. He was created a Knight of the Order of the Thistle in 1915, Knight Commander of St. Michael and St. George in 1919, and Knight of the Grand Cross of the Royal Victorian Order in 1922.

Lowell, James Arnold, died Nov. 30, 1933.

Luke, George Benjamin, died Oct. 29, 1933.

Lunacharsky, Anatol Vasilievitch, died Dec. 26, 1933. Lyster, Brig-Gen. Theodore Charles, U.S.A., Ret. American army surgeon, died in Los Angeles, Calif., Aug. 6, 1933. Born at Fort Larned, Kan., July 10, 1875, he was graduated from the University of Michigan with the Ph.B. degree in 1897 and the M.D. degree in 1899. Commissioned 1st lieutenant with the Medical Corps of the United States Army in 1900, he was appointed in 1904 chief of the eye, ear, nose, and throat clinic in the hospital at Ancon, Canal Zone. In 1911 he was transferred to the Philippines as chief of eye service at the University of the Philippines and two years later during the American occupation of Vera Cruz, Mexico, was chief health officer for the American troops. On the entry of the United States into the World War he was appointed chief of aviation and professional services in the Surgeon-General's Office, serving in France during the winter of 1917-18. On his retirement with the rank of colonel in 1919 Dr. Lyster became a director of yellow fever elimination research at the Rockefeller Foundation in New York City. After 1920 he was engaged in private practice in Los Angeles. He received the Distinguished Service Medal in 1919 and in 1930 was commissioned brigadier-general by special act of Congress.

Macia y Llusca, Francisco, died Dec. 25, 1933.

Maciel Olegario, Brazilian statesman, died at Bello Horizonte Sept. 5, 1933. Born in 1855, he was graduated from the Polytechnic School in 1878. Two years later he was elected provincial deputy and in 1889, upon the downfall of Dom Pedro II, was elected to the new State Legislature. As a member of the National Assembly he helped to draft the constitution of the republic and from 1890 to 1910 represented the State of Minas Geraes in the Federal Congress. An able engineer as well as statesman, he served during 1914-18 as inspector-general of railway services and five years later was elected vice-governor of Minas Geraes, succeeding to the post of governor on the death of Raul Soares in 1924. He was again returned to the State Legislature in 1926, serving for several years as president of its Senate. Elected governor of Minas Geraes in 1930, Dr. Maciel was one of the few provincial officials who during the civil war of 1932 supported Getulio Vargas, head of the provisional government established in November, 1930. The causes of the war lay primarily in the rivalry between São Paulo and Minas Geraes, the two most important States, for the control of the Federal government. After the defeat of the Paulista forces in October, 1932, Dr. Maciel was the only State governor to retain his office. Federal interventors or provisional governors being named in all the other States. In recognition of the services he had rendered he was buried with the honors of a president of the republic.

McCaleb, Ella, American educator, died in Poughkeepsie, N. Y., Jan. 9, 1933. She was born in Mount Pleasant, Pa., Apr. 23, 1856, and was graduated from Vassar College in 1878. After teaching at Clifton Springs, N. Y., and at the Home and Day School in Detroit, she returned to her alma mater in 1885 as secretary to President Taylor. In 1893 Miss McCaleb was appointed secretary of the college and in 1919 was named the first dean, holding the latter office until her retirement in 1923.

McConnell, Ira Welch, died Jan. 8, 1933.

McCumber, Porter James, died May 18, 1933.

McGeehan, William O'Connell, American journalist, died at Sea Island Beach, near Brunswick, Ga., Nov. 29, 1933. Born in San Francisco, Calif., Nov. 22, 1879, he attended Stanford University but left on the outbreak of the Spanish-American War to serve in the Philippines with the 1st California Volunteers. His newspaper career began in 1900 as a reporter on the San Francisco *Oakland*. After going over to the San Francisco *Post*, on which he acted successively as city editor and managing editor, he removed in 1914 to New York City and for a year contributed to the *Evening Journal's* sports column "Right Cross." He next became connected with the New York *Tribune* as sports editor, serving during 1921-

22 as its managing editor. From 1922 until the merger of the paper with the *Tribune* in 1924 he acted as sports editor of the New York *Herald*. It was in connection with the *Herald* that Mr. McGeehan started the column "Down the Line." He continued it for the New York *Herald Tribune*, coining many words, phrases, and epithets that added a satirical touch to this type of writing. He was also one of the sincerest advocates among sports writers of clean sport, holding aloof from professional promotion of any sort. Among his other assignments was the famous Scopes trial held at Dayton, Tenn., in 1925.

McGiffert, Arthur Cushman, died Feb. 25, 1933.

McGlothlin, William Joseph, American clergyman and educator, died at Gastonia, N. C., May 28, 1933. He was born near Gallatin, Tenn., Nov. 29, 1867, and was graduated from Bethel College in 1889 and from the Southern Baptist Theological Seminary in 1894, receiving the Ph.D. degree from the University of Berlin in 1901. He was ordained to the Baptist ministry in 1891, and in 1893 joined the faculty of the Southern Baptist Theological Seminary as a tutor in Hebrew and Old Testament. The following year he became instructor, in 1896 assistant professor, and in 1900 professor, directing also the correspondence work during 1915-19. In 1919 he was elected president of Furman University, Greenville, S. C., and in 1930 was president of the Southern Baptist Convention. Dr. McGlothlin wrote many articles for religious periodicals, and published *What Is Essential Baptist Doctrine?* (1906); *Kentucky Baptists, the Seminary and 'Athen Immersion'* (1908); *A Guide to the Study of Church History* (1908); *Baptist Confessions of Faith* (1910); *A Vital Ministry* (1913); *Infant-baptism in History* (1915); *The Course of Christian History* (1917); *History of Furman University* (1926). He contributed also to *Hastings's Dictionary of Religion and Ethics* and the *International Bible Dictionary*.

McGovern, Patrick, American contractor, died in Great Neck, L. I., N. Y., Feb. 22, 1933. Born in County Cavan, Ireland, in 1871, he came to the United States at the age of 20 and worked for several years as a laborer in Boston. On the discovery of gold in the Klondike in 1896 he joined the Alaska gold rush, but his failure to make his fortune caused him to return to Boston. This experience, however, had equipped him with considerable practical engineering knowledge and he entered the contracting business, working on the construction of part of the Boston subway. In 1908 he removed to New York City where his most important achievement as a subway contractor was the construction at a cost of \$22,000,000 of the 53d Street twin tunnels of the municipal subway system, extending under the East River from Manhattan to Long Island City. He constructed also a section of the Philadelphia subway. After 1929 he was engaged in the construction for the New York Board of Water Supply of a supplementary pressure tunnel, extending from the Hill View Reservoir in Yonkers to Hamilton Avenue, Brooklyn, and costing \$43,000,000. Mr. McGovern figured in frequent disputes with labor organizations over wage rates. In April, 1932, he was summoned before a Federal grand jury where in an income-tax investigation he refused to testify in regard to certain monies which he was alleged to have paid during 1928-30 to labor leaders. Sentenced to serve a 60-day term for contempt of court, he appealed in vain to the higher courts and on Nov. 30, 1932, entered the Federal house of detention.

McKenny, Charles, American educator, died at Ypsilanti, Mich., Sept. 24, 1933. Born at Dimondale, Mich., Sept. 5, 1860, he was graduated from the Michigan Agricultural College with the B.S. degree in 1881 and from Olivet College with the A.B. degree in 1889. He served on the faculty of the latter institution for the next seven years, first as instructor in English and history and then as professor of history. During 1896-1900 he was principal of the State Normal School at Mt. Pleasant, Mich., and during 1900-12 president of the State Normal School in Milwaukee. As president of the Michigan State Normal College at Ypsilanti from 1912 to 1933, Dr. McKenny was responsible for the student enrollment being doubled and for improvements in the physical plant. He was president of the National Society for the Study of Education (1908-10) and of the Association of American Teachers Colleges (1917-19). In addition to editing the *American Schoolmaster* he wrote *The Personality of the Teacher* (1910).

McLean, Rear Admiral Ridley, U.S.N., American naval officer, died in San Francisco, Calif., Nov. 12, 1933. Born at Pulaski, Tenn., Nov. 10, 1872, he attended the University of Tennessee and was graduated from the United States Naval Academy in 1894. Commissioned an ensign in 1896, he served on the battleships *Indiana* and *Oregon* and during the Spanish-American War was assigned to the ammunition ship *Armeria*. He was also active in the Philippine Insurrection. An ordnance specialist, Admiral McLean acted as assistant inspector of target practice with the Atlantic Fleet from 1903 to 1906 and as fleet gunnery officer from 1906 to 1909. After being detailed to the General Board of the Navy Department

during the next two years he was assigned in 1911 to the battleship *Florida* as navigator, 1st lieutenant, and executive officer. In 1913 he became judge-advocate-general of the United States Navy but in 1916 returned to sea duty as commander of the *Columbia*. On the entry of the United States into the World War Admiral McLean was made chief of staff of Battleship Force One and the following year commander of the battleship *New Hampshire* which acted as escort to convoys and after the Armistice assisted in transporting back to the United States the troops of the American Expeditionary Force. After commanding the battleship *Arkansas* during 1922-24 he was appointed director of naval communications. Promoted to the rank of rear admiral in 1927, he commanded the Submarine Divisions of the United States Battle Fleet until 1929 and then was made budget officer of the Navy Department. At the time of his death he commanded Division Three of the Battle Fleet, his flagship being the *Nevada*. He wrote *Bluejacket's Manual* (1902).

MacLennan, Frank Pitts American publisher, died at Topeka, Kan., Nov. 18, 1933. He was born at Springfield, Ohio, Mar. 1, 1855, and was graduated from the University of Kansas in 1875. From the position of mail boy in 1877 he rose to the post of editor and part owner of the *Emporia Daily News* in 1880, remaining in the latter capacity until 1885. He then bought the *Topeka State Journal*, whose circulation he increased tenfold within five years after its purchase. In editorial policy the paper was free from all political alliances, allowing its owner wider scope not only in politics but in other controversial matters. He was also vice-president of the Associated Press during 1910-11 and a director of that organization after 1919. Outside the newspaper field Mr. MacLennan served as president of the Kansas Hotel Co., which he had helped to organize for the purpose of providing Topeka with additional convention accommodations. He was also one of the organizers and a past president of the Kansas Reserve State Bank. He wrote *A Kansan in New York* (1918); *Four Weeks with the Navy* (1924); and *A Tale of the Great Sea* (1925).

MacMechan, Archibald McKellar, Canadian educator, died in Halifax, N. S., Aug. 7, 1933. Born June 21, 1862, he attended Hamilton Collegiate Institute and the University of Toronto, being graduated from the latter in 1884. After serving as Modern Language master at the Galt Collegiate Institute during 1885-86 he attended Johns Hopkins University, from which he received the Ph.D. degree in 1889. He was then called to Dalhousie University as George Munro professor of English language and literature, which chair he retained until his retirement in 1931. He was honored by several American institutions in being requested to teach at their summer sessions. Among these were Chicago, Columbia, Northwestern, and Harvard universities. He was president of the Nova Scotia Historical Society during 1907-09 and in 1916 was elected a Fellow of the Royal Society of Canada. Dr. MacMechan edited Carlyle's *Sartor Resartus* (1896) and *Heroes and Hero-Worship* (1900) and *Nova Scotia Archives*, vols. ii and iii. He published also *The Porter of Bagdad* (1901); *Poems of Tennyson* (1907); *The Life of a Little College* (1914); *Sagas of the Sea* (1923); *Old Province Tales* (1924); *The Book of Ultima Thule* (1927); *There Go the Ships* (1928); and *Red Snow on Grand Pré* (1931). To Canada and its Provinces (vols. xii and xiv), he contributed *Nova Scotia under English Rule, 1713-1915* and to *Chronicles of Canada, The Winning of Responsible Government* (1915).

McMillan, Sir Daniel Hunter, Canadian soldier and administrator, died in Winnipeg, Man., Apr. 14, 1933. Born at Whitch, Ont., Jan. 14, 1846, he joined the militia in 1864, serving during the Fenian Raid of Irish-American invaders on the Niagara frontier (1866), with Col. Garnet Wolseley's expedition against the Red River French and Indian half-breeds (1870), and during the Northwest Rebellion (1885), being promoted to lieutenant-colonel of the Ninety-Fifth Regiment of Manitoba Grenadiers. In 1870 he settled in Winnipeg where he engaged in the grain business, and in 1887 was elected the first president of the Winnipeg Grain and Produce Exchange. He subsequently became identified with several financial and insurance corporations, such as the Great West Life Assurance Co. and the Toronto General Trusts Corp. Sir Daniel served as a Liberal member of the Manitoba Legislature for 20 years (1880-1900), representing Centre Winnipeg, and during the latter eleven was Provincial Treasurer in the Manitoba government. Appointed Lieutenant-Governor of the province in 1900, he filled the post so successfully that the Governor-General extended his term until 1911. In 1902 he was created Knight Commander of St. Michael and St. George. McMillin, Benton, died Jan. 8, 1933.

McNeill, John, British clergyman, died at Frinton-on-Sea, near London, Apr. 19, 1933. He was born at Houston, Renfrewshire, Scotland, July 7, 1854, the son of a quarry foreman. He worked as a railway employee from 1869 to 1877, and then studied for the ministry at Edinburgh and Glasgow universities and at the Free

Church Divinity Hall in Glasgow. Following his ordination to the Presbyterian ministry, he preached during 1886-89 at the McCrie-Roxburgh Free Church, Edinburgh, and then for three years at the Regent Square Presbyterian Church, London. In 1892 he joined Dwight L. Moody as a revival preacher in Aberdeen and during the next 16 years conducted mission services in different parts of the world. Among the Presbyterian pastorates which he held after 1908 were Christ's, London, St. George's, Liverpool; Cook's, Toronto, Canada; Central, Denver, Colo.; and Fort Washington, New York City.

Maddox, Ernest Edmund, British ophthalmologist, died in London Nov. 10, 1933. Born in 1860, he received the M.D. degree from the University of Edinburgh, being appointed in 1884 Syme Surgical Fellow. In connection with the Edinburgh Royal Infirmary he served as resident physician and assistant ophthalmic surgeon and was also ophthalmoscopic tutor at the University's medical school. Later removing to Bournemouth, he was appointed consulting ophthalmic surgeon to the Royal Victoria and the West Hampshire Hospitals. Dr. Maddox's great contribution was the orthoptic training of squint in children, inventing for this purpose the chiroscope. He was also considered one of the leading authorities on heterophoria or latent deviation of the eyes. In 1899 the British Medical Association awarded him its Middlemore Prize for the most important contributions to ophthalmology made during the preceding three years, and in 1921 he received the Doane Memorial Medal from the Oxford Ophthalmological Congress. He served as vice-president of the ophthalmic section of the British Medical Association in 1929 and as president in 1931. Among his publications were *The Clinical Use of Prisms and the Decentering of Lenses*, which ran into five editions; *Tests and Studies of the Ocular Muscles*, and *Golden Rules of Refraction*. He invented a safety device for dangerous cataract extraction.

Maddox, William Arthur, American educator, died suddenly at Davis Junction, Ill., Aug. 10, 1933. Born in Richmond, Va., Feb. 24, 1883, he was graduated from the College of William and Mary in 1904, and received the Ph.D. degree from Columbia University in 1917. After serving as grammar and high school principal in Portsmouth, Va., he held the post of superintendent of schools in Henrico Co., Va., from 1907 to 1910. For the next three years he was professor of psychology and principal of the training school at the State Normal College, Farmville, Va. In 1913 he was appointed director of teacher training at the State Normal School, Oswego, N. Y., and in 1916 assistant professor of education at Teachers College, Columbia University. After 1919 Dr. Maddox was president of Rockford College. He held also the office of president of the Federation of Illinois Colleges during 1925-26. He wrote *The Free School Idea in Virginia Before the Civil War* (1918) and the chapter, "Development of Method," in *Twenty-five Years of American Education* (1924).

Magnus, Sir Philip, British educator, died at Chilworth, Surrey, Aug. 29, 1933. He was born in London, Oct. 7, 1842, and was educated at University College, London. In 1880 he organized the City and Guilds of London Institute, serving as its secretary until 1888. He then became superintendent and secretary of the Institute's department of technology, in which position he remained until 1915. He was a member of the Royal Commission on Technical Instruction during 1881-84, of the London School Board during 1890-91, and of the Senate of London University during 1898-1931 and also a governor of the Royal Grammar School at Guilford, the Northampton Polytechnic, and other institutions. From 1906 to 1922 he was Unionist Member of Parliament for London University. Sir Philip wrote *Educational Aims and Efforts* (1880-1910); *Industrial Education* (1888); and various textbooks on mechanics, including *Lessons in Elementary Mechanics and Hydrostatics and Pneumatics*. Knighthood was conferred on him in 1886, and in 1917 he was created a baronet.

Main, Arthur Elwin, American theologian, died at Alfred, N. Y., Jan. 29, 1933. He was born at Adams Centre, N. Y., Aug. 23, 1846, and was graduated from the University of Rochester in 1869 (A.M., 1870) and from the Rochester Theological Seminary in 1872. Following his ordination to the Seventh Day Baptist ministry, he was pastor at Ashaway, R. I., until 1880. He then became corresponding secretary of the Seventh Day Baptist Missionary Society, holding this position until his election in 1893 as president of Alfred University. From 1895 to 1901 he served successively as a missionary in Rhode Island and as pastor at Plainfield, N. J. In 1901 Dr. Main returned to Alfred University as dean and professor of theology in the theological seminary. He founded the *Helping Hand* in 1885 and published *Bible Studies on the Sabbath Question* (1910) and *The New Psychology, Behaviorism, and Christian Experience* (1931).

Makins, Sir George Henry, died Nov. 2, 1933.

Malmberg, Aino Finnish feminist and author, died in Helsingfors, Feb. 8, 1933. She was born 67 years ago.

In 1888 when the University of Helsingfors opened its doors to women, Mme. Malmberg was a member of the first class. In 1910 she was exiled from Russia and until 1930 made her home in London. Between 1912 and 1918 she frequently visited the United States, lecturing on Finland and pleading the cause of Finnish independence. During the World War she was a pacifist, and was a member of Henry Ford's Peace Ship expedition in 1916. She wrote many articles for the press, and was the official translator of George Bernard Shaw's works into Finnish. Her publications include two volumes of sketches, *People of Power* and *The Powerless Ones*, and an Australian travel book.

Maloney, Thomas J. American business executive and philanthropist, died at Teaneck, N. J., Jan. 18, 1933. He was born at Covington, Ky., July 12, 1859, where as a boy he worked in the tobacco fields. In 1885 he joined the P. Lorillard Co. as superintendent of manufacture. When this concern was merged with the American Tobacco Co. in 1900, he became a vice-president. Following the dissolution of the so-called tobacco trust in 1911, Mr. Maloney became president of the reorganized Lorillard Company, retiring in 1924. In addition to being a director of the Emigrant Industrial Savings Bank of New York, he was chairman of the board of directors of the Hudson County National Bank of New Jersey. Noted for his Catholic benefactions, he gave \$250,000 in 1928 to Georgetown University for cancer research, and in 1931 made gifts amounting to more than \$1,000,000 to the diocese of Newark, N. J. He also made donations to the cause of Irish freedom. In 1924 he was created a Knight of the Order of St. Gregory the Great. He was later made Private Chamberlain of the Cape and Sword.

Manhart, Franklin Pierce American theologian and educator, died at Selinsgrove, Pa., Sept. 13, 1933. Born at Catawissa, Pa., Aug. 30, 1852, he was graduated from the Missionary Institute at Selinsgrove in 1875 and from the Pennsylvania College at Gettysburg in 1877. Following his ordination to the Lutheran ministry in 1878, he held pastorates at Bloomsburg, Pa. (1881-89) and in Philadelphia (1889-93). For the next two years he served as superintendent of the Missionary Institute and when it was renamed the Susquehanna University became its president. In 1896 he founded the Deaconess Motherhouse in Baltimore, serving as its head until 1904 when he was appointed dean of the theological department at Susquehanna University. He was acting in this capacity at the time of his death. Dr. Manhart held the offices of secretary of the General Synod of the Lutheran Church in the United States from 1902 to 1922, president from 1922 to 1926, and secretary again after 1926. He was also president of the Lutheran Historical Society of the United States after 1911, vice-president of the Inner Mission Board from 1913 to 1918, and director of the Lutheran Publication Board from 1892 to 1930. His principal work was *Present Day Lutheranism* (1910).

Marbury, Elisabeth, died Jan. 22, 1933.

Markle, John American coal operator, died in New York City, July 10, 1933. He was born at Hazelton, Pa., Dec. 15, 1858. On his graduation from Lafayette College in 1880 he became general superintendent of the mines operated by G. B. Markle and Co., in which his father had a controlling interest. He later became president of that company and of its successor, the Jeddo-Highland Coal Co., one of the largest independent anthracite-coal firms in Pennsylvania. Mr. Markle represented the independent operators in the negotiations with President Roosevelt in the settlement of the anthracite coal strike of 1902. During the '80s he aroused admiration for his resourcefulness in constructing the Jeddo tunnel, used to drain certain flooded mines. He was also president of the Sprague Electric Co. (later merged with the General Electric Co.), the Wilkes-Barre and Hazleton Railroad, and the Industrial Finance Corp. After his retirement in 1926 he devoted himself to various philanthropic enterprises, medical, educational, and social welfare, founding for this purpose the John and Mary R. Markle Foundation.

Marling, Sir Charles Murray, died Feb. 16, 1933.

Marr, John Edward. British geologist, died in Cambridge, England, Oct. 2, 1933. Born in Lancashire June 14, 1857, he attended St. John's College, Cambridge, of which after receiving the Sc.D. degree he was made a Fellow. He held the Woodwardian chair of geology at that institution from 1917 to 1930. Prominent in the British Association for the Advancement of Science, he served in 1896 as president of its Section C (geology) and from 1896 to 1902 as a member of its council. He was also a member of the council of the Royal Society from 1904 to 1906 and in 1930 received the society's Royal Medal. Dr. Marr wrote *Principles of Stratigraphical Geology* (1898); *Scientific Study of Scenery* (1900); and *Deposition of the Sedimentary Rocks* (1929). He was also an authority on the geology of the Lake District and of Cumberland, Westmorland, and North Lancashire.

Marsh, Daniel Brand, died Sept. 22, 1933.

Marsh, Richard. British turfman, died in London,

May 20, 1888. He was born near Dover, Dec. 31, 1851. Beginning his racing career as a jockey, he eventually turned to race-horse training, and in 1892 became royal trainer for King Edward VII., retiring from the Royal Stable in 1924. During the period that he was trainer for the Duke of York (later George V.), his greatest triumph on the turf was in 1900 when Diamond Jubilee won the "Triple Crown"—the Derby, the Two Thousand Guineas, and the St. Leger. His other two Derby winners were Jeddah, which won at 100 to 1 in 1898 in the Larnock colors, and King Edward's Nunoin, winner in 1909. In June, 1921, King George, in his birthday honors, appointed him a member of the Royal Victorian Order, Fifth Class. In 1925 he published his reminiscences, *A Trainer to Two Kings*.

Marshall, (Davis) Edward, died Feb. 24, 1933.

Martin, Fernando Wood. American chemist, died at Lynchburg, Va., Mar. 22, 1933. He was born at Volga, W. Va., May 5, 1863. On his graduation from Chaddock College in 1886 he became professor of natural science there and acted also as lecturer on chemistry and toxicology at the Quincy (Ill.) Medical College during 1889-90. He next held the chair of natural science at Fort Worth (Texas) University. In 1893 he became professor of chemistry at Randolph-Macon Woman's College and from 1894 to 1907 also served as vice-president of that institution. He retired in 1929 as professor emeritus. In addition to contributing to scientific and educational journals, Dr. Wood wrote *Qualitative Analysis with the Blow Pipe* (1903); *Text-Book on Inorganic Chemistry* (1903); *Qualitative Analysis* (1907); *Introduction to Anthropology* (1913); and *Essentials of Organic Chemistry* (1915).

Martin, Guy Hart American lawyer, died in Spokane, Wash., Mar. 20, 1933. He was born at Lancaster, Ia., Aug. 31, 1866. Following his apprenticeship as a law clerk he was admitted to the Iowa bar in 1892 and began to practice at Spencer. In addition to serving as attorney for various railroads he held the office of prosecuting attorney for Clay Co. from 1894 to 1899. In 1907 he removed to Sandpoint, Ida., where he practiced until his appointment by President Harding in 1923 as district attorney for the Canal Zone. The following year President Coolidge named him district judge for the Canal Zone. In 1920 he was called to Washington as special assistant to the United States Attorney-General, and in 1931 was appointed an attorney in the Court of Claims division.

Marye, George Thomas American banker and ambassador, died in Washington, D. C., Sept. 2, 1933. Born in Baltimore, Md., Dec. 13, 1849, he attended schools in Florence, Italy; Darmstadt, Germany; Paris, France; and Barcelona, Spain, and studied law at Trinity College, Cambridge, being graduated from the latter in 1872. He then returned to the United States and upon his admittance to the California bar in 1875 began his practice in San Francisco. He soon abandoned this profession, however, to become junior partner in his father's banking firm of George T. Marye and Son, with headquarters in San Francisco and a branch office at Virginia City, Nev., recording his impressions of the formative period in the history of the two States in a biography of his father, *From '49 to '83 in California and Nevada* (1923). He himself helped as a member of the board of freeholders to draft in 1883 a charter for the city and county of San Francisco. On his father's death in 1892 he retired from the banking business but remained in California until 1904 when he removed to Washington. He was active, however, in California politics, serving as Democratic presidential elector in 1888 and from that date until 1893 as chairman of the executive committee of the Democratic State Central Committee. Shortly before the outbreak of the World War Mr. Marye was appointed ambassador to Russia and during his two-year service also had charge of the diplomatic interests of Germany and Austria-Hungary in that country, caring in particular for German and Austrian war prisoners. As a result of his early banking experience he urged the establishment in Russia of branch offices of prominent American banks. Following his resignation in 1916 he received from the Czar the decoration of the Order of St. Alexander Nevsky. He rendered an account of his ambassadorship in *Nearing the End in Imperial Russia* (1929).

Mason, Alfred Bishop. American lawyer and author, died in Florence, Italy, Jan. 26, 1933. He was born in Bridgeport, Conn., Feb. 23, 1851, and was graduated from Yale in 1871. The following year he became an editorial writer on the *Chicago Tribune* and studied law in his spare time, being admitted to the Illinois bar in 1875. In addition to his practice as a corporation lawyer, he was a railroad executive, serving as vice-president of the Jacksonville, Tampa and Key West Railroad during 1883-89, and president of the Vera Cruz and Pacific Railroad in Mexico during 1898-1902 and of the Cauca Railroad in Colombia during 1905-07. Mr. Mason was active in the National Civil Service Reform movement and supported Henry George's fight for the single tax, being president of the Metropolitan Single Tax Club.

He was also one of the founders of the Provident Loan Society. His most noted publications were the series of boys' books: *Tom Strong, Washington's Scout* (1911); *Tom Strong, Boy Captain* (1913); *Tom Strong, Junior* (1915); *Tom Strong, Third* (1916); and *Tom Strong, Lincoln's Scout* (1919). He also published *Primer of Political Economy* (1875) and translated and edited Van Holst's *Constitutional History of the United States* (1876) and *Constitutional Law of the United States* (1887). His last works were the novel *A Duchess and Her Daughter* (1929) and *Horace Walpole's England* (1930).

Massingham, Dorothy. British actress and playwright, died suddenly in London, Mar. 30, 1933. She was born in the same city, Dec. 12, 1889, and studied for the stage at the Academy of Dramatic Art, making her first appearance at the Liverpool Repertory Theatre, February, 1912, as Kalleis in *The Perplexed Husband*. Her first London appearance was as Claire in *Great Catherine* at the Vaudeville Theatre, Nov. 18, 1913. After appearing in various roles with the Repertory Theatre Company of Birmingham during 1917-19 she returned to the London stage, appearing in *Fanny's First Play* (1921), *Loyalties* (1922), *The Philanderer* (1924), *The Assignment* (1925), and *Uncle Vanya* (1926). She then joined the Old Vic Company, appearing during 1926-27 in various Shakespearean roles, and in 1928 became a member of the New Shakespeare Company at Stratford-on-Avon, with which she toured in the United States and Canada during 1928-29, and again during 1931-32. Miss Massingham wrote the plays *Glass Houses* (1918); *The Goat* (1921); *Washed Ashore* (1922); *Not in Our Stars* (1924); and *The Lake* (with Murray Macdonald, 1933).

Matson, Roderick Nathaniel. American lawyer, died at Cheyenne, Wyo., Feb. 14, 1933. He was born near Ira, N. Y., Nov. 1, 1871, and was graduated from Franklin College, New Athens, Ohio, in 1894 and from Syracuse University with the LL.B. degree in 1897. Admitted to the New York bar in 1897, he practiced in Syracuse as a member of Matson and Kennedy for three years. In 1901 the firm moved to Cheyenne, Wyo. Elected to the Wyoming House of Representatives in 1903, Mr. Matson resigned in 1905 on his appointment as judge of the First Judicial District of Wyoming. The following year he was elected to this office for a six-year term. Resuming his law practice with Matson and Kennedy in 1913, he practiced alone during 1921-28 and then became a member of Matson and Swainson. In 1926 Mr. Matson served on the commission appointed by the State Department to organize the United States exhibit at the International Exposition in Seville, Spain. He was president of the Wyoming State Bar Association during 1921-22 and chairman for Wyoming of the National Hoover-Curtis Lawyers Association in 1928. On Feb. 9, 1933, five days before his death, he was nominated by President Hoover as Minister to Greece.

Mauray, Dabney Herndon, died May 11, 1933.

Mauran, John Lawrence. American architect, died at Peterboro, N. H., Sept. 23, 1933. Born at Providence, R. I., Nov. 19, 1866, he attended Massachusetts Institute of Technology, becoming associated in 1890 with the architectural firm of Shepley, Rutan and Coolidge, in Boston. Two years later he was sent to their Chicago office to work on plans for the Chicago Public Library and the Art Institute of Chicago. Following his transfer to St. Louis in 1893 he became the firm's St. Louis partner. In 1900 he became a member of the firm of Mauran, Russell and Garden, known after its reorganization in 1911 as Mauran, Russell and Crowell. This firm designed the St. Louis Union Trust Co. Building, New Bank of Commerce Building, Butler Brothers Buildings (in St. Louis and Dallas), Railway Exchange, St. Louis Country Club, Skin and Cancer Hospital, Children's Hospital, Federal Reserve Bank, and Southwestern Bell Telephone Office Building. Mr. Mauran was president of the American Institute of Architects during 1916-18, having previously served as treasurer during 1913-15 and as president of its St. Louis chapter during 1902-04. He was also United States delegate to the Sixth International Congress of Architects held in Madrid in 1904. Appointed chairman of the Public Buildings Commission of St. Louis in 1904, he served as member of the board of the National Commission of Fine Arts in 1930. During the World War he was a member of the committee on contracts of the Council of National Defense and of the sub-committee on industrial safety of the War Industries Board.

Mawbey, Admiral Henry Lancelot. British naval officer, died in London June 4, 1933. Born June 17, 1870, he received his naval education on the British training ship, the *Britannia*. During the World War he was captain of the battleships *Dominion* and *Agincourt* of the Grand Fleet. He was also appointed aide-de-camp to King George in 1918. On his promotion to the rank of rear-admiral in 1919 his first command was that of the Reserve Fleet at the Nore, the *Indefatigable* being his flagship. In 1920 he was detailed to the East Indies station

at Bombay, directing from there during the next two years at the instance of the Indian government the Royal Indian Marine. He retired in 1924 with the rank of vice-admiral, and in 1928 was listed as a retired admiral. He was created a Companion of the Bath in 1920 and a Commander of the Royal Victorian Order two years later. He held also the decoration of the Japanese Order of the Sacred Treasure, third class, and was an officer of the French Legion of Honor.

Mayo-Robson, Sir Arthur William, died Oct. 12, 1933.

Melchior, Carl Joseph, died Dec. 30, 1933.

Meldrim, Peter W. (Iltberger). American lawyer, died Dec. 13, 1933, at Savannah, Ga., where he was born Dec. 4, 1848. He was graduated from the University of Georgia with the A.B. degree in 1868 and with the LL.B. degree the following year, and on his admittance to the Georgia bar engaged in practice at Savannah as a member of the firm of Garrard and Meldrim. After 1909 he practiced alone. On the bench he served as judge of the Superior Court of Chatham Co. and at the time of his death was presiding judge of the Eastern Judicial Circuit of Georgia. He was president of the American Bar Association during 1914-15, succeeding William H. Taft, and was a past president of the Georgia Bar Association. Judge Meldrim's political career consisted of service in the Georgia General Assembly, both the House of Representatives and the Senate, and as mayor of Savannah. In 1908 when he was chairman of the Georgia delegation to the Democratic National Convention in Denver, he displayed characteristics of courage and tenacity by consistently defying the forces supporting a third nomination for the presidency for William Jennings Bryan. Judge Meldrim was active as well in the military field, having participated during the Civil War in the attempt to stay Sherman's march to the sea and later becoming commander of the 1st Regiment of the Georgia Cavalry with the rank of colonel. He rose to the rank of brigadier-general with the Georgia National Guard and during the World War helped to organize and command the Georgia State Guard. He was also commander of the Georgia division of Confederate Veterans with the rank of major-general. As chairman after 1891 of the Commission on the Georgia State Industrial School for Colored Persons, he directed his efforts toward the extension of educational opportunities, both industrial and agricultural, for the Negroes of the State.

Mellon, Richard Beatty, died Dec. 1, 1933.

Menardos, Simos, died July 23, 1933.

Mikhailovitch, Alexander, Grand Duke of Russia. Russian naval officer and author, died at Roquebrune, Cap Martin, France, Feb. 26, 1933. Born at Tiflis, Apr. 1, 1866, son of the Grand Duke Michael Mikhailovitch, a cousin of Nicholas II, he spent his youth in the Caucasus where his father was Viceroy and on joining the Imperial Navy as a lieutenant first came to the United States in 1893 to represent Alexander II at the World's Columbian Exposition in Chicago. On his return in 1894 he married the Czar's daughter, the Grand Duchess Xenia. He rapidly rose through the ranks of the Russian Marine to admiral, editing a monthly periodical entitled *The Sea and Its Life* and translating into Russian the works of the American naval authority, Rear Admiral Alfred T. Mahan. He also founded the first Russian air force and was made aide-de-camp to Nicholas II. After the downfall of the Romanoffs he made his home in Paris but visited the United States in 1928 on a lecture tour. Some of his books were *Spiritual Education* (1930); *Union of Souls* (1931); *Once a Grand Duke* (1932); *Twilight of Royalty* (1932); and posthumously *The Evil Emperors* (1934).

Miller, Edward Furber. American engineer and educator, died at Newton Centre, Mass., June 12, 1933. He was born in Somerville, Mass., Jan. 18, 1866. On his graduation from the Massachusetts Institute of Technology in 1886 he joined the faculty of that institution as instructor in mechanical engineering, serving after 1892 as professor of steam engineering. He was also in charge of the department of mechanical engineering after 1911 and at the time of his death was director of the engineering laboratories. During the World War Professor Miller established several schools for the training of engineer officers for the Emergency Fleet operated by the United States Shipping Board. After the War he was instrumental in establishing at the Massachusetts Institute of Technology an ordnance school and was commissioned a colonel in the Auxiliary Reserve of the United States Army, serving after 1930 as assistant district chief of ordnance. He patented a safety valve, improved the life-saving equipment used in the Lyle gun, and studied extensively the problem of smoke abatement. His publications include *Steam Boilers* (with Cecil H. Peabody, 1897); *Problems in Thermodynamics and Heat Engineering* (with W. C. Berry and J. C. Riley, 1911); and *Notes on Heat Engineering* (1931).

Miller, Kempton Blanchard. American electrical engineer, died at Pasadena, Calif., Nov. 22, 1933. He was born in Boston, Mass., Aug. 14, 1870, and was graduated from the engineering college of Cornell University in

1898. After acting as an assistant examiner in the United States Patent Office at Washington, he became in 1896 chief engineer for the Western Telephone Construction Co. of Chicago and in 1899 engineer for the Kellogg Switchboard and Supply Co. As a member of the firm of McMeen and Miller from 1904 to 1918, he designed and built several hydro-electric plants in Oregon and California but rendered his greatest service as a consultant on telephonic design, construction, and installation. For several years (1913-18) he was chief engineer for the Central Union Telephone Co., operating in Illinois, Ohio, and Indiana. He had also designed the fire-alarm telegraph system used in New York City and had served as arbitrator in many controversies pertaining to public utility properties. A Fellow of the American Institute of Electrical Engineers, he wrote *American Telephone Practice* (1904) and *Telephone Theory and Practice* (1930).

Mizner, Addison. American architect, died in Palm Beach, Fla., Feb. 5, 1933. He was born at Benicia, Calif., Dec. 12, 1872, and received his higher education at the University of Guatemala, where his father, Lansing B. Mizner, was United States Minister, and at the University of Salamanca, Spain. On his return to the United States in 1893 he studied architecture under Willis Polk in San Francisco, later becoming his partner. Especially noted for the introduction of a novel type of Spanish mission architecture, Mr. Mizner designed many of the palatial hotels, and clubs at Santa Barbara, Calif., and Palm Beach, Fla. He was also known as "the father of the Florida renaissance" for the part which he played in the State's post-war real estate development. He was a brother of Wilson Mizner (q.v.). In 1932 he published the first volume of his memoirs entitled *The Many Mizners*.

Mizner, Wilton. American playwright, died in Los Angeles, Calif., Apr. 3, 1933. He was born at Benicia, Calif., Mar. 19, 1876, and was educated at the National Institute in Guatemala and at Santa Clara College in California. In 1897, with his brother Addison Mizner (q.v.), he joined the gold rush to the Klondike, absorbing during his three-year stay "local color" for his future plays and stories. In 1906 considerable excitement was caused by his marriage to Mrs. Charles T. Yerkes, widow of the traction magnate, who was 15 years his senior. Subsequently they were divorced. In 1907 Mr. Mizner produced his first play, *The Girl in the Dark*. It was followed by *The Only Law* (later renamed *The Double Cross*), which he wrote in collaboration with Paul Armstrong. The authors achieved their greatest success in 1910 with *The Deep Purple*. In 1912 they wrote *The Greyhound*. Mr. Mizner then turned to short story writing and at the time of his death was one of the better known Hollywood scenarists.

Modi, Sir Jivanji Jamshedji. Oriental scholar, died in Bombay, India, Mar. 28, 1933. He was born at Colaba, near Bombay, Oct. 23, 1854, and was educated at Elphinstone College and the University of Bombay, receiving the B.A. degree from the latter in 1877. For many years he served as secretary of the Par-ee Panchayat of Bombay from which post he propagated knowledge of the origin, literature, and teaching of Zoroastrianism. In 1903 he published *Translations from the Pahlavi* (the language in which the Zoroastrian teachings were originally recorded) of Aryadgar-zairan, of Bundehsh, and of Jamasp. *Asiatic Papers* and *Anthropological Papers*, which he read during 1905-17 before the Bombay branch of the Royal Asiatic Society, were noteworthy, and in 1918 he received that society's Campbell Medal. He published also *The Parsees at the Court of Akbar and Dastur Meherji Rana* (1903), *A Few Events in the Early History of the Parsees* (1905), *Moral Extracts from Zoroastrian Books* (1914), *The Religious Ceremonies and Customs of the Parsees* (1922); *Gama Oriental Institute Papers* (1928); and *Oriental Conference Papers* (1932).

Moffett, Rear Admiral William Adger, U.S.N., died Apr. 4, 1933.

Moir, Sir Ernest William, died June 15, 1933.

Monahan, Michael. American editor and author, died in New York City, Nov. 22, 1933. Born at Mallow, Co. Cork, Ireland, Apr. 6, 1865, he was educated privately and at the age of 15 came to the United States. He began his newspaper career as a reporter for the *Albany Press* in 1887 and later became its editor. After holding editorial posts on the *Albany Argus* and other newspapers, he removed to Denver, Colo., and during 1893 was engaged in similar work there. On his return to Albany he served during 1896-1900 as secretary to two mayors of that city, John Boyd Thacker and Thomas J. Van Alstyne. In 1903 he founded the magazine *Papyrus* (later renamed *The Phoenix*) at Mt. Vernon, N. Y., with which he was associated until 1916. Mr. Monahan was noted as a lecturer on various phases of Irish culture. Besides contributing articles to various periodicals, he wrote *Benigna Vera* (1904); *Palms of Papyrus* (1908, 1909); *Adventurer in Life and Letters* (1910); *Heinrich Heine* (1911); *Novae Hibernia* (1914); *At the Sign of the Van* (1914); *New Adven-*

tures (1917); *Dry America* (1921); and *An Attic Dreamer* (1922).

Montes, Ismael, died Nov. 18, 1933.

Moody, William Revell. American educator, died at East Northfield, Mass., Oct. 12, 1933. Born in Chicago, Ill., Mar. 25, 1869, he was graduated from Yale University in 1891. On the death of his father, Dwight L. Moody, the evangelist, in 1899 he succeeded to the presidency of the Northfield Seminary for Girls and the Mount Hermon Schools for Boys. During his administration he succeeded in increasing the endowment funds of the schools and in securing gifts for the construction of additional buildings. A notable feature of these schools, which were primarily designed for students of limited means, was that in return for devoting so many hours each day to work about the premises they should pay only half of their tuition. Mr. Moody tendered his resignation as president about 1927, but continued his work as director of the General Conference of Christian Workers, founded also by his father, and was interested in the other Northfield summer conferences, such as the Foreign Missionary and Sunday School Workers. He served for several years as editor of the *Record of Christian Work* and wrote a biography of his father entitled *The Life of Dwight L. Moody* (1900).

Moore, George, died Jan. 21, 1933.

Morgan, Rear Admiral Casey Bruce, U.S.N., Ret., died Aug. 17, 1933.

Morgan, Harry Hays, died Mar. 19, 1933.

Morris, Sir Daniel, died Feb. 9, 1933.

Morse, Brig.-Gen. Benjamin Clarke, U.S.A., Ret. American soldier, died in San Diego, Calif., Apr. 16, 1933. He was born at Macon, Mo., Oct. 15, 1859. On his graduation from the United States Military Academy in 1884, he was assigned to the 23d Infantry as second lieutenant, and during 1890-94 taught military science and tactics and was commandant of the cadets at the Agricultural and Mechanical College of Texas. He participated in the Spanish-American War and the Philippine Insurrection. After acting during 1900-01 as personal aide to Maj.-Gen. William R. Shafter, commanding general of the Department of California, he became assistant adjutant-general (1901) and acting adjutant-general (1902) of that department. General Morse served in the Moro campaign in the Philippines during 1903-04 and was recalled to Cuba during the second occupation of that island from 1906 to 1909. On his return to the United States General Morse was appointed professor of military science and tactics and commandant of the cadets at the University of Illinois. He participated in the occupation of Vera Cruz, Mexico, in April, 1914, and on the entry of the United States into the World War, was stationed at Camp Custer, Mich., as commander of the 169th Brigade, with the rank of brigadier-general. On his discharge from the National Army in 1918 he was sent to the Canal Zone as colonel of the 33d Infantry. He retired in 1920, the rank of brigadier-general being conferred on him by congressional action in 1930.

Morse, Charles Wyman, died Jan. 12, 1933.

Morton, Maj.-Gen. Charles Gould, U.S.A., Ret. American soldier, died in San Francisco, Calif., July 18, 1933. He was born at Cumberland, Me., Jan. 15, 1861. On his graduation from the United States Military Academy in 1883 he was commissioned a second lieutenant in the Army and saw service during the ensuing years on the frontier, in the Philippines, in Panama, and on the Texas border. On his promotion to brigadier-general in 1916 he was made commander of the 10th Division. On the entry of the United States into the World War he became commander of the 29th Division (which included the National Guards of New Jersey, Virginia, and Maryland) with the rank of major-general. This division rendered its greatest service in the Meuse-Argonne operations and the third Battle of Verdun. General Morton receiving in recognition of his bravery, in leading it, the Distinguished Service Medal and the Croix de Guerre with two palms. He was also made a commander of the French Legion of Honor. After the War he was in command of the Hawaiian Department (1919-21) and of the Ninth Corps Area (1922-25). He retired in January of the latter year.

Moskowitz, Belle Linder Israels, died Jan. 2, 1933.

Mosley, Lady Cynthia Blanche. British politician, died in London, May 16, 1933. She was born Aug. 23, 1898, the daughter of the Marquess Curzon of Kedleston, and received a private education. During the World War she was employed as a clerk in the War Office, and in 1920 was married to Sir Oswald Mosley. She sympathized with her husband's change in political views from Conservative to Independent and after his conversion to Socialism in 1924 joined the Labor party with him. Following her election as Labor representative for Stoke in 1929, she sat in Parliament with him. When her husband introduced Fascism into Great Britain in 1931 they both resigned and during the next two years were politically eclipsed. Sir Oswald, however, continued to develop his new project, the British Union of Fascists, which by

the end of 1933 numbered 500,000 blackshirt members.

Motzkin, Leo, died Nov. 7, 1933.

Muir, Maj.-Gen. Charles Henry, U.S.A., Ret., died Dec. 8, 1933.

Muldoon, William. American boxing official, died at Purchase, N. Y., June 3, 1933. Born at Belfast, N. Y., May 25, 1845, he enlisted at the outbreak of the Civil War with the Federal Army and served throughout the conflict. After the war he came to New York where he was engaged in various occupations until his entrance about 1870 into the wrestling ring. He later served for six years in the New York Police Department, perfecting the Greco-Roman style of wrestling in his encounters with other champions of the department. About 1878 he took up wrestling professionally and was engaged in important bouts with Edwin Bibby, the English wrestler, Evan "Strangler" Lewis, and "Professor" Sebastian Miller, finally laying claim to the heavyweight championship after a match with Clarence Whistler in 1883. Muldoon later became the trainer of such prominent boxing figures as John L. Sullivan, "Kid" McCoy, and Jack Dempsey, being noted for the Spartan rules which he imposed. In 1921 Gov. Nathan Miller appointed him chairman of the New York Boxing Board and in this capacity as "Iron Duke" of wrestling he was responsible of many humanitarian regulations of the sport. Reappointed a member of the board by Gov. Alfred Smith, he continued to serve until 1929. On Gene Tunney's retirement from the ring in 1928 he joined with him in providing the Muldoon-Tunney trophy, emblematic of the world's heavyweight championship.

Munro, Dana Carleton, died Jan. 13, 1933.

Murayama, Ryuhei. Japanese publisher, died in Tokyo, Nov. 24, 1933. Born at Wakayama, Apr. 3, 1850, he started as a merchant in Osaka in the early '70s and from the first showed a desire to follow the example of the West, his shop being stocked with merchandise from the United States and other countries. His success led to the purchase of the Osaka *Asahi*, through which he carried out his ideas of transforming Japanese journalism from a narrow, provincial point of view to a national one. In 1888 he became the proprietor of the Tokyo *Asahi* which, thanks to his shrewd business management, succeeded in spite of the boycott raised by 18 rival journals in becoming as influential as its sister publication. Mr. Murayama once represented Osaka-fu in the Diet and was active in the Liberal movement. At the time of his death he was a member of the House of Peers.

Murphy, Emily Ferguson Canadian jurist and author, died at Edmonton, Alta., Oct. 27, 1933. Born at Cookstown, Ont., in 1868, she attended the Bishop Strachan School in Toronto and in 1887 was married to Arthur Murphy. Removing to Edmonton in 1904, she was appointed three years later magistrate in and for the Province of Alberta and judge of the juvenile court of that city. In 1931 she resigned these positions to devote more of her time to literary work. Under the pen-name of Janey Canuck, Mrs. Murphy had published *Janey Canuck in the West* (1910); *Open Trails* (1912); *Seeds of Pine* (1914); *The Black Candle* (1922); *Little Canadian Cousins of the Canadian Northwest* (1923); and *Bishop Bompas* (1929). She was also a frequent contributor to Canadian, English, and American magazines. From 1913 to 1920 she served as president of the Canadian Women's Press Club, and from 1926 to 1929 as its historian. She was also honorary secretary of the Society of Women Journalists of England (1913-20), member of the Imperial Press Conference (1920), and member of the executive committee of the Canadian Authors' Association (1922-27). In 1914 she was decorated a Lady of Grace of the Order of St. John of Jerusalem.

Murphy, Thomas Edward. American clergyman and educator, died in Brooklyn, N. Y., Dec. 14, 1933. Born in New York City, Jan. 27, 1856, he attended the College of St. Francis Xavier there and in 1875 became a member of the Society of Jesus, serving his novitiate at Sault-au-Récollet, Quebec. After studying philosophy at Woodstock College he was appointed in 1882 professor of Latin and Greek at Georgetown University. In 1887 he returned to Woodstock to study theology and in 1890 was ordained priest in the Roman Catholic Church. From 1891 to 1893 he served as vice-president of Georgetown University and was then called to the College of St. Francis Xavier as its president. In 1900 Father Murphy became prefect of studies at Holy Cross College, Worcester, Mass., and in 1906 was chosen president of that institution. On his resignation in 1911 he accepted the pastorate of St. Ignatius' Church, in Brooklyn.

Murray, Sir David, died Nov. 14, 1933.

Muto, Nobuyoshi, Baron. Japanese soldier, died at Changchun, Manchuria, July 27, 1933. He was born in Tokyo in 1870 and on his graduation from the Military Staff College in 1893 was commissioned a sub-lieutenant in the Japanese Army, being promoted through the grades to colonel in 1911. Four years later he was made commander of a regiment of the Imperial Guards. He acted also for several years as inspector general of

military education. Previous to Japan's recognition of Manchoukuo in September, 1932, Baron Muto was sent as the Emperor's ambassador to act as "godfather" of the new state, comprising three provinces carved out of Manchuria, and as governor of the Kwantung Leased Territory. During the next year, as commander-in-chief of the Japanese Army in Manchuria, he directed the manoeuvres in the province of Jehol. The rank of Field Marshal was conferred on him for his successful conduct of that campaign. His elevation to the peerage was posthumous.

Nadir Shah Ghazi, died Nov. 8, 1933.

Nelson, Charles Alexander, died Jan. 12, 1933.

Nevin, George Balch. American composer, died at Easton, Pa., Apr. 17, 1933. Born at Shippensburg, Pa., Mar. 15, 1859, he attended Lafayette College, of which he was later appointed member of the visiting committee for the department of music. He was especially noted for his sacred compositions, many of which were adapted through the Braille system of musical notation for the use of the blind. Outstanding among these were: *Arise! Shine! for Thy Light Is Come*; *The Heavenly Voice*; *Jesus Word of God Incarnate*; *O Lord God, to Whom Vengeance Belongeth*; *At the Sepulchre*; *God Will Make All Things Right*; *Into the Woods My Master Went*; *The Words on the Cross*; *The Saving Victim*; *The Master's Garden*; *The Crown of Life*; *The Angel of the Dawn*; *The Incarnation*; *The Adoration*; and *The Crucified*. In addition he wrote the secular songs: *My Bonnie Lass She Smileth*; *It Was a Lover and His Lass*; *O Little Mother of Mine*; *When the Kye Came Home*; and *George Washington Processional*. During the War he organized "The Victory Drummers," a group of 40 men about 60 years of age, who played at patriotic rallies.

New, Clarence Herbert. American author and editor, died in Brooklyn, N. Y., Jan. 8, 1933. Born in New York City Nov. 14, 1862, he attended the Brooklyn Polytechnic Institute and after extensive traveling became first a foreign correspondent and then a construction engineer. In 1895 he was editor of *Truth*, and from 1897 to 1910 manager of the *New York and London Literary Press*. He was also editor during 1913-14 of *Real Life*. Especially noteworthy were the magazine serials of his adventures: *Culpeper Zandt—War Correspondent* (1900-02); *Memoirs of the International Bureau* (1907-08); *An Agent of the Government* (1908-09); *Deep Water Men and the Glowing Ember* (1920-21); and after 1909 *Adventures of a Diplomatic Free Lance*, said to be the longest continuous series with the same leading characters ever published. Under the pseudonym of Culpeper Zandt Mr. New published the series *Mysteries of the Sea* (1911-12; 1914-18), *Galt, M.D.* (1926-27), and *Mysteries of Today* (1928-29), and under that of Stephen Hopkins (Orcutt, *Buccaneers Limited* (1927-28) and *Deep Water Life* (1929).

Newell, Lyman Churchill. American chemist and educator, died at Brookline, Mass., Dec. 13, 1933. Born at Pawtucket, R. I., Sept. 18, 1867, he was graduated from Brown University in 1890, receiving the Ph.D. degree from Johns Hopkins University in 1895. After teaching chemistry at the Pawtucket High School during 1890-92, the Somerville (Mass.) High School during 1895-98, and the Normal School at Lowell, Mass., during 1898-1904, he was called to Boston University as professor of chemistry, serving at the time of his death as head of that department. Dr. Newell was especially interested in the evolution of chemistry since the days of the alchemists, serving as historian of the Northeastern Section of the American Chemical Society and as chairman of the society's committee for the collection of historical data. For his contributions in this field he received from Glessen University its Justus von Liebig Medal. Among the chemistry text-books which he published were: *Experimental Chemistry* (1900); *Descriptive Chemistry* (1903); *Inorganic Chemistry for Colleges* (1909); *General Chemistry* (1914); *Practical Chemistry* (1922); and *Brief Course in Chemistry* (1929).

Ngag-Wang Lobsang Thubden Gya-Tsho, The Dalai Lama of Tibet, died Dec. 17, 1933.

Nitobe, Inazo, died Oct. 15, 1933.

Noailles, Anna Elisabeth, Comtesse de, died Apr. 30, 1933.

Noetzi, Fred A., died May 24, 1933.

Oberhoffer, Emil, died May 22, 1933.

O'Brien, Thomas James, died May 19, 1933.

Odenbach, Frederick Louis, died Mar. 15, 1933.

Oliver, Frank. Canadian journalist and statesman, died in Ottawa Mar. 31, 1933. Born in Peel Co., Ont., in 1853, he migrated in early manhood to Winnipeg and later to Edmonton where in 1880 he founded the *Bulletin*, one of the influential newspapers of the Canadian Northwest. Entering politics as a Liberal, Oliver served as a member of the Northwest Council (1883-88) and of its successor, the Northwest Legislative Assembly (1888-96). In 1896 he was elected to the House of Commons for Alberta as an Independent Liberal, being reelected in 1900, 1904, 1908, and 1911. From 1905 to 1911 he was Minister of the Interior and Superintendent General

of Indian Affairs in the administration of Sir Wilfrid Laurier, continuing the progressive immigration policy initiated by his predecessor, Sir Clifford Sifton, which did so much to procure for the Canadian Northwest a large number of superior agricultural settlers. He was also a member of the Royal Canadian Conservation Commission in 1909. On relinquishing the editorship of the *Edmonton Bulletin* in 1923 Oliver was appointed member of the Board of Railway Commissioners for Canada and after 1928 was special advisory officer to that body.

Orrego Luco, Augusto. Chilean physician and statesman, died Aug. 26, 1933, in Valparaiso where he was born May 2, 1848. On his graduation from the medical school of the University of Valparaiso in 1873 he started his practice and the following year was appointed professor of anatomy at the institution. From 1891 to 1907 he held the chair of mental diseases, acting also as director of the medical school from 1891 to 1896. Dr. Orrego Luco's political career started in 1876 on his election as Deputy from Santiago to the National Congress. Ten years later he was chosen president of the Chamber. On the election of President Errázuriz in 1896 he was made Minister of the Interior and the following year Minister of Public Instruction. He again held the latter portfolio in President Sanfuentes's cabinet of 1916. Dr. Orrego Luco won recognition also as a journalist, editing the reviews *La Revista Chilena* and *Revista de Santiago*, to which he contributed both political and psychological articles. In 1896 he was president of the Chilean Press Association. He was a member of the French Academy of Sciences and of the Royal Spanish Academy.

Ottley, Robert Lawrence. British theologian, died in London Feb. 2, 1933. He was born at Richmond, Yorkshire, Sept. 2, 1856, and was educated at King's School, Canterbury, and at Pembroke College, Oxford, of which he became honorary fellow in 1905. He was appointed tutor at Christ Church, Oxford, in 1881, vice principal of Cuddesdon (theological) College in 1886, divinity dean of Magdalen College, Oxford, in 1890, principal of Pusey House in 1893, and rector of Winterbourne Bassett in 1897. After 1903 he was canon of Christ Church, Oxford, and regius professor of moral and pastoral theology. Dr. Ottley wrote *Lancelot Andreues* (1893), *The Doctrine of the Incarnation* (1895), *Aspects of the Old Testament* (Bampton Lectures, 1897); *The Hebrew Prophets* (1898); *Short History of the Hebrews to the Roman Period* (1901); *The Grace of Life* (1903); *The Religion of Israel* (1905); *Christian Ideas and Ideals* (1909); *The Rule of Faith and Hope* (1911); *The Rule of Life and Love* (1913); *The Rule of Work and Worship* (1915); *Christian Morals* (1915), and *Studies in the Confessions of St. Augustine* (1919).

Pachmann, Vladimir de. Russian pianist, died in Rome, Italy, Jan. 7, 1933. Born in Odessa July 27, 1848, he first studied the violin and theory under his father, Vincent de Pachmann, a professor in the University of Odessa and a friend of Beethoven, Weber, and other musicians. Subsequently he was sent to the Vienna Conservatory where he studied the piano under Dachs and harmony under Bruckner. Returning to Odessa in 1869, he made his debut there as a pianist, and during the next decade, while assiduously perfecting his art, played occasionally at the Gewandhaus in Leipzig, Bosendorfer's Salon in Vienna, the Salle Erard in Paris, and St. James's Hall in London. In 1882 he went to London, and in 1891 traveled in the United States, making subsequent extended tours. De Pachmann's superlative interpretation of the works of Chopin and Mozart, especially in their tonal beauty and romantic poetry, won him his great reputation, but his eccentricities of performance, which increased as he advanced in years, frequently marred his playing of other composers, especially Beethoven. In 1925, after his eighth tour of the United States, he retired from the concert platform. Among the honors bestowed on him was membership in the Order of the Danebrog of Denmark (1885) and the Beethoven Medal from the London Philharmonic Society (1916).

Page, Robert Newton. American congressman, died at Aberdeen, N. C., Oct. 3, 1933. He was born at Cary, N. C., Oct. 26, 1859. After attending the Cary High School and the Bingham School, he began his career in the lumber business in 1880, eventually becoming a manufacturer. In 1890 he branched out into the transportation field, serving during the next 12 years as treasurer of the Aberdeen and Ashboro Railroad Co. In 1903 he took his seat in the 58th Congress as Democratic representative from the seventh North Carolina district, continuing to represent that constituency until his resignation in 1916 because of the government's preparedness policy from which he foresaw the entry of the United States into the World War. On his return to private life Mr. Page was chosen president of the Citizens Bank and Trust Co. at Southern Pines, N. C., where he was also closely identified with the development of Pinehurst as a winter resort. From 1927 to 1933 he was president of the Page Trust Co. of Raleigh. He was a brother of

Walter Hines Page, Ambassador to the Court of St. James's during the World War period.

Painlevé, Paul, died Oct. 29, 1933.

Pakenham, Admiral Sir William Christopher, died July 28, 1933.

Palmer, George Herbert, died May 7, 1933.

Parker, James Southworth. American congressman, died in Washington, Dec. 19, 1933. Born at Great Barrington, Mass., June 3, 1867, he attended Cornell University and taught for several years at St. Paul's School at Concord, N. H. On removing to Salem, N. Y., where he engaged in farming and horse breeding, he decided to enter politics, being elected to the Assembly of the New York Legislature in 1904, 1905, and in the four successive elections after 1908. Elected to the 63d Congress as Republican representative from the 29th New York district in 1913, Mr. Parker continued to represent that constituency during the next 20 years. His most important committee assignment was chairman of the Committee on Interstate and Foreign Commerce. In this connection he sponsored in 1926 the measure abolishing the Railroad Labor Board, leaving the settlement of labor disputes to the parties involved but providing a board of mediation to intervene at the request of either party and if necessary to postpone strikes. In 1931 he introduced in the House the measure recommending that railroad holding companies be put under the jurisdiction of the Interstate Commerce Commission. He advocated also the use of dirigibles in oceanic air mail service to foreign countries.

Parkhurst, Charles Henry, died Sept. 8, 1933.

Parsons, Albert Ross. American musician, died at Mount Kisco, N. Y., June 14, 1933. Born at Sandusky, Ohio, Sept. 16, 1847, he received private instruction on the piano and organ in Buffalo and New York City and then studied in Germany during 1867-72 at the Royal Conservatory in Leipzig, Tausig's High School of the Pianoforte in Berlin, and Kullak's New Academy of Music in Berlin. After his return to the United States in 1873 he was active as an organist and was also vice-president and director of the piano department of the Metropolitan College of Music in New York City. From 1893 to 1914 he was president of the American College of Musicians of the University of the State of New York. Mr. Parsons translated Wagner's philosophic study *Beethoven* and wrote *Science of Pianoforte Practice, The Principles of Expression Applied to the Pianoforte, Teaching Reform, and The Virtuoso Handling of the Piano*. Among his compositions were the songs *The Night Has a Thousand Eyes* and *Break, Break*. Prominent as an Egyptologist, he published *New Light from the Great Pyramid* (1893).

Patel, Vithalbhaj Javerbhaj. Indian Nationalist leader, died in Geneva, Switzerland, Oct. 22, 1933. Born at Karamsed, Gujarat, about 1873, he studied for the bar and for many years practiced in Bombay. In 1912 he was elected to the Bombay Assembly from Gujarat and five years later was sent to Delhi to represent that body in the Imperial Assembly. There he promoted the Bombay Primary Education Act. He represented the Indian National Congress before the Joint Select Committee of the British Parliament which was appointed in 1919 to consider the Government of India Act in which were embodied certain constitutional changes for the extension of India's self-government, drawn up by Edwin S. Montagu, Secretary of State for India, and Viscount Chelmsford (q.v.), the Viceroy. On his return to India Patel participated in Gandhi's non-cooperation movement, including the tax strike of Gujarat landowners. His election as Lord Mayor of Bombay followed. He lost this post, however, when he refused to receive Lord Reading, the newly-appointed Viceroy. In 1923 he was returned to the Legislative Assembly as member for Bombay City and was chosen deputy-leader of the Swarajist party. Two years later he was appointed president of the Assembly and served in that capacity until 1930. In the latter year he was imprisoned for six months for leading the second civil disobedience demonstration in Bombay. In 1931 he attended the first Indian Round Table Conference in London, but on his return was again arrested because while passing through other European countries he had continually denounced British rule in India. At the time of his death he was living in exile in Switzerland.

Paton, Thomas Bugard. American lawyer, died at Forest Hills, L. I., N. Y., Mar. 28, 1933. Born in New York City May 7, 1861, he attended Columbia University and on being admitted to the New York bar in 1883 began his practice in New York City. He later edited the law department of the *Journal of Banking* and in 1889 founded the *Banking Law Journal*, of which he was editor for 19 years. After 1908 Mr. Paton was general counsel for the American Bankers Association, sponsoring for that organization many statutes relating to banking practice which have been adopted by various States. The opinions on banking law, which he prepared for members of the Association, were published under the title of *Paton's Digest*.

Paulus, Francis Petrus. American painter, died Feb. 3, 1933, in Detroit, Mich., where he was born Mar. 18, 1862. After attending the Pennsylvania Academy of Fine Arts, he went to Europe studying at the Royal Academy in Munich under Loefft and at the École des Beaux-Arts in Paris under Bonnat. On his return to the United States in 1889 he served as instructor in drawing and painting at the Detroit Institute of Arts and six years later was appointed associate director of the Detroit Art Academy. He directed also during 1896-98 the Ann Arbor Art School. In 1903 he again went abroad, setting up his studio in Bruges, Belgium, where he later founded an art school. Among scenes of the quaint medieval town which Mr. Paulus painted were "Alley in Bruges," at the Herron Art Institute, Indianapolis; "Low Tide," "Fish Market," "Shimmering Sea," and "Old Bridge, Bruges," at the Detroit Institute of Arts and "Old Canal, Bruges," at the McGregor Library, Highland Park, Mich. His etchings were exhibited at the New York Public Library, Library of Congress, Oakland (Calif.) Museum, Musée Moderne in Bruges, and the Royal Academy of Fine Arts in Munich.

Peek, Frank William, Jr., died July 26, 1933.

Peralta, Frances (Phyllis Partington). American dramatic soprano, died in New York City Dec. 22, 1933. Born in Manchester, England, she was brought to the United States in childhood and obtained her preliminary musical education in San Francisco, later going to New York City where she studied voice under Victor Maurel. In 1913 she was understudy to Marguerite Sylva in Lehár's operetta *Gypsy Love*, and upon Miss Sylva's inability to continue with the second act at the New York première stepped into the rôle and created a sensation. After this event she went to Italy for further study and entered grand opera under the name of Frances Peralta. On her return to the United States she was associated successively with the Boston Opera Co., Chicago Civic Opera Co., and St. Louis Opera Co. Previous to joining the Metropolitan Opera Co. in 1921 Miss Peralta toured the United States for three years with Antonio Scotti's company. She made her début with the Metropolitan as Elena in Boito's *Mefistofele* and was one of that company's members who sang in Italian opera at Baden-Baden, Germany, in 1926. Among the operas in her repertoire were *Aida*, *La Forza del Destino*, *William Tell*, *Il Trovatore*, *Mona Lisa*, *Andrea Chénier*, *Tosca*, *Don Carlos*, and *Cavalleria Rusticana*. After her retirement in 1930 she made only a few concert appearances.

Perdue, William Egerton. Canadian jurist, died in Winnipeg, Man., Jan. 17, 1933. Born near Brampton, Ont., June 20, 1850, he was graduated from the University of Toronto in 1873. He served as head master of the Brampton High School for two years and then became legal editor and reporter on the Toronto *Globe*. Admitted to the Ontario bar in 1879, Justice Perdue began his practice in Toronto but in 1882 removed to Winnipeg where he practiced until his appointment in 1903 as puisne judge of the Court of King's Bench for Manitoba. Transferred to the Provincial Court of Appeal in 1906, he was elevated 12 years later to the chief justiceship of that court. He resigned in 1930. For some years he was president and treasurer of the Law Society of Manitoba.

Perkins, George Henry. American educator, died at Burlington, Vt., Sept. 12, 1933. Born in Cambridge, Mass., Sept. 25, 1844, he was graduated from Yale University in 1867, receiving the Ph.D. degree from that institution in 1869. Joining the faculty of the University of Vermont, in 1869, he served until 1898 as professor of zoology, botany, and geology and after that date as professor of geology. He was also from 1898 to 1933 vice-president and dean of the College of Arts and during Pres. Guy Potter Benton's leave of absence during the World War was acting president of the institution. In addition to serving as entomologist for the State of Vermont from 1880 to 1895, Dr. Perkins was State geologist after 1898. Some of his publications were *A Flora of Vermont* (1888); *Reports on Injurious Insects* (1880-91); *Reports on the Marble, Slate and Granite Industries of Vermont* (1898).

Peterson, Olof August, died Nov. 12, 1933.

Peynado, Francisco J. Dominican lawyer and diplomat, died in Paris, France, Jan. 1, 1933. Born at Puerto Plata, Dominican Republic, Oct. 4, 1867, he studied for the bar and during his 40-year practice in Santo Domingo established an international reputation. Appointed Minister to the United States in 1913, he was especially prominent during his five-year residence in Washington in the affairs of the Pan American Union, participating in the first Pan American Financial Congress and the second Pan American Scientific Congress of 1915 and serving as a member of the Union's governing board. In 1922 he was co-author with Charles E. Hughes, then Secretary of State of the United States, of the Hughes-Peynado Plan which resulted in the establishment of a provisional government and the gradual withdrawal of the American military administration. While acting as Secretary of State for Foreign Affairs in 1929 Señor

Peynado was Dominican member of the commission which helped to draft the treaty settling the boundary dispute with Haiti. Previous to his death he had been Minister of Justice.

Phillips, Charles. American editor, poet, and playwright, died in Minneapolis, Minn., Dec. 29, 1933. Born at New Richmond, Wis., Nov. 20, 1880, he attended De La Salle College, Toronto, and began his newspaper career in 1901 as managing editor of the St. Paul *Northwestern Chronicle*. In 1903 he removed to Washington where for three years he edited the *New Century*. After editing the *Republican Voice* at New Richmond during 1906-07 he went to San Francisco where he was editor and manager of the *Monitor* until 1915. During the World War he served in France with the Knights of Columbus and after the War was stationed for three years with the American Red Cross in Poland, recording his impressions in *The New Poland* (1923). On his return to the United States in 1924 he became professor of English literature at the University of Notre Dame. In addition to being associate literary editor of the *Catholic World Magazine* Professor Phillips was founder and co-editor of *Pan, Poetry and Youth*. Among his poems were *Back Home* (1913) and *High in Her Tower* (1927). He wrote also the dramas, *The Divine Friend* (produced by Margaret Anglin in 1915), *Tarcisus* (1917), and *The Shepherd of the Valley* (1918); a novel, *The Doctor's Wooing* (1926); and a biography, *Young Lincoln* (1929).

Pichon, Stephen, died Sept. 18, 1933.

Pickford, Jack. American motion picture actor, died in Neuilly, France, Jan. 3, 1933. Born in Toronto, Ont., Canada, Aug. 18, 1896, he attended the St. Francis Military Academy in New York City and had experience as a child actor on both the legitimate stage and in motion pictures. After attaining stardom about 1919 some of his better known films were *The Bat*, *Brown of Harvard*, *Exit Smiling*, *All Square*, and *Gang War*. After making the last picture in 1927 he was obliged to retire on account of ill health. He was a brother of Mary Pickford, the famous screen star. His real name was John C. Smith, but like his sister he adopted for professional purposes his mother's maiden name.

Piez, Charles. American engineer, died in Washington, D. C., Oct. 2, 1933. Born in Mayence, Germany, Sept. 24, 1866, he was graduated from the School of Mines of Columbia University in 1889 and began his career with the Link Belt Engineering Co. of Philadelphia, rising from engineer-draftsman to chief engineer, general superintendent, and general manager. On the merger of this company in 1906 with the Link Belt Machinery Co. of Chicago and the Ewart Manufacturing Co. of Indianapolis he was elected president of the greater Link Belt Co., manufacturers of elevating and conveying machinery, with headquarters in Chicago, and from 1924 until his death was chairman of the board of directors. On the entry of the United States into the World War Mr. Piez was appointed vice-president and general manager of the Emergency Fleet Corp. of the United States Shipping Board. Made director general on Charles M. Schwab's resignation in December, 1918, he directed during the next six months the corporation's huge building programme for which \$3,000,000,000 had been appropriated. As chairman of the Illinois Workmen's Compensation Commission in 1911 he had shown special interest in framing labor legislation for that State. He had also served as president of the Illinois Manufacturers Association (1911-13 and 1924-25) and of the American Society of Mechanical Engineers (1929-30).

Pinedo, Francesco, Marchese, died Sept. 2, 1933.

Platt, Charles Adams, died Sept. 12, 1933.

Pollak, Egon. Czech orchestral conductor, died June 14, 1933, in Prague, where he was born May 5, 1879. He attended the University of Göttingen and received his musical education at the Prague Conservatory where he studied with Karl Křtitl. In 1900 he made his début at the Prague Opera, conducting Flotow's *Marta*. That same year he was made conductor at the Royal Landestheatre in Prague. Called to the Bremen Stadttheatre as chief conductor in 1906, he held the same position at the Leipzig Stadttheatre from 1910 to 1912 and at the Frankfurt Opera from 1912 to 1914. The next year he was guest conductor of the Wagnerian cycle at Covent Garden, London, and the Théâtre des Champs Élysées, Paris. On coming to the United States in 1915 Mr. Pollak was associated with the Chicago Civic Opera Company, but on account of the anti-German feeling that was aroused by the entry of the United States into the World War returned to Hamburg in 1917 where he was general musical director of the Stadttheatre. However, he was invited in 1930 to conduct at the first season's performances in the new Chicago Opera House. He was stricken while conducting Beethoven's *Fidelio* at the Deutsches Theatre in Prague.

Porter, Arthur Kingsley. American archæologist, died by drowning off the Donegal Coast of Ireland July 8, 1888. Born at Stamford, Conn., Feb. 6, 1888, he was graduated from Yale University in 1904 and studied

architecture at Columbia University during the next two years. After several years of travel and study in Europe he became lecturer on the history of art at Yale University in 1915 and assistant professor two years later. In 1920 he was called to Harvard University as professor in the history of art, holding after 1924 the William Dorris Boardman chair of fine arts. Professor Porter was requested by the French government to advise on the restoration of damaged monuments after the War and served during 1923-24 as exchange professor at French and Spanish universities. Among his best-known works were: *Medieval Architecture* (2 vols., 1908); *The Construction of Gothic and Lombard Vaults* (1912); *Lombard Architecture* (4 vols., 1915-17, awarded the Grande Médaille de Vermeil by the French Archaeological Society); *Romanesque Sculpture of the Pilgrimage Roads* (10 vols., 1925); *Spanish Romanesque Sculpture* (2 vols., 1928); and *The Crosses and Culture of Ireland* (1931). He was a fellow of the Medieval Academy of America, the American Academy of Arts and Sciences, and the Royal Irish Society of Antiquaries.

Porter, Holbrook Fitz-John, died Jan. 25, 1933.

Porter, Jermain Gildersleeve, American astronomer, died in Cincinnati, Ohio, Apr. 14, 1933. Born in Buffalo, N. Y., Jan. 8, 1852, he was graduated in 1873 from Hamilton College, to which, after a year at the University of Berlin and the Royal Observatory, he returned as assistant professor of astronomy, receiving the Ph.D. degree in 1878. Dr. Porter then became associated with the United States Coast and Geodetic Survey but in 1884 returned to his astronomical work as director of the Cincinnati Observatory and professor of astronomy at the University of Cincinnati. In 1894 he received the *Astronomical Journal* comet prize and from 1899 to 1905 acted as observer for the International Latitude Service. He retired as professor emeritus in 1931. His publications included, besides numerous catalogues of stars and nebulae, *Our Celestial Home* (1888); *Charts and Measures of Nebulae* (1891); *Historical Sketch of Cincinnati Observatory* (1893); *The Stars in Song and Legend* (1901); *Variation of Latitude* (1908); *All-American Time* (1918); and *How to Find the Stars and Planets* (1920).

Prall, William, American clergyman and author, died in New York City Mar. 22, 1933. Born in Paterson, N. J., Apr. 6, 1853, he was graduated from Heidelberg University with the Ph.D. degree in 1878 and from Columbia University with the LL.B. degree in 1875. Admitted to the New Jersey bar in 1876, he practiced in Paterson for 10 years. During this period he served also for one term (1883-84) in the New Jersey Assembly, drafting and securing the enactment of the Free Public Library Law. In 1885 he was elected the first president of the Paterson Free Library. Dr. Prall then decided to enter the ministry, being ordained a deacon in the Protestant Episcopal Church in 1887 and a priest the following year. He served successively as rector of the Church of the Holy Communion, South Orange, N. J. (1887-91), of St. John's Church, Detroit, Mich. (1891-1900), and of St. Paul's Church, Albany, N. Y. (1900-06). An authority on the French Protestants, from which stock he was descended, he published *The Origin of the Church of the Huguenots* (1924), *The Edict of Nantes* (1925), *The Revocation of the Edict of Nantes* (1926); and *Huguenot Settlements in America* (1928). He was also the author of *Omne Christianity* (1885); *The State and the Church* (1900); *Court of Alexander III* (1910); and *Some Half-Forgotten Worthies of New Netherlands* (1925).

Price, Eli Kirk, American lawyer, died Jan. 24, 1933, in Philadelphia, Pa., where he was born in 1860. He was graduated from the University of Pennsylvania with the LL.B. degree in 1883 and upon his admittance to the Pennsylvania bar the same year began his practice in Philadelphia. In addition to his profession Mr. Price devoted much of his time to beautifying the city of Philadelphia and, although continually opposed because of the enormous expense involved, realized his wish in the development of the Parkway, created through the demolition of hundreds of old buildings so that the city's business centre might be directly linked by a grand boulevard with Fairmount Park. This project included also the erection of various cultural units, such as the Pennsylvania Museum, Free Library of Philadelphia, Rodin Museum, and Franklin Institute. In recognition of his efforts he received in 1929 the Philadelphia Civic Award of \$10,000 founded by Edward Bok. After 1925 Mr. Price was president of the Pennsylvania Museum and School of Industrial Art. He held also the offices of president of the City Parks Association and vice-president of the Fairmount Park Commission. The French Society of Architects conferred on him its Beaux-Arts medal, while the French government made him a member of the Legion of Honor and the Italian government a member of the Order of the Crown of Italy.

Purinton, Daniel Boardman, American educator, died at Morgantown, W. Va., Nov. 27, 1933. He was born in Preston Co., Va., Feb. 15, 1850. On his graduation

from West Virginia University in 1873 he taught in its preparatory department until 1878 and then joined the faculty as professor of logic. In 1880 he was made professor of mathematics and in 1885 of metaphysics. He had served also during 1881-82 as vice-president and acting president. In 1890 Dr. Purinton was elected president of Denison University but 11 years later was recalled to West Virginia University, serving as president until his retirement in 1912. He wrote *Christian Theism* (1889).

Putnam, Eben, died Jan. 22, 1938.

Radford, Robert, British concert and operatic basso, died in London, Mar. 1, 1933. Born at Nottingham, May 13, 1874, he received his musical education at the Royal Academy of Music under Frederic King, Alberto Randegger, and Battison Haynes. He made his debut in 1899 at the Norwich Musical Festival and after 1906 appeared at most of the leading festivals, including those of Birmingham, Leeds, Sheffield, and Bristol, and at the Chappell Ballad Concerts and the Hallé Concerts in Manchester. His voice was ideally suited to the oratorios of Haydn and Handel and after 1906 he was principal bass soloist at all the Handel Festivals held in the Crystal Palace, London. Mr. Radford was also principal basso with the Royal Opera at Covent Garden and for some time with the Beecham Opera Co., his repertoire including *Boris Godunov*, *Ivan the Terrible*, *Mephistopheles*, *Sarastro*, *Ossin*, *Louise*, and many Wagnerian operas. He was one of the founders of the British National Opera Co. in 1921, and after 1928 was professor of singing at the Royal Academy of Music.

Rainsford, William Stephen, American clergyman, died in New York City, Dec. 17, 1933. Born in Dublin, Ireland, Oct. 30, 1850, he took his degree at St. John's College, Cambridge, in 1872, and then following his ordination in the Church of England was curate of St. Giles's Church, Norwich, until 1876. In the latter year he came to the United States to serve as acting rector of Holy Trinity Protestant Episcopal Church, New York City, and subsequently conducted evangelistic services in other cities of the United States and Canada. From 1878 to 1882 he was assistant rector of St. James's Cathedral, Toronto. Dr. Rainsford was then called to St. George's Church, New York City, which under his direction developed great institutional activity especially in ministering to the needs, both physical and spiritual, of an engulfing tenement population. In this work he was ably supported by J. Pierpont Morgan, senior warden of the vestry. After his retirement from the ministry in 1906 he became known as an African lion hunter, his experiences being recounted in *The Land of the Lion* (1909). In his later days he became a pronounced Modernist on theological matters, seeking from Bishop Greer of the Diocese of New York divestment from all ecclesiastical rank in 1912. Dr. Rainsford published also *The Reasonableness of Faith, and Other Addresses* (1891), *Seven Last Words on the Cross* (1894); *A Preacher's Story of His Work* (1901); *The Reasonableness of the Religion of Jesus* (1908); and *The Story of a Varied Life* (1922).

Ranfurly, Uchter John Mark Knox, Fifth Earl of, British administrator, died in London, Oct. 1, 1933. Born Aug. 14, 1856, he received his education at Harrow and Trinity College, Cambridge. After serving for two years as Lord-in-waiting to Queen Victoria, he was appointed in 1897 Governor and Commander-in-Chief of New Zealand, his seven-year administration being marked by the passage of some of the most radical legislation enacted by the colonial government. On his retirement in 1904 he was reputed to have been the most popular governor New Zealand ever had. Lord Ranfurly was director of the Ambulance Department of the British Red Cross during the World War, receiving in recognition of these services the decorations of Knight of Justice of the Order of St. John of Jerusalem in England and Officer of the French Legion of Honor. He was also created Knight Commander of the Order of St. Michael and St. George (1897); Knight of the Grand Cross of St. Michael and St. George (1901); and Privy Councillor of Ireland (1905).

Ranjitsinhji Vibhaji, Maharaja Jamsheeb of Nawanagar, Indian statesman, died at Jamnagar, Nawanagar, India, Apr. 2, 1933. Born at Sarodar, Sept. 10, 1872, he was adopted about 1880 by his uncle, Shri Vibhaji, Jam Sahab of Nawanagar, as his successor. He received his education at the Rajkumar College and at Trinity College, Cambridge, and while in England made a name for himself as an expert cricket player, being champion batsman for All England in 1896 and again in 1900. In 1906 he ascended the throne of Nawanagar and succeeded in effecting many improvements in the government during the next quarter of a century so that the revenue was more than trebled. In addition he improved communications by constructing a state railway from Rajkot to Tamnagar, built up a seaport at Bedi Bundar, developed irrigation works, and provided better sanitation for the urban centres. During the early part of the World War he served in France on Sir John French's

staff, sent to the front several squadrons of Lancers, and lent his house at Staines, Middlesex, as a hospital for wounded soldiers. On the formation of the League of Nations Ranjitsinhji twice represented India at the Assembly and was a delegate to the Indian Round-Table Conferences held in London in 1930 and 1931. In connection with the Chamber of Princes he served as pro-chancellor for several years and in 1932 was chosen chancellor. He was created Knight Commander of the Star of India in 1917, Knight of the Grand Cross of the Order of the British Empire in 1919, and Knight Grand Commander of the Star of India in 1923.

Rasmussen, Knud, died Dec. 21, 1933.

Reber, Samuel, died Apr. 16, 1933.

Rees-Davies, Sir Colin. British colonial jurist, died at Bournemouth, Feb. 1, 1933. Born in Pembrokeshire, May 15, 1867, he attended Eton and studied for the bar at the Inner Temple, being admitted as a solicitor in 1891. Removing to the Bahamas in 1901, he joined the bar there and two years later was appointed acting chief justice. In 1907 he was transferred to British Honduras where in addition to being attorney general and member of the executive and legislative councils, he served as acting colonial secretary during 1908-09 and as acting chief justice in 1908, 1909 and 1912. Sir Colin was next sent to British Guiana as solicitor-general of that colony and was also on several occasions acting attorney-general. In 1917 he was appointed chief justice of the Bermuda Islands and president of the legislature council. After declining the posts of chief justice of Grenada, British Honduras, and the Leeward Islands, he accepted in 1923 that of first puisne judge of Trinidad and Tobago and during the year previous to his retirement in 1926 was acting chief justice. Knighthood was conferred on him in 1920.

Renaud, Maurice Arnaud. French operatic baritone, died in Paris, Oct. 17, 1933. Born in Bordeaux in 1861, he received his musical education at conservatories in Paris and Brussels, making his debut in the latter city in 1883. Seven years later he appeared at the Opéra Comique in Paris. In 1891 he made his debut at the Paris Opera and sang there until 1902. During this period he appeared also at Covent Garden, London, La Scala in Milan, and San Carlo at Lisbon. Brought to the United States by Oscar Hammerstein in 1906 he sang in various French and Italian operas at the Manhattan Opera House in New York City, his most successful rôle being that of Athanée in *Thaïs* in which he appeared with Mary Garden. After the closing of the Manhattan Opera House in 1910 he joined the Boston Opera Company, and through the courtesy of the latter returned to New York City for several appearances with the Metropolitan Opera Company. On the outbreak of the World War he returned to France and promptly enlisted in the Army, receiving several citations and the Croix de Guerre with palms and stars for his bravery under fire. During the course of his career which ended in 1919, Renaud sang in more than 60 operas. Outstanding in his repertoire were *L'Africaine*, *Faust*, *Les Huguenots*, *William Tell*, *Samson and Delilah*, *Othello*, *Hamlet*, *Aida*, *Don Juan*, *Lohengrin*, *Tannhäuser*, and *The Flying Dutchman*.

Reno, Conrad. American lawyer, died at Daytona Beach, Fla., May 7, 1933. Born at Mt. Vernon, Ala., Dec. 28, 1859, he attended Lehigh University, the Harvard Law School, and Boston University, receiving his LL.B. degree from the latter in 1883. Following his admission to the Massachusetts bar, he practiced in Boston during the next 29 years. He gained special recognition for the part which he played in drafting the Public Service Tri-Partnership Bill of 1907, which called for the regulation of rates and charges, dividends and wages in public service corporations; the Railroad Tri-Partnership Bill of 1908; the Gas Tri-Partnership Bill of 1909; and the Business Tri-Partnership Bill of 1911. Later for Congress he drafted the Interstate Railroad Capital-and-Labor Partnership Bill (1921) and the Coal Partnership Bill (1922). Mr. Reno was a leader in Theodore Roosevelt's Progressive revolt of 1912, and in the campaign of 1932, the People's party candidate for President. He wrote *State Regulation of Wages* (1891); *Non-Residents and Foreign Corporations* (1892); *Employer's Liability Acts* (1896-1903); and *History of the Judicial System of New England* (1900).

Renton, Sir Alexander Wood. British jurist, died in London, June 17, 1933. Born at Auchtermuchty, Fifeshire, Scotland, June 24, 1861, he was educated at the University of Edinburgh and studied law at Gray's Inn in London. After his admission to the bar in 1885 he practiced on the Oxford circuit. In 1901 he went to Mauritius where he was procurer and advocate-general and for a few months served as puisne justice of the Supreme Court. Appointed justice of the Supreme Court of Ceylon in 1906, he was promoted in 1914 to chief justice. Knighthood was conferred on him in 1915 and previous to his retirement three years later he was a bencher of Gray's Inn. Sir Alexander then entered on his career as an arbitrator, serving as vice-president of

the Egyptian Riots Indemnities Commission in 1919, chairman of the Salaries Commission for Ceylon in 1921, and chairman of the Irish Compensation Commission in 1923 and of the Irish Grants Committee during 1926-30. In addition to publishing the valuable *Law and Practice of Insanity* (1896) he edited the *Encyclopedia of English Law* (13 vols., 1897) and, with G. G. Phillimore, *The Comparative Law of Marriage and Divorce* (1910).

Renwick, William Whetten. American architect, died at Short Hills, N. J., Mar. 15, 1933. Born at Lennox, Mass., Oct. 30, 1864, he was graduated from Stevens Institute of Technology in 1885. After studying architecture under his uncle, James Renwick, in New York, he became associated with him in designing such well known New York churches as St. Patrick's Roman Catholic Cathedral and for the Protestant Episcopal communion, St. Bartholomew's Church, All Saints' Church, and Grace Church. He later pursued the profession alone. As a specialist in ecclesiastical architecture and decoration, Mr. Renwick was said to have invented the mural decorative process known as "fresco-relief" and designed the Cathedral of St. Peter and St. Paul in Indianapolis and St. Aloysius's Roman Catholic Church in New York City. At the time of his death he was devoting himself to country house designing and its accompanying landscape architecture.

Restarick, The Rt. Rev. Henry Bond. American Protestant Episcopal bishop, died in Honolulu, T. H., Dec. 8, 1933. Born in Somersetshire, England, Dec. 26, 1854, he attended King James Collegiate School at Bridgewater, and after coming to the United States was enrolled in Griswold College at Davenport, Iowa. On his graduation in 1882 he was ordained to the priesthood of the Protestant Episcopal Church and served during the next 20 years as rector of St. Paul's Church, San Diego, Calif. In 1902 he was elected and consecrated first Missionary Bishop of the District of Honolulu. During his 18-year incumbency of this office Bishop Restarick made also a valuable contribution to historical knowledge of the Hawaiian Islands, serving as president of the Hawaiian Historical Society and in 1923 as a member of the Commission for the Sesquicentennial Celebration of the Discovery of Hawaii. He edited the *Hawaiian Church Chronicle* from 1907 to 1920 and again after 1930, and in addition to several devotional works wrote *Hawaii from the Viewpoint of a Bishop* (1924); *Gaetano Did Not Discover Hawaii* (1929), and *Sun Yat Sen, Liberator of China* (1931).

Reuterdaahl, Arvid. American physicist and educator, died in Minneapolis, Minn., Jan. 13, 1933. Born in Sweden, Feb. 15, 1876, he was brought by his parents to the United States in 1882. On his graduation from Brown University in 1897 he began his career as an instructor in mathematics there. In 1904 he accepted a call to Colby College as professor of physics but the following year removed to Spokane, Wash., where until 1915 he was engaged in practice as an engineer. Reuterdaahl then held for two years the chair of theoretical and applied mechanics at the Kansas City Polytechnic Institute, but it was while serving as dean of the department of engineering and architecture at the College of St. Thomas in St. Paul, Minn., that he startled academic circles with various facts disputing the truth of Einstein's theory of relativity and bringing to their attention in *Einstein and the New Science* (1921) the work of various scientific forerunners. After 1922 he was president of Ramsey Institute of Technology in St. Paul. In 1923 the Academy of Nations awarded to Reuterdaahl a Doctorate in Science in recognition of his promulgation of the theory of septad-constants as set forth in *The Synthesis of Number Space-Time and Energy and a Physical Basis for Planck's and Rydberg's Constants*. He wrote also *Theory and Design of Reinforced Concrete Arches* (1908); *Scientific Theism versus Materialism, The Space-Time Potential* (1920); *History of Thought* (1925), and *The God of Science* (1928).

Rhodes, Frederick Leland. American electrical engineer, died at Short Hills, N. J., Mar. 18, 1933. He was born in Boston, Mass., Oct. 25, 1870. On his graduation from the Massachusetts Institute of Technology in 1892 he began his career with the American Bell Telephone Co. Later under John J. Carty, chief engineer of the American Telephone and Telegraph Co., he served as a member of the research staff of the Bell Telephone Laboratories, helping in the solution of many of the problems connected with long distance telephony. In 1912 he accompanied General Carty to the Pacific Coast, the experiments which they conducted resulting three years later in the opening of the first transcontinental telephone line between New York and San Francisco. An outside plant development engineer for the American Telephone and Telegraph Co. from 1919 to 1932, Rhodes continued his important work in connection with the standardization of materials, apparatus, and practices in underground and overhead wire systems. He was a fellow of the American Institute of Electrical Engineers and served at one time as chairman of its board of examiners. He wrote *Beginnings of Telephony* (1929).

Richer, Paul Marie Louis Pierre. French neurologist, sculptor, and author, died in Paris, Dec. 17, 1938. Born at Chartres, Feb. 17, 1849, he was educated at the University of Paris, beginning his medical career in 1879. The publication two years later of *Études cliniques sur l'hydro-épilepsie ou grand hystérie*, which was crowned by the Institute, secured his appointment as director of the laboratory connected with the Salpêtrière clinic of nervous diseases. In 1903 he became professor of anatomy at the École Nationale des Beaux Arts and was thereafter perhaps better known for his connection with art. He published *Anatomie artistique* (1890) which was crowned by the Academy of Fine Arts and by the Academy of Sciences; *Canon des proportions du corps humain* (1893); *Physiologie artistique de l'homme en mouvement* (1895); *L'Art et la médecine* (1902); and *Nouvelle anatomie artistique du corps humain* (3 parts, 1906-21). As a sculptor, Richer acquired his greatest fame as designer of monuments to his colleagues, Pasteur, Arloing, and Mangan, and of statues of athletes. In 1900 he received a bronze medal at the Exposition Universelle in Paris. A member of the Academy of Medicine and of the Academy of Fine Arts of the French Institute, he served in 1907 as president of the Society of the History of Medicine. He was later appointed inspector-general of public instruction and an officer of the Legion of Honor.

Rickards, Maj.-Gen. George Collins, U.S.A., Ret. American soldier, died at Oil City, Pa., Jan. 15, 1933. Born in Philadelphia, Pa., Aug. 25, 1860, he attended the public schools of Franklin, Pa., and was engaged in the hardware business at Oil City from 1882 to 1915. His military career was in connection with the National Guard of Pennsylvania which he joined in 1877, and with which he served during the Spanish-American War as lieutenant-colonel and then colonel of the 16th Infantry. He also saw action with this regiment in Puerto Rico and on the Mexican border during 1916-17. When it was reorganized as the 112th Infantry on the entry of the United States into the World War he was made commander, accompanying it to France. After the reorganization of the 28th Division he became commander of the 56th Brigade which participated in the battles of Château-Thierry, Champagne-Marne, Aisne-Marne, Fismes, Oise-Aisne, and Meuse-Argonne. On his return General Rickards received the Long Service Medal of Pennsylvania and the Distinguished Service Medal and in 1921 was appointed by President Harding chief of the Militia Bureau of the War Department with the rank of major-general. He was the first National Guardsman of this rank to be associated with the War Department. On his retirement in 1925 he urged the establishment of the Militia Bureau under an Assistant Secretary of War rather than under the General Staff. For some time he was an executive officer of the Polk State School at Polk, Pa. In 1927 he was elected and in 1931 reelected Register of Wills, Recorder of Deeds, and Clerk of the Orphans' Court of Venango Co., Pa.

Ricker, George Alfred Joy. American civil engineer, died in Washington, D. C., Nov. 2, 1933. Born at Portsmouth, N. H., June 30, 1863, he attended the Massachusetts Institute of Technology and began his career in 1881 as transit man with the Erie Railroad. After a year's service with the Northern Pacific Railway as topographer and locating engineer, he established his private practice in Buffalo in 1887. From 1890 to 1908 he was chief engineer in the construction of the Niagara Gorge Railroad. He served also as resident engineer for the Buffalo Creek Railroad (1887-97); chief engineer for the Buffalo Traction Co. (1895-99), the Buffalo and Dewey Electric Railway (1900-03), Niagara Gorge Power Co. (1901-08); and construction engineer of the Twin Lakes (Colo.) Land and Water Co. (1898). In 1913 Mr. Ricker gave up his practice to accept the appointment of First Deputy Commissioner of Highways in New York State, supervising in this capacity the construction of more than 2500 miles of roads, including the Storm King Highway along the Hudson River. The next step in his career was that of consulting engineer in Albany, N. Y., where he edited for the New York State Automobile Association during 1915-16 its official magazine, *Motordom*. In 1916 he went to Chicago to serve as highway engineer for the Portland Cement Association and two years later became district engineer for that company in Washington. He resumed private practice in that city in 1930 and at the time of his death was a member of the board of consulting engineers of the Reconstruction Finance Corporation.

Rigdon, Jonathan. American educator, died at Danville, Ind., Dec. 30, 1933. He was born at Rigdon, Ind., Dec. 22, 1858. On his graduation from the Central Normal College at Danville, Ind., in 1886, he remained at that institution as professor of philosophy, acting also as president during 1897-1900. He then studied for his Ph.D. degree at Boston University, serving in the meantime (1904-06) as professor of ethics and philosophy at Clark College, Worcester, Mass. In 1908 Dr. Rigdon founded and was president until 1916 of the Winona College at Winona Lake, Ind. Recalled to Central Nor-

mal College in 1918, he again served as president of that institution until his retirement in 1929. Among his publications were: *Grammar for Beginners* (1891); *Outline of Psychology* (1892); *College Ideals* (1915); *Science and Religion* (1926); and *The Art of Speaking* (1932).

Riley, (Isaac) Woodbridge. American philosophical scholar, died at Cape May, N. J., Sept. 2, 1893. He was born in New York City, May 20, 1869, and was educated at Yale University, receiving the A.B. degree in 1892 and the Ph.D. degree in 1902. During 1902-04 he served as acting professor of philosophy at the University of New Brunswick and then for three years held the Johnston research scholarship at Johns Hopkins University. After 1908 he was professor of philosophy at Vassar College. As associate editor of the *Psychological Bulletin* from 1903 to 1907, he published *The Founder of Mormonism: A Psychological Study of Joseph Smith, Jr.* (1892); *American Philosophy: The Early Schools* (1907); *American Thought from Puritanism to Pragmatism* (1915); *Le Génie Américain* (1921); *The Faith, Falsity, and Failure of Christian Science* (joint author, 1925); *From Myth to Reason* (1926); *Men and Morals* (1929); and *The Meaning of Mysticism* (1930).

Robb, William Luspensard. American electrical engineer, died at Troy, N. Y., Jan. 26, 1933. Born at Saratoga, N. Y., May 9, 1861, he was graduated from Columbia University in 1880, receiving the Ph.D. degree from the University of Berlin three years later. During the Spanish-American War he was connected with the submarine mine service. He later served as consulting engineer for the Hartford Electric Light Co., the New York Shipbuilding Co., the General Electric Co., and the General Railway Signal Co. After 1902 he was professor of electrical engineering and physics at the Rensselaer Polytechnic Institute and head of the electrical engineering department.

Roberts, Arthur. British actor, died Feb. 27, 1933, in London where he was born Sept. 21, 1852. He acquired his earliest fame as a comedian during the '70s at the Middlesex and other London music halls. In 1880 he made his first appearance on the legitimate stage in a *Mother Goose* pantomime at Drury Lane. After touring the provinces in *The Miller and His Men* and *Sinbad* in 1883 he returned to the London stage, appearing during the next few years in such successes as *Le Vie, Nell Gwynne*, *Black Eyed Susan*, and *The Grand Mogul*. In 1890 he became associated with Sir Augustus Harris in the management of the Royalty Theatre where he appeared in *Tra-la-la Tosca*. He also appeared that year in *Guy Fawkes, Esq.*, and the following year played the rôle of De Richemont in *Joan of Arc*. *Blue Eyed Susan* and *Too Lovely Black Eyed Susan* in 1892 were followed by *Claude Duval* (1894), *Gentleman Joe* (1895), and *Dandy Dan, the Lifeguardman* (1897). In 1900 he toured with and later appeared at the Strand Theatre, London, in *The Cruise of H. M. S. Irresponsible*. After appearing in *Bull Adams, the Hero of Waterloo* in 1903, Mr. Roberts returned to the vaudeville stage for the next 10 years. He was again a London music hall favorite during the World War period. Some of his later successes were *Society, Ltd.* (1920), *Fun of the Fayses* (1921), *Phy-Phy* (1922), and *The Veterans of Variety* (1923-29). Regarded as the dean of English comedians, he wrote *Fifty Years of Spoof* (1927).

Roberts, Brigham Henry. American congressman, died in Salt Lake City, Utah, Sept. 27, 1933. Born at Warrington, Lancashire, England, Mar. 13, 1857, he came to the United States in 1866 and was graduated from Deseret University (later the University of Utah) in 1878. Previous to his election to the 56th Congress, he had been engaged as an editor and writer. In January, 1900, however, he was excluded from his seat by action of the House of Representatives because of a charge of polygamy. During the World War he served first at Camp Kearny, Calif., and then in France as chaplain of the 145th Field Artillery. He held the office of president of the Eastern States Mission of the Church of Jesus Christ of Latter-Day Saints in 1922 and at the time of his death was head of the First Council of Seventy. One of the leading interpreters of Mormonism, Mr. Roberts wrote *The Gospel* (1888); *Life of John Taylor* (1892); *Outlines of Ecclesiastical History* (1893); *Succession in the Presidency of the Church* (1893); *New Witnesses for God* (3 vols., 1895); *Missouri Persecutions* (1900); *The Rise and Fall of Nauvoo* (1900); and *Mormon Doctrine of Deity* (1908). He served also as editor of Smith's *Journal History of the Church* (6 vols., 1900); *History of the Mormon Church* (6 vols.), and *The Seventy's Course in Theology* (in 5 books).

Robertson, Gideon Decker. Canadian statesman, died in Ottawa, Ont., Aug. 25, 1933. Born in Welland Co., Ont., Aug. 26, 1874, he attended the public schools of Welland and entered the employ of the Canadian Pacific Railroad in 1893 as telegraph operator, eventually rising to the post of general chairman for that line of the Order of Railroad Telegraphers. After 1914 he was vice-

president of the Order of Railroad Telegraphers for Canada. Elected to the Senate in 1916, Mr. Robertson was appointed the following year Minister without portfolio. An attempt to meet the pressing demands of Labor was made in 1918 when he was offered the portfolio of Labor, serving during the next three years under Sir Robert Borden and Arthur Meighan. In 1930 he was again appointed Minister of Labor in the Conservative cabinet of Richard B. Bennett but was obliged to resign two years later on account of the impairment of his health due to the serious problems of unemployment with which he had to cope. Mr. Robertson was chairman of the Canada Registration Board in 1918 and attended at Washington the same year as representative of the Canadian Government the first International Labor Conference. In 1919 he served as promoter on the Canadian Railway Adjustment Board No. 1.

Robertson, John G. British Germanic scholar, died in London May 28, 1933. He was born in Glasgow, Jan. 18, 1867, and was educated at the Universities of Glasgow and Leipzig, receiving the Ph.D. degree from the latter. From 1896 to 1903 he was lecturer in English at the University of Strassburg and afterward held the chair of German language and literature at the University of London. He acted also after 1924 as director of the department of Scandinavian studies at that institution. In 1905 he founded the *Modern Language Review*. Among his publications were *Selections from the Correspondence between Schiller and Goethe* (1898), *History of German Literature* (1902); *Schiller After a Century* (1905); *Milton's Fame on the Continent* (1909); *Outlines of German Literature* (1911); *Goethe and the Twentieth Century* (1912); *The Literature of Germany* (1913); *The Genesis of Romantic Literary Theory* (1923); *Goethe and Byron* (1925); and *Goethe* (1927).

Robertson, John Mackinnon. British author, died in Kensington, Jan. 5, 1933. Born at Brodick, Isle of Arran, Scotland, Nov. 14, 1856, he received his schooling at Stirling, and in 1878 joined the staff of the *Edinburgh Evening News* as an editorial writer. Six years later he went to London where he became associated with Charles Bradlaugh on the *National Reformer*, editing that journal after Bradlaugh's death from 1891 until its abandonment in 1893. He then founded the *Free Review* and served as its editor until 1895. In 1900 he went to South Africa to study martial law in Cape Colony and Natal sending letters describing conditions there to the *Morning Leader*. He was elected to Parliament as Liberal member from the Tyneside Division of Northumberland in 1906 and retained his seat until 1918. During 1911-15 he served also as Parliamentary Secretary to the Board of Trade, this appointment having largely been secured through his work on *Trade and Tariffs* (1908). He later published the *Battle for Free Trade* (1923) and *The Political Economy of Free Trade* (1928). Robertson was better known, however, as a literary controversialist, his favorite topics being Christianity and the Shakespeare canon which he subjected to a process of "critical disintegration." He wrote *Montaigne and Shakespeare* (1897), *Christianity and Mythology* (1900); *Pagan Christ* (1911); *A Short History of Christianity* (1913), *The Baconian Heresy* (1913), *Elizabethan Literature* (1914), *Shakespeare and Chapman* (1917); *The Jesus Problem* (1917), *The Problem of Hamlet* (1919); *The Shakespeare Canon* (1922); *The Problems of the Shakespeare Sonnets* (1926), *The Dynamics of Religion* (1926); and *The Genuine in Shakespeare* (1930). As one of the leading advocates of Liberalism, he wrote *The Future of Liberalism* (1895), *The Meaning of Liberalism* (1912); and *History of Free Thought in the Nineteenth Century* (1929).

Robertson, Sir William Robert, died Feb. 12, 1933.

Robinson, Corinne Roosevelt. American poet, welfare worker, and sister of the late President Theodore Roosevelt, died Feb. 17, 1933, in New York City where she was born Sept. 27, 1861. She was educated privately and in 1882 was married to Douglas Robinson, a New York realtor. During the World War she worked tirelessly in the interests of the American Red Cross, spoke numerous times during the Liberty Loan and Salvation Army campaigns, and formed and served for a time as chairman of the New York City committee for "Fatherless Children of France." Her entrance into national politics was in 1920 when at the Republican Convention in Chicago she seconded the nomination for president of General Leonard Wood. In addition to being a member of President Coolidge's advisory committee during his 1924 campaign, she was for several years a member of the executive committee of the Republican National Committee and of the New York State Committee. She was a vice-president of the Poetry Society of America. Besides lecturing and speaking on political subjects, Mrs. Robinson wrote *The Call of Brotherhood* (poems, 1912); *One Woman to Another* (1914); *Service and Sacrifice* (1919); *Collected Poems* (1921); *My Brother, Theodore Roosevelt* (1921); and *Out of Nymph* (poems, 1930).

Robinson, Joseph Armitage, died May 8, 1933.

Rockwell, Alphonso David, died Apr. 12, 1933.

Rodgers, Rear-Admiral John Augustus, U.S.N., Ret. American naval officer, died Mar. 2, 1933, at Havre de Grace, Md., where he was born July 26, 1848. A descendant of the John Rodgers who commanded the *President* during the War of 1812, he had the distinction of being appointed to the United States Naval Academy by President Lincoln in 1863, and during the last summer of the Civil War served on the *Marion* which pursued the Confederate steamers *Florida* and *Tallahassee*. On his graduation from Annapolis in 1868, he served as ensign with the Pacific squadron on the *Supply* and *Nipsic*, and in the torpedo service on the *Hartford*, *Junata*, *Monongahela*, *Trenton*, and *Constellation*, rising to the rank of lieutenant in 1874. In 1880 he was transferred to the Navy Yard at Washington where after three years service he returned to the *Ossipee*. In 1887 he was again detailed to shore duty as a member of the Steel Board of the Navy Department. He saw duty on the *Pensacola* during 1890-91 and on the *Montanama* during 1892-94. Commissioned a lieutenant-commander in 1895, he was assigned for the next two years to inspection duty. From 1897 to 1899 Rodgers served as executive officer of the *Indiana*, which during the Spanish-American War took an active part in destroying Cervera's squadron off Santiago. In recognition of his conduct in this battle he received a promotion of five numbers in seniority. He had charge of the Sixth light house district until 1902 and commanded the *Marietta* and the *Albany* until 1904. Previous to his appointment as inspector of the Third lighthouse district in 1906, he served on the *Illinois* with the rank of captain. Following his promotion to rear admiral in 1908, he became commandant of the Navy Yard at Puget Sound, Wash., where he remained until his retirement in 1910. During the World War he emerged to take charge of the organization of naval units at Harvard University, the Massachusetts Institute of Technology, Boston University and Tufts College.

Romaine, Rose Pastor Stokes. American radical, died in Frankfurt-on-the-Main, Germany, June 20, 1933. Born at Angustava, Suvolk, Russia, July 18, 1879, she was taken by her parents at the age of four to London where during 1887-89 she attended the Jewish Free School. In 1890 she came to the United States, her family settling in Cleveland, Ohio, where from 1892 to 1903 she was employed as a cigar maker. The acceptance of some of her poems by the *Jewish Daily News* led her to seek a journalistic career in New York and she served as assistant editor of that paper during the next two years. Her friendship with J. G. Phelps Stokes, scion of a prominent New York family who had identified himself with various philanthropic organizations, resulted from an interview in which she praised his social ideals. Soon after their marriage in 1905 they both became active in the Socialist party, but neither of them upheld the party's pacifist stand after the entry of the United States into the World War. Mrs. Romaine, however, later returned to the party, identifying herself with the more radical element from which the Communist party developed. After the War on account of her criticism of the government's alleged alliance with profiteers she escaped serving a 10-year prison term only when a higher court overruled the sentence imposed by the Federal Court at Kansas City. She was also active during the next decade in various strikes in New York City. Mr. Stokes sought a divorce in 1925, and four years later she was married to Isaac Romaine, a language instructor.

Roper, William Winston. American football coach and lawyer, died Dec. 10, 1933, in Philadelphia, Pa., where he was born Aug. 22, 1880. After his graduation from Princeton University in 1902 he went to the Virginia Military Institute at Lexington, Va., where his success as a football coach led to his call to Princeton as assistant coach in 1906. Between seasons he attended the law school of the University of Virginia, and on receiving his degree in 1907 was admitted to the Pennsylvania bar. His practice was interrupted in 1909 when he went to the University of Missouri as head football coach. In 1910 he returned to Princeton for the next two seasons and then entered politics on his appointment by President Wilson as United States appraiser of merchandise for the Port of Philadelphia. After 1920 he was a member of the Philadelphia City Council. He fought for the repeal of Prohibition and of the Pennsylvania Sunday blue laws and lived to see each materialize. After giving up his law practice in 1926 he became manager of the Quaker City Agency of the Prudential Insurance Co. of America. In 1919 Roper again returned to Princeton University as football coach, his teams winning the "Big Three" championship in 1922, 1925, and 1926. Termed "the last of the gridiron romantics," he wrote previous to his retirement in 1930, *Winning Football* (1921) and *Football—Today and Tomorrow* (1927).

Ropes, Arthur Reed. British author, died Sept. 11, 1933, in London where he was born Dec. 23, 1859. He attended King's College, Cambridge, and was Lightfoot and Whewell scholar in 1883 and fellow of King's Col-

lege from 1884 to 1890. He lectured on history at Cambridge, wrote a *Short History of Europe* (1889), and edited *Lady Mary Wortley Montagu's Letters* (1893) and numerous French texts for the *Pitt Press Series*. Under the name of Adrian Ross he wrote after 1899 the lyrics or librettos of some of the most popular operettas. Among these were *Joan of Arc* (1891), *San Toy* (1899), *The Toreador* (1901), *The Merry Widow* (1907), *The Dollar Princess* (1909), *Gypsy Love* (1912), *Monsieur Beaucaire* (1919), *Lilac Time* (1922), and *The Toy-maker of Nuremberg* (1930).

Ropes, James Hardy. American theologian, died in Cambridge, Mass., Jan. 8, 1933. Born at Salem, Mass., Sept. 3, 1866, he was graduated from Harvard University in 1889 and from the Andover Theological Seminary in 1893. After attending the Universities of Kiel, Halle, and Berlin he returned to Harvard in 1895 as instructor in New Testament criticism and interpretation, being advanced to assistant professor in 1898. Following his ordination to the Congregational ministry he was chosen in 1903 Bussey professor of divinity and after 1910 held the Hollis chair of divinity. He was also after 1903 Dexter lecturer on biblical literature and in 1928 received the British Academy's medal for biblical studies. Dr. Ropes was also prominent in an administrative capacity, being dean in charge of University Extension from 1910 to 1922, and dean of special students from 1918 to 1922. He wrote *The Apostolic Age in the Light of Modern Criticism* (1906), *Commentary on the Epistle of St James* (1915), *The Text of Acts* (1925), and *The Singular Problem of the Epistle to the Galatians* (1929).

Ross, Adrian. See Ropes, Arthur Reed.
Roux, Emile Pierre Paul, died Nov. 3, 1933.
Rowland, Henry Cottrell. American author and physician, died in Washington, D. C., June 5, 1933. He was born in New York City, May 12, 1874. On his graduation from the medical school of Yale University in 1898 he enlisted immediately in the Spanish-American War, serving on the cruiser *Yankee*. During the Philippine Insurrection of 1900 he was assistant surgeon with the United States forces. His experience in the East suggested his first adventure story *Sea Scamps* (1903). On settling at Vermenton, France, in 1905, he devoted his leisure to fiction writing, his more popular works being *In the Shadow* (1906), *Across Europe in a Motor Boat* (1908), *In the Service of the Princess* (1909), *The Mugnet* (1910), *The Apple of Discord* (1912), *The Closing Net* (1912), and *Duda* (1919). During the early part of the World War Dr. Rowland was director of the military auxiliary hospital at Acolay. After the entry of the United States into the conflict he became an accredited special agent in France of the intelligence department of the United States Navy.

Royce, Sir (Frederick) Henry, died Apr. 22, 1933.
Ruggles, Brig.-Gen. Colden L'Honniedieu, U.S.A., Ret. American soldier, died at Charleston, S.C., Apr. 2, 1933. He was born in Omaha, Neb., Mar. 18, 1869. On his graduation from the United States Military Academy in 1890 he was commissioned a 2d lieutenant in the 1st Artillery and was assigned to duty on Governor's Island. He later served at Fortress Monroe, Sandy Hook Proving Ground, and the Frankfort (Pa.) Arsenal and in 1900 became inspector of ordnance for the United States Army at the Bethlehem Steel Works. In 1903 he was transferred to the Watertown (Mass.) Arsenal. After serving as professor of ordnance and the science of gunnery at the United States Military Academy he became in 1911 commanding officer at the Benicia (Calif.) Arsenal and ordnance officer of the Western Department. In 1913 he was sent to the Philippines where he had charge of the Manila Ordnance Depot and was ordnance officer for the Philippine Department. Returning to the Sandy Hook Proving Ground in 1915, General Ruggles served as commanding officer until 1918 when he became chief of the inspection division of the Ordnance Department and served overseas with the American Expeditionary Force. From 1919 to 1922 he was chief of the technical staff of the Ordnance Department. Appointed in 1923 assistant to the chief of ordnance with the rank of brigadier-general, he became later in that year assistant chief of ordnance and chief of manufacture. In 1925 President Coolidge appointed him delegate to the Conference for the Supervision of the International Trade in Arms and Ammunition and in Implements of War, held in Geneva, Switzerland. He received the Distinguished Service Medal and the Army Ordnance Association's Medal of Merit. He retired in 1930.

Ryan, John Denis, died Feb. 11, 1933.
Sabin, Charles Hamilton, died Oct. 10, 1933.
Saintsbury, George Edward Bateman, died Jan. 28, 1933.

Salmond, Sir (William) Geoffrey (Hanson), died Apr. 27, 1933.

Sánchez Cerro, Luis M., died Apr. 30, 1933.
Sanders, Frank Knight. American theologian and educator, died at Rockport, Mass., Feb. 20, 1933. Born at Batticotta, Jaffna, Ceylon, June 5, 1861, he was gradu-

ated from Ripon College in 1882 and with the Ph.D. degree from Yale University in 1889. At the latter institution he held the chair of biblical literature from 1891 to 1901 and then became professor of biblical history and archaeology and dean of the Divinity School. After serving from 1905 to 1908 as secretary of the Congregational Sunday School and Publication Society he was elected president of Washburn College. In 1914 he returned to the National Council of Congregational Churches as director of missionary preparation for foreign missions of the Conference of North America, resigning in 1927. Besides editing with C. F. Kent *The Messages of the Bible* (12 vols., 1897-1912), Dr. Sanders wrote *The Messages of the Earlier Prophets* (1898); *The Messages of the Later Prophets* (1899); *The Teachers' Life of Christ* (1907); *Studies in the Life of Paul* (1908); *The Messages of the Sages* (1912); *History of the Hebrews* (1914), *The Program of Christianity* (1918), *Old Testament Prophecy* (1921); and *Old Testament History* (1921). At the time of his death he was editing with H. P. Beach *The World's Living Religions* (10 vols.) and with H. A. Sherman *The Life and Religion Series* (10 vols.).

Sayce, Archibald Henry. British Orientalist, died at Bath, England, Feb. 4, 1933. He was born at Shirehampton Sept. 25, 1845, and attended Queen's College, Oxford, where he became fellow in 1869. In addition to serving as a member of the Old Testament Company of the Bible Revision Committee from 1874 to 1884 he was appointed in 1876 deputy professor of comparative philology at Oxford and in 1891 professor of Assyriology, holding the latter chair until his retirement in 1919. He served as a member of the Advisory Committee on Words of Disputed Pronunciation of the Funk & Wagnalls *Standard Dictionary*, 1891-1900. His scholarly activity covered a wide range of subjects—Assyriology, Oriental history, biblical criticism, comparative philology, and general archaeology, and in recognition of the contribution which he had made to these various fields he received in 1925 the Gold Medal of the Asiatic Society. He delivered the Hibbert Lectures in 1887, the Gifford Lectures in 1900-02, and the Rhind Lectures in 1906. Among Dr. Sayce's works were: *An Assyrian Grammar for Comparative Purposes* (1872); *The Principles of Comparative Philology* (1874); *Babylonian Literature* (1877); *Introduction to the Science of Language* (1879), *The Monuments of the Hittites* (1881); *The Ancient Empires of the East* (1884); *Assyria* (1885); *Babylonian Religion* (1887), *The Races of the Old Testament* (1891); *The Higher Criticism and the Verdict of the Monuments* (1894), *Patristic Palestine* (1895); *Early History of the Hebrews* (1897); *Israel and the Surrounding Nations* (1898); *Babylonians and Assyrians* (1900), *The Archaeology of Cuneiform Inscriptions* (1907); and *Kemissences* (1923). He edited also the *Records of the Past* (2d series, 1888-92).

Scapinelli, Raphael, Cardinal, died Sept. 17, 1933.
Schillings, Max von, died July 24, 1933.
Schmidt, Johannes. Danish biologist, died in Copenhagen, Feb. 22, 1933. He was born at Jagerspris, Jan. 2, 1877. In 1910 he became director of the physiological department of the Carlsbad Laboratories in Copenhagen. The discoveries which he made in connection with the migration of eels were especially significant, the collection of his data being completed in 1928 on an around-the-world oceanographic expedition on the research ship *Dana*. His principal work was *Contributions of the Life-History of the Eel* (1906).

Schoen, Wilhelm von. German diplomat, died at Berchtesgaden, Bavaria, Apr. 24, 1933. He was born at Worms, June 3, 1851. After serving with the 24th regiment of Hessian dragoons during the Franco-Prussian War, he decided to abandon an army career and in 1877 entered the diplomatic service as attaché at the German embassy in Madrid. Transferred to Athens as legation secretary in 1882, he held the same post in Berne (1883), The Hague (1885), and Paris (1887). While at the latter embassy he was made counselor, in which capacity he served until 1895. After acting as Grand Marshal of Saxe-Coburg-Gotha, he was appointed in 1900 Minister to Denmark. Five years later he became Ambassador to Russia, helping greatly to strengthen cordial relations between Russia and Germany. In 1907 Von Schoen was recalled to assume the office of Secretary of State for Foreign Affairs, negotiating with France in 1909 the first treaty regarding German concessions in Morocco. In 1910 he was again assigned to the Paris embassy as Ambassador, being recalled on the outbreak of the World War. He was raised to the Hessian nobility in 1885 and was made a baron in 1909. He wrote *Erliebtes Beiträge zur Geschichte der Neuesten Zeit* (1921).

Schreiber, The Most Rev. Christian Karl August. German Roman Catholic bishop, died in Berlin, Sept. 2, 1933. Born at Somborn, near Gelnhausen, Aug. 3, 1872, he attended the Gregorian University in Rome and was ordained to the priesthood at the age of 26. In 1899 he

became professor of philosophy and the history of philosophy and theology at the Fulda Seminary, being appointed prebendary in 1908. In 1921 he was consecrated Bishop of Meissen and on the ratification of the concordat between Prussia and the Vatican in July, 1929, became head of the newly-created Bishopric of Berlin. He was the first incumbent of this office since the Reformation.

Schröder, Admiral Ludwig von. German naval officer, died in Berlin, July 23, 1933. Born at Hinzekamp, Prussia, July 17, 1854, he entered the German Navy in 1871, becoming a flag officer in 1905 and squadron leader in 1908. During 1911-12 he was in charge of the naval station at Kiel and retired the following year. On the outbreak of the World War, however, Schröder was recalled and was placed in command, with the rank of admiral, of the marine corps that held the German end of the North Sea throughout the conflict. After the German occupation of Flanders he directed from Zeebrugge mine planting in the North Sea and English Channel submarine warfare on Channel traffic, and the air raids over eastern England. Ruthless in the prosecution of his duty, he was one of 12 German high seas officers whose extradition was demanded by the Allies after the War.

Scialoja, Vittorio, died Nov. 19, 1933.

Seligman, Arthur. American administrator, died at Albuquerque, N. M., Sept. 25, 1933. Born at Santa Fe, N. M., June 14, 1873, he attended Pierce's College of Business in Philadelphia and in 1888 entered the mercantile business in Santa Fe, serving as president of Seligman Bros. from 1903 to 1926. He was also interested in the beautification of his native city, being instrumental in the erection of Santa Fe's famous hostelry La Fonda and serving as president of the La Fonda Building Corp. during 1920-26. In the financial field he was president of the First National Bank of Santa Fe after 1924 and a director of the Northern New Mexico Loan Association. He served on the Board of Irrigation Commissioners in 1910 and was president in 1923 of the Educational Survey Commission. Governor Seligman had long been a leader in the Democratic party, acting as chairman of the Territorial Democratic Committee (1895-1911) and of its successor, the Democratic State Committee (1912-22). After 1920 he was also a member of the Democratic National Committee. Elected Governor of New Mexico for the term 1931-33, he strove during his administration for efficiency and economy in government. He vetoed the measure calling for State control of narcotics as he held Federal control was sufficient.

Seymour, Arthur Bliss. American botanist, died at Belmont, Mass., Mar. 29, 1933. He was born at Moline, Ill., Jan. 3, 1859. On his graduation from the University of Illinois in 1881, he was appointed botanist to the Illinois State Laboratory of Natural History. In 1883 he was called to the Cryptogamic Herbarium at Harvard University where with the exception of the year 1885-86 when he was instructor in botany at the University of Wisconsin he remained until his death. He taught cryptogamic botany at Radcliffe College during 1890-91 and at the summer sessions of 1890 and 1892. He compiled *A Provisional Host Index of the Fungi of the United States* (with W. G. Farlow, 1888-91), and *Host Index of the Fungi of North America* (1929). He edited and published with F. S. Earle *Economic Fungi and Economic Fungi Supplement* and contributed to scientific and agricultural periodicals, articles on fungi and fungus diseases.

Seymour, William. American actor and stage director, died at Plymouth, Mass., Oct. 2, 1933. Born in New York City, Dec. 19, 1855, he began his theatrical career at the age of seven appearing during the next five years at the Varieties Theatre, New Orleans. Joseph Jefferson selected him in 1867 as the boy Hendrick in *Rip Van Winkle* and from 1869 to 1879 he toured with such notables as Edwin Booth, Lawrence Barrett, A. M. Palmer, John McCullough, and Thomas Maguire. He also gained with Barrett, Palmer, and Maguire experience as a stage manager and in 1879 became associated with the Boston Museum's company as both actor and stage manager. After touring with Julia Marlowe in 1889 he became actor-manager for Abbey, Schoeffel and Grau at the Tremont Theatre in Boston, remaining there until 1898. Mr. Seymour then came to New York City where until 1911 he was general stage manager and until 1916 antiquarian for Charles Frohman. After serving as manager of the Empire Theatre he became stage director for George C. Tyler during the seasons of 1919-23. Previous to his retirement he appeared in such revivals as *The School for Scandal* (1925) and *The Two Orphans* (1926). His farewell gesture was the production in 1928 of *She Stoops to Conquer*.

Shepherd, William Gunn. American journalist, died in Washington, D. C., Nov. 4, 1933. He was born at Springfield, Ohio, June 13, 1878. After attending the St. Paul (Minn.) high school he began his career in 1898 as a reporter on the St. Paul *Dispatch*. Ten years later he removed to New York City where he wrote fiction for *Munsey's Magazine* and, as a free lance,

covered the Madero revolution in Mexico. In 1912 he became correspondent for the Newspaper Enterprise Association, in which capacity he commented on the Olympic Games at Stockholm and on political and other news in the capitals of Europe. He then returned to Mexico in the interests of the United Press Association and was there at the time of Huerta's downfall. Returning to Europe on the outbreak of the World War in 1914, Mr. Shepherd gave an impartial view of the progress of the war in articles which he contributed to *Everybody's*, *Collier's*, *Harper's*, the *Metropolitan*, and other magazines. During the Russian revolution he was correspondent for the United Press Association as well as for the *Exchange Telegraph* of London, and *Everybody's Magazine*. He attended the Paris Peace Conference and was present at the signing of the treaty of Versailles, reporting this momentous occasion in *Everybody's Magazine* and the *New York Evening Post*. In 1921 he investigated and wrote reports on the reconstruction problems of Germany, France, and England. After 1924 Mr. Shepherd was staff correspondent for *Collier's Weekly*, his principal assignments being such topics as prohibition enforcement, state penitentiary systems, law violations, organized crime, and commercial and financial situations. He was a member of the council of the Authors' League of America and had been a vice-president of the Authors' Guild. Among his books were *The Confessions of a War Correspondent* (1917); *The Scar That Tripled* (1918); *Boy's Own Book of Politics* (1923); and *Great Preachers as Seen by a Journalist* (1925).

Sherman, Lucius Adelno. American educator, died at Lincoln, Neb., Feb. 13, 1933. Born at Douglas, Mass., Aug. 28, 1847, he was graduated from Yale University in 1871, receiving the Ph.D. degree four years later. Called to the University of Nebraska as professor of English language and literature in 1882, he served also during 1887-1901 as dean of the general faculty of that institution and during 1901-26 as dean of the graduate college. He retired as dean emeritus in 1930. Dr. Sherman was the author of *Analytics of Literature* (1893); *What is Shakespeare?* (1902); *Elements of Literature and Composition* (1908); and *How to Describe and Narrate Visually* (1925). In 1878 he translated *Frithjof's Saga*.

Sherrerd, Morris Rebeson, died Oct. 20, 1933.

Shipman, Louis Evan. American author, died at Bourg-en-Vexin, Department of Oise, France, Aug. 2, 1933. Born in Brooklyn, N. Y., Aug. 2, 1869, he attended the Brooklyn Polytechnic Institute and Harvard University. After serving as an editorial writer for *Leslie's Weekly* during 1895-96, he embarked on his writing career, publishing *Urban Dialogues* (1896), *A Group of American Theatrical Caricatures* (1898), *Predicaments* (1899); *The Curious Courtship of Kate Poins* (1901); and *The Quality of Youth* (1904). His first play *The Head of the House* (1898), was written with Glen McDonough, but it was not until the production of *D'Arcy of the Guards* (1901), with Henry Miller in the lead, that he achieved recognition as a playwright. He next collaborated with Winston Churchill in the dramatization of Mr. Churchill's novels, *The Cross* (1902), and *The Crossing* (1905), and with Frederic Remington wrote *John Ermine of the Yellowstone* (1903). His later successes were *On Parole* (1906); *The Admiral* (1909); *The Grain of Dust* (1911); *The Fountain of Youth* (1918); *Fools Errant* (1921), and *Poor Richard* (1924). The latter as *Le Bonhomme Richard* was played at the Théâtre National de l'Odéon in Paris, June 17, 1930, on the occasion of the 153d anniversary of Franklin's official recognition as the first Ambassador from the United States to France. In addition to contributing to *Collier's Weekly* and *Life*, Mr. Shipman served as editor of the latter during 1922-24. He was decorated a chevalier of the French Legion of Honor.

Sichel, Walter. British biographer and lawyer, died in London Aug. 7, 1933. Born in 1855, he was educated at Harrow and at Balliol College, Oxford, and was called to the bar in 1879. In addition to his law practice he took an interest in politics and in journalism, editing the magazine *Time*, but he acquired his greatest reputation as an historical biographer. Among his works were: *Bolingbroke* (1902); *Disraeli: A Study in Personality and Ideas* (1904); *The Life of Lord Beaconsfield* (1904); *Emma, Lady Hamilton* (1905); *The Life of Richard Brinsley Sheridan* (2 vols., 1909); *Sterne: A Study* (1910); and *Types and Characters: A Kaleidoscope* (1925).

Silverman, Sime. American editor and publisher, died at Hollywood, Calif., Sept. 21, 1933. He was born at Cortland, N. Y., May 19, 1872, and attended the public schools there and in Syracuse. After being associated with his father in business for a time, he removed to New York City where he obtained a position as a reporter on the *Morning Telegraph*. Discharged by the editor of that paper for an unfavorable criticism which he wrote of a vaudeville sketch, he founded in 1905 the

theatrical magazine *Variety* which through its veracity became recognized as one of the most authoritative periodicals pertaining to the theatre Mr. Silverman wrote his articles in the jargon peculiar to the theatrical world, coining expressions that soon became part of the slang vocabulary of the United States and that influenced the work of Ring Lardner (q.v.) and other writers.

Sisson, Francis Hincley. American banker, died in Yonkers, N. Y., Sept. 17, 1933. Born at Galesburg, Ill., June 14, 1871, he was graduated from Knox College in 1892 and took a post-graduate course at Harvard University the following year. He began his career in 1893 as editorial writer and reporter on the Galesburg *Evening Mail*, becoming editor five years later. In 1903 he came to New York City where he was on the editorial staff of *McClure's Magazine* for a year and then entered the advertising field as advertising manager for the American Real Estate Co. In 1912 he became vice-president and general manager of the H. E. Lisan Advertising Agency. Mr. Sisson served as assistant chairman of the Association of Railway Executives during 1916-18 and after 1917 was vice-president of the Guaranty Trust Company of New York. During the course of his banking career he lectured frequently on economic subjects and in 1932 was president of the American Bankers' Association.

Sloan, James Todhunter (Tod). American jockey, died in Los Angeles, Calif., Dec. 21, 1933. He was born at Kokomo, Ind., Aug. 10, 1873, and attended the public schools there. On becoming interested in ballooning during the '80s he toured the Indiana circuit with a balloonist, meeting with an adventure at one of the fair grounds that started him on his horse-racing career. His first professional riding was in New Orleans, Chicago, and St. Louis. After unsuccessful attempts in the East he went to San Francisco where, after winning a number of races, he was recognized by race-track enthusiasts. Under the tutelage of George E. Smith (Pittsburgh Phil), he came into prominence, winning in 1896 races successively at San Francisco, Gravesend, and New Market, England. Tod Sloan reached the peak of his career the following year when as a jockey in the royal stables of Great Britain, he won three races and was influential in changing the British jockey's style of riding. In 1898 he returned to the United States where he continued to bring his horses "down the home stretch first," winning both the Futurity and Flatbush races in 1900. He was subsequently a café proprietor in Paris, motion picture actor in Hollywood, and real estate operator in San Diego, Calif.

Sloan, Richard E. American jurist and administrator, died at Phoenix, Ariz., Dec. 14, 1933. Born in Preble Co., Ohio, June 22, 1857, he was graduated from Monmouth College in 1877 and from the Cincinnati Law School in 1884. Removing to Phoenix, Ariz., in the latter year, he began his practice there. Four years later he was elected to the 15th Territorial Council. In 1889 he was appointed by President Harrison Associate Justice of the Supreme Court, being assigned to the First Judicial District and serving until 1894. Before his reappointment to the Supreme Court by President McKinley in 1897, he practiced for a time at Prescott. President Theodore Roosevelt confirmed his appointment to the Fourth Judicial District in 1902 and again in 1906. Judge Sloan was one of two delegates to the Republican National Convention of 1908 where he played an important part in securing the adoption by the committee on resolutions of the plank in the party's platform calling for statehood for Arizona. In 1909 he was appointed Territorial Governor by President Taft and held that office until 1912 when Arizona was admitted to the Union. He wrote *Memories of an Arizona Judge* (1932).

Smith, J(onas) Waldo, died Oct. 14, 1933.

Smith, Ormond Gerald. American publisher, died Apr. 17, 1933, in New York City where he was born Aug. 30, 1860. After his graduation from Harvard University in 1883, he entered the publishing business in New York City, founding numerous popular magazines such as *Ainslee's*, *Popular*, *People's*, *Smith's*, *Top Notch*, and *Picture Play*. In these appeared the first short stories of several writers who were to achieve prominence. The most notable example was William Sydney Porter (O. Henry) whose tales of the more humble element of the metropolis found a sympathetic response among their readers. The detective and love story magazines, more commonly known as "pulp wood," which he established also achieved a wide circulation. At the time of his death, Mr. Smith held the office of president of the Street and Smith Publishing Co. and had been president of the Ormorge Realty Co. He donated funds in 1931 for the erection in New York City of the building of the French Institute in the United States and served as president of the Institute, as chairman of the executive committee of its Museum of French Arts, and as curator of its library. He was also chairman of the French Chamber of Commerce of the United States. For the services which he thereby rendered in promoting

Franco-American friendship, he received the decoration of Officer of the French Legion of Honor in 1927 and that of Commander four years later.

Sothern, Edward Hugh, died Oct. 28, 1933.

Southerland, Rear Admiral William Henry Hudson, U.S.N., Ret. American naval officer, died in Washington, D. C., Jan. 30, 1933. He was born in New York City July 10, 1852, and joined the United States Volunteer Navy at the age of 13, seeing service on such famous vessels as the *Constellation* and *Hartford* and participating for a short while in the Civil War. On his graduation from the United States Naval Academy in 1872 he was promoted through the grades from ensign to rear admiral in 1910. During the Spanish-American War he commanded the gunboat *Eagle*, which aided in the blockade of Cuban ports and succeeded in capturing three Spanish vessels. He was next assigned to the United States Hydrographic Office where with Commander Schroeder he prepared the notable *Azimuth Tables*. After commanding the *Cleveland* for two years he became in 1906 a member of the Board of Inspection and Survey of the Navy Department and in 1910 of the Naval Examining and Retiring Board. After commanding the second division of the Pacific Fleet during 1911-12 Admiral Southerland was made commander-in-chief of that fleet, having charge of an expeditionary landing force of 2000 marines sent to Nicaragua in August, 1912, to protect the lives and property of American citizens until suppression of the revolt led by Gen. Luis Mena. In 1913 he was named member of the General Board and the following year was retired by operation of law.

Spenlove-Spenlove, Frank. British landscape and figure painter, died in London, Apr. 30, 1933. Born at Bridge of Allan, Stirling, North Britain, Feb. 24, 1868, he received his art education in London, Paris, and Antwerp and after 1886 was a regular exhibitor at the Royal Academy. Among his best-known paintings were "Funeral in Holland in Winter" (which won the gold medal at the Paris Salon of 1901); "Too Late" (in the Musée de Luxembourg, Paris); "The Little White Cross" and "In the Shadow of the Church" (Manchester Gallery); "Vespers, Holland" (Glasgow Corporation Gallery); "Grey of the Morn" (Guildhall, London); "Grey of Evening" (Hull Gallery); "Return of the Prodigal" and "Pilot's Funeral" (Hotel de Ville, Paris). His landscapes all showed his peculiar skill in the rendering of atmosphere, while his figure paintings resembled in style and sentiment the work of Israels and other Dutch genre painters of the nineteenth century. He founded the Spenlove School of Painting and was a member of the Royal Institute of Painters in Water-colors, Royal Institute of Oil Painters, and Royal Society of British Artists.

Starr, Frederick, died Aug. 14, 1933.

Sterki, Victor. American zoologist, died at New Philadelphia, Ohio, Jan. 25, 1933. He was born at Solothurn, Switzerland, Sept. 27, 1846, and was graduated with the M.D. degree from the University of Berne in 1873. On coming to the United States ten years later he abandoned medicine to take up the study of mollusca and protozoa, and after 1910 was assistant curator of mollusca at the Carnegie Museum in Pittsburgh. He had published more than 100 papers, articles and pamphlets on original researches in zoology. His phenomenal nearsightedness enabled him to study the smallest snail, clam, or shellfish without the aid of a microscope.

Stewart, Rear Admiral Edwin, U.S.N., Ret. American naval officer, died at South Orange, N. J., Feb. 28, 1933. Born in New York City, May 6, 1837, he was graduated from Williams College in 1862. During the Civil War he served as paymaster in the Navy and also saw service at the battles of Port Royal, Port Hudson, and Mobile Bay. After the War he served at the Great Lakes station on the *Michigan* which patrolled those waters and in 1866 captured a party of Fenian invaders who were crossing the Niagara River into Canada. Admiral Stewart next saw service in Washington as purchasing officer for the Navy from 1868 to 1873, and then became fleet paymaster of the Asiatic station. After his promotion to pay inspector in 1879, he was made inspector of provisions and clothing at the New York Navy Yard and in 1883 became fleet paymaster of the European station. Appointed paymaster general of the Navy in 1890, he was reappointed in 1894 and 1898. During the Spanish-American War the Navy's efficient Bureau of Supplies and Accounts, under his direction, was credited with performing the work effected by three departments of the Army. His foresight in purchasing the Chinese supply ships *Nanshan* and *Zafiro* also contributed greatly to Dewey's victory at Manila Bay. Shortly before his retirement in 1899 he had been commissioned a rear admiral.

Stewart, George David. American surgeon, died in New York City, Mar. 9, 1933. He was born at Upper Malagash, N. S., Canada, Dec. 28, 1862, and after graduating from the Teachers' College at Truro, N. S., in 1884 taught at the St. Francis Xavier College at

Antigonish, N. S. Two years later he decided to study medicine and came to New York City to attend the Bellevue Hospital Medical College of New York University, receiving his degree in 1889. He practiced for a year in Nova Scotia and then returned to New York City to become professor at the University and Bellevue Hospital Medical College. He was rapidly promoted to instructor in anatomy, assistant professor of anatomy, and assistant visiting surgeon at Bellevue Hospital. In 1899 he was appointed to the chair of anatomy and 16 years later became professor of surgery, holding that post at the time of his death. After 1915 he was also surgical director and visiting surgeon of Bellevue and St. Vincent's Hospitals and consulting surgeon to several institutions in the suburbs of New York City such as St. Joseph's Hospital, Yonkers, N. Y.; St. Mary's Hospital, South Orange, N. J.; Monmouth (N. J.) Memorial Hospital; Tuxedo (N. Y.) Memorial Hospital; South Side Hospital, Bay Shore, L. I., N. Y.; and Englewood (N. J.) Hospital. Noted as an after-dinner speaker, Dr. Stewart came into prominence in January, 1927, when at a banquet of the American College of Surgeons in Washington he maintained that alcohol was a valuable remedy which medical men should be allowed to prescribe regardless of the Eighteenth Amendment. He was a founder of the American College of Surgeons and served as its president in 1927. He was also president during 1919-25 of the New York Academy of Medicine. In 1929 his friend, George F. Baker, gave \$1,000,000 to New York University to establish in his honor the George David Stewart professorship of surgery.

Stillman, Charles Orrin. Canadian oil executive, died in Toronto, Ont., Nov. 18, 1933. He was born in Cleveland, Ohio, Oct. 23, 1864, and after being educated privately began his career with the Standard Oil Company in Bayonne, N. J. After gaining 10 years of experience in various phases of the business, he was transferred to Buffalo in 1890 as plant superintendent. In 1897 he went to Sarnia, Ont., to supervise the construction of the Bushnell Company's new plant there, and two years later became director and superintendent of Imperial Oil Ltd., a subsidiary of the Standard Oil Co. After a series of managerial promotions, he rose to the office of vice-president of the latter concern in 1911 and of president in 1919. He retained the latter post until his retirement in June, 1933. Mr. Stillman was also president of Imperial Pipe Line Co., Ltd., and Queen City Oil Co., Ltd.

Stokes, Rose Pastor. See Romaine, Rose Pastor Stokes. Stone, Ormond. American astronomer, died at Fairfax, Va., Jan. 17, 1933. Born at Pekin, Ill., Jan. 11, 1847, he attended the University of Chicago, receiving the A.M. degree in 1875. He began his career as assistant at the United States Naval Observatory in Washington in 1870 and five years later was appointed director of the Cincinnati Observatory. In 1882 he was called to the chair of astronomy at the University of Virginia, where until his retirement in 1912 he acted also as director of the Leander McCormick Observatory. Among Ormond Stone's noteworthy observations were eclipses of the sun in Iowa in 1869, in Colorado in 1878, and in South Carolina in 1900, while his observations of double and variable stars, nebulae and the satellites of Saturn added to the information about these bodies. He was chairman of the astronomy section of the International Congress of Arts and Sciences held in St. Louis in 1904.

Storms, Albert Boynton. American clergyman and educator, died at Berea, Ohio, July 1, 1933. Born at Lima, Mich., Apr. 1, 1860, he was graduated from the University of Michigan in 1884. Joining the Detroit Conference of the Methodist Episcopal Church in the latter year, he held pastorates during the next 14 years at Franklin, Mich., Hudson, Mich., and Detroit, being assigned in the latter city to the Woodward Avenue Church (1890-93) and the Cass Avenue Church (1893-98). In 1898 he was transferred to the First Church in Madison, Wis., and in 1900 to the First Church in Des Moines, Iowa. Elected president of the Iowa State College of Agriculture and Mechanic Arts in 1903, Dr. Storms carried these administrative duties until 1910 when he became pastor of the Central Avenue Church in Indianapolis. In 1915 he was appointed superintendent of the Indianapolis District of the Methodist Episcopal Church. In 1918 he again returned to the educational field as president of the Baldwin-Wallace College at Berea, Ohio. He wrote *The Cool of the Day* (1902); *The Outlook* (1904); and *The Master Secret* (1913).

Strachan, Robert Charles. American consulting engineer, died in Brooklyn, N. Y., Apr. 16, 1933. He was born at Newburgh, N. Y., Oct. 23, 1862, and was graduated in civil engineering from New York University in 1883. He began his career as assistant on railroad and canal construction, serving in that capacity with the West Shore Railroad, the Erie Railroad, and the State of New York and Kings County

Elevated Railroad, Brooklyn. After acting as structural draughtsman and engineer for various concerns, he entered about 1905 upon the work for which he was best known, the design and construction of bridges in New York City. The original designs for the Queensboro Bridge over the East River were largely his work, and he was in charge of the design and construction of the bridges over the Harlem River at Third Avenue and Willis Avenue. From 1917 to 1927 Mr. Strachey served as examining engineer for New York City, reporting on proposed projects such as the municipal market buildings in Brooklyn and acting as designing engineer for the subway and tunnel work under way during that period. After 1928 he was engaged in a general consulting practice, the terminal facilities of the George Washington Bridge at Fort Washington and Fort Lee being planned under his direction. In addition to numerous contributions to professional and technical magazines he wrote *A Table of Hyperbolic Radicals* (1928).

Straus, Herbert Nathan. American merchant, died Apr. 8, 1933, in New York City, where he was born Nov. 2, 1881. He was graduated from Harvard University in 1903 and immediately afterward became associated with his father, Isidor Straus, and his uncle, Nathan Straus, in the New York department-store firm of R. H. Macy and Co. After the death of his father on the *Titanic* in 1912, he formed a partnership with his brothers, Jesse Isidor and Percy S. Straus, building up in Macy's what was said to be the largest mercantile business in the United States. When the firm was incorporated in 1919, Mr. Straus, who was the youngest of the three brothers, became secretary-treasurer. After 1922 he was vice-president of Macy's and after 1930 president of L. Bamberger and Co., a Newark department store which was bought by Macy's in 1929. He was also a director of two other department-store firms, the Davison-Paxon Co. of Atlanta, Ga., and the La Salle and Koch Co. of Toledo, Ohio. Mr. Straus was active in political affairs, having served as a delegate to the Republican National Convention in 1928 and shortly afterward as treasurer of the New York State Republican Committee. The Republican Business Men, Inc., which he organized and became president of in 1926 supported Herbert Hoover in his presidential campaign. During the World War he served on Hoover's staff in the Food Administration and was also controller of the War Trade Board. He joined the first Citizens Military Training Corps at Plattsburg in 1916 and two years later enlisted with the Motor Transport Corps, receiving the rank of captain. Mr. Straus was a trustee of the Georgia Warm Springs Foundation for the treatment of infantile paralysis victims and with his brothers was engaged in many other philanthropies. In 1924 they gave \$300,000 to Harvard for the construction of a dormitory bearing their father's name, and in 1927 endowed a professorship in the Harvard Graduate School of Business Administration.

Strother, (Edgar) French. American writer, died in Washington, D. C., Mar. 12, 1933. Born at Marshall, Mo., Oct. 5, 1883, he received his education in the public schools of Fresno, Calif., and began his journalistic career at the age of 19 as a reporter for the *Fresno Republican*. In 1904 he moved to New York City and joined the staff of *World's Work*, an association which was continued until 1926 except for an interval spent as associate editor of the *California Weekly* in San Francisco, 1909-10, and in the office of the state superintendent of public instruction in Sacramento, 1911. Mr. Strother was named managing editor of *World's Work* in 1913 and associate editor in 1923, but after three years in the latter post turned to free lance writing. In March, 1929, President Hoover called him to the post of administrative assistant, which he held until May, 1931, and again after February, 1932. In this capacity he was engaged in research work, particularly in the preparation of articles and speeches, and acted in the organization of the White House Conference on Child Health and Protection, the President's Conference on Homes and Home Building, and similar enterprises. He was the author of a great many magazine articles and of *Fighting Germany's Spies* (1918) and *Maid of Athens* (1932). He collaborated with Henry Morgenthau in the writing of two books, *All in a Life-Time* (1922) and *I Was Sent to Athens* (1929).

Stuart, Henry Carter. American administrator, died at Elk Garden, Va., July 24, 1933. He was born at Wytheville, Va., Jan. 18, 1855, and graduated from Emory and Henry College in 1874, after which he studied law for two years at the University of Virginia. He did not take up the practice of law, however, but turned to farming and cattle raising, and subsequently acquired coal and iron interests of considerable importance. He became president of the Stuart Land and Cattle Co. of Virginia, of the Buckhorn Coal Co., and of the First National Bank of Lebanon, Va. (1898-1905). Governor Stuart's political career began with

his election as a delegate to the Democratic National Convention in 1892. He was a member of the Virginia Constitutional Convention in 1902 and in 1903 was appointed to the Virginia State Corporation Commission, on which he served for five years. His nomination for Congressman from the 9th Virginia District in 1910 resulted in defeat because of the strong Republican majority there, but in 1913 he was elected governor of Virginia by an almost unanimous vote and served the term 1914-18. It was during his administration that the State prohibition law was passed. Mr. Stuart was again delegate to the Democratic National Convention in 1916 and in 1924. He served as chairman of the National Agricultural Advisory Committee in 1917-18 and was a member of the price-fixing committee of the War Industries Board. In December, 1919, he attended the President's Industrial Conference.

Stuart, Robert Young. American forester, died in Washington, D. C., Oct. 23, 1933. He was born in South Middleton Township, Cumberland County, Pa., Feb. 13, 1883, and was educated at Dickinson College and the Yale School of Forestry, receiving the M.F. degree from the latter institution in 1906. The U.S. Forest Service assigned him upon graduation to duty in Montana, Idaho, and Wyoming, and from 1906 to 1912 he was chief of timber sale and planting in the Missoula district of Montana. He was then promoted to the position of forest inspector with headquarters in Washington, D. C., where he remained until 1917. During the World War he served with the Forestry Engineers Corps at the A. E. F. headquarters in Paris, at Tours, Chaumont, and in the Gen district, being promoted to the rank of major in 1918 and cited by General Pershing. The years following the war found Mr. Stuart in Pennsylvania, where he served successively as deputy commissioner of forestry for the State (1920-22), as commissioner (1922-23), and as secretary of forests and waters (1923-27). On May 1, 1928, he was appointed chief of the United States Forest Service, and during his administration accomplished much in carrying out plans for the enlargement of the national forests of the United States. These plans were furthered in 1933 through the work of the Civilian Conservation Corps.

Sturgis, Maj.-Gen. Samuel Davis, U. S. A. Ret., died Mar. 6, 1933.

Stutsman, Jesse O. (rila). American penologist, died at Lewisburg, Pa., Apr. 25, 1933. He was born at Philadelphia, Ind., Feb. 19, 1871, and attended De Pauw University (A. B., 1895) and the Johns Hopkins University. Ordained as a minister in the Methodist Episcopal Church in 1896, he served various pastorates in the State of Indiana. In 1910 he entered the field of penological work as general secretary of the Prisoners' Aid Association of Maryland. He was superintendent of the research department of the Board of Public Welfare, Kansas City, Mo., from 1912 to 1918, and also of the Kansas City Municipal Farm for Misdemeanants. During the World War various military camps claimed his services in connection with the War Camp Community Service, and subsequently he was superintendent of the Detroit House of Correction (1920-23) and of the Rockview Penitentiary, Bellefont, Pa. (1923-29). In 1929 Mr. Stutsman was appointed superintendent of the United States Detention Headquarters in New York City, and when the first Federal Training School for Prison Officers was opened there in 1930 he was made principal. In addition to lecturing in behalf of fair colonies for misdemeanants he wrote *Curing the Criminal* (1926). He was an advocate of character analysis in the study of criminals and made important contributions to that field.

Sumner, Frederick Azel. American clergyman and educator, died at Hoboken, N. J., Dec. 26, 1933. He was born at Eastford, Conn., Mar. 26, 1864, and was graduated from Oberlin College in 1891 and the Hartford Theological Seminary in 1894. Ordained to the ministry of the Congregational Church in the latter year, he served several pastorates in Minnesota, including the Pilgrim Church in Minneapolis, 1902-07. In 1907 he was called to the First Church of Milford, Conn., where he remained for nine years. In 1916 Dr. Sumner assumed the presidency of Talladega College, a school for negroes at Talladega, Ala., conducted under the auspices of the American Missionary Association of the Congregational Home Mission Board. He retired as president emeritus in June, 1933. During his administration a fund of \$1,000,000 was raised for the institution, five new buildings were erected, and Talladega achieved a rating of grade "A" in the Southern Association of Colleges and Secondary Schools.

Surtees, Brig. Gen. Sir Conyers. British army officer, died in London, Apr. 18, 1933. Born Jan. 13, 1858, and educated at Harrow and Sandhurst, he entered the army in 1876 and rose rapidly through the ranks to lieutenant-colonel in 1900. He served in the Nile Expedition (1884-85), with the Egyptian Frontier Field Force (1885-86), and in the Boer War (1899-1900).

In recognition of his South African services he was named a Companion of the Distinguished Service Order in 1900. From 1905 to 1909 he was military attaché at the British embassies in Constantinople and Athens, at which time he received the Cross of Grand Commander of the Order of Saviour of Greece. During the World War Sir Conyers was in command of the 52d Infantry Brigade in France and Belgium, 1915-16, being twice mentioned in dispatches, and was inspector of infantry, 1916. A Conservative Member of Parliament for Gateshead during 1918-22, he was made a Companion of St. Michael and St. George in 1919 and was knighted in 1932.

Sutro, Alfred. British dramatist, died Sept. 11, 1933, in London where he was born Aug. 7, 1868. While serving his apprenticeship as a journalist during the '90s he essayed the writing of plays, following from the first that dictum of certain literary aspirants of Grub Street to appeal to the public by "never being dull." His first successful play was *The Walls of Jericho* (1904), an artificial comedy dealing with high society in London. In the same year appeared *A Marriage Has Been Arranged*, which remained popular as a curtain raiser over 80 years. These were followed by *Mollentrave on Women* (1905); *John Glayde's Honor* (1907); *The Builder of Bridges* (1908); *Making a Gentleman* (1909); *The Perplexed Husband* (1911); *The Two Virtues* (1914); *The Choice* (1919); *The Great Well* (1922); *The Desperate Lovers* (1927); and *Living Together* (1929). Sutro won distinction also as the translator of the works of Maeterlinck. In 1918 he was made an officer of the Order of the British Empire.

Suzzallo, Henry, died Sept. 25, 1933.

Švehla, Antonín. Czechoslovak statesman, died Dec. 12, 1933, in Prague, near which city he was born Apr. 15, 1873. As leader in the Chamber of Deputies of the Agrarian party, the largest and most influential in the country, he assumed in 1909 a position of political importance which he maintained throughout his public career. He was vice-president of the National Committee which in 1918 played a prominent part in the formation of the republic. He was appointed Minister of the Interior in the first Czechoslovak cabinet of Edward Benes, serving until 1920. First becoming premier in October, 1922, Švehla retained that office almost continuously for seven years in spite of political crises that caused a change of cabinet three times. He was convinced of the necessity of uniting the landowners against Bolshevism and strongly supported cooperation on the part of his government with Germany. An agriculturist himself, he labored throughout his career for the betterment of the peasants. In January, 1929, he retired because of ill-health.

Swettenham, Sir Alexander. British colonial administrator, died in Switzerland, Apr. 19, 1933. He was born at Derby, England, in 1846 and was educated at Clare College, Cambridge. Between 1868 and 1901 he held various government offices in Ceylon, Cyprus, Singapore, and the Straits Settlements, serving as acting governor of the latter from 1898 to 1900. He was governor and commander-in-chief of British Guiana during 1901-04 and captain-general and governor-in-chief of Jamaica during 1904-07. In 1907 Jamaica was visited by a severe earthquake, which partly destroyed Kingston, the capital and seat of government, and resulted in the loss of 800 lives. The United States government willingly sent assistance to Jamaica, but Swettenham appeared to resent American interference and aroused harsh criticism, both in the United States and England, for his failure cordially to avail himself of the relief offered by Rear Admiral C. H. Davis. He retired from office the same year. In 1898 he was created Knight Commander of St. Michael and St. George.

Swynnerton, Annie Louisa (Robinson). British painter, died in London, Oct. 24, 1933. Born in Manchester about 1845, she was educated there and in Paris, and in 1883 was married to Joseph William Swynnerton, a sculptor. Besides being well-known for her studies of children, she painted a number of symbolic works, including: "The Sense of Sight," in the Liverpool Art Gallery; "The Unrelenting Past," in the Ottawa Art Gallery; "Mater Triumphalis," in the Luxembourg, Paris; "Dream of Italy," in the Metropolitan Museum of Art, New York City; "Hope," in the Melbourne Art Gallery; and "The Oreads" and "New Risen Hope," in the Tate Gallery, London. Her election as an associate of the Royal Academy in 1922 was reputed to be that of the first woman painter so honored since Angelica Kauffmann was made one of the original members of the Academy in 1769. She was also a member of the International Society of Sculptors, Painters and Gravers.

Sydenham of Combe, George Sydenham Clarke, 1st Baron, died Feb. 7, 1933.

Talmage, James Edward. American scientist and theologian, died in Salt Lake City, Utah, July 27, 1933. He was born at Hungerford, Berkshire, England, Sept. 21, 1862, but emigrated with his family to the United States at the age of 18. He attended Lehigh University

and Johns Hopkins and received the Ph.D. degree from Illinois Wesleyan University in 1896. His educational work began at the Brigham Young Academy at Provo, Utah, where he was professor of chemistry and geology during 1884-88. He was president of the Latter-Day Saints College in Salt Lake City from 1888 to 1893 and of the University of Utah from 1894 to 1897, resigning in the latter year as president but remaining as professor of geology until 1907. In 1911 he was ordained as one of the 12 apostles of the Church of Jesus Christ of Latter Day Saints. Dr. Talmage was the author of the following works on Mormonism: *The Articles of Faith* (1899); *The Story of Mormonism* (1907); *The Great Apostasy* (1909); *The House of the Lord* (1912); *The Philosophy of Mormonism* (1914); *Jesus the Christ* (1915); and *The Vitality of Mormonism* (1919).

Taylor, Sir William, died Jan. 29, 1933.

Teasdale, Sara, died Jan. 29, 1933.

Terry, Fred, died Apr. 17, 1933.

Terry, Marshall Orlando, died Oct. 11, 1933.

Terry, Roderick. American antiquary and clergyman, died in Newport, R. I., Dec. 28, 1933. Born in Brooklyn, N. Y., Apr. 1, 1849, he was educated at Yale, Andover Theological Seminary, and the Union Theological Seminary. After his graduation from the latter institution in 1875 he was ordained to the ministry of the Presbyterian Church and served as pastor at Peekskill, N. Y., 1875-79, and of the South Reformed Church of New York City, 1881-1905. He was also chaplain of the 12th Infantry Regiment of the National Guard of the State of New York, 1890-1900, and served as chaplain during the Spanish-American War. After his retirement in 1905 Dr. Terry devoted much time to the preservation of historic buildings and Colonial relics in Rhode Island. Among these were the State House, erected in 1739, Fort Barton, and the site of the Battle of Rhode Island. On July 14, 1928, there was dedicated in King Park the memorial tower which he gave marking the spot where 6000 French troops under Rochambeau landed in 1780. Interested in the work of the Newport Historical Society, he acted as president of that organization from 1918 until the time of his death. He was also president of the Redwood Library, one of the oldest in the United States.

Thatcher, Roscoe Wilfred. American educator, died at Amherst, Mass., Dec. 6, 1933. Born at Chatham Centre, Ohio, Oct. 5, 1872, he was graduated from the University of Nebraska in 1898, receiving the M.A. degree from the same institution in 1901 and the degree of D.Agr. in 1920. He began his career as assistant chemist at the Nebraska Agricultural Experiment Station in 1899, and transferred in 1901 to the Washington Agricultural Experiment Station, where he remained for 12 years, becoming director in 1907. He was also professor of agricultural chemistry at Washington State College during 1907-13. From 1913 until 1921 he was on the faculty of the University of Minnesota, becoming dean of the Department of Agriculture in 1917 and being connected also during that time with the Minnesota Agricultural Experiment Station. He was director of the New York Agricultural Experiment Station, 1921-23, and of the experiment stations of the New York State College of Agriculture, 1923-27. In 1927 he became president of the Massachusetts Agricultural College (later the Massachusetts State College), retiring in 1932 because of ill health but continuing his work there as research professor of chemistry. Dr. Thatcher was president of the American Society of Agronomy in 1912 and of the American Society for the Promotion of Agricultural Science in 1919. He edited the *Journal of the American Society of Agronomy*, 1922-27. President Coolidge appointed him a member of the President's Agricultural Commission in 1924. His researches in the chemistry of flour and wheat and his chemical studies of insecticides brought him wide recognition. He wrote *Chemistry of Plant Life* (1921).

Thayer, Benjamin Bowditch. American mining engineer, died in New York City, Feb. 22, 1933. He was born in San Francisco Oct. 20, 1862. After graduating from the Lawrence Scientific School of Harvard University in 1885 he engaged in mining operations for the Anaconda Copper Mining Co. in Montana, later supervising the mining interests of William Randolph Hearst and his mother in California and becoming general manager of the Santa Rita Mine in New Mexico. From 1909 to 1915 he held the office of president of the Anaconda Copper Mining Co. and after its merger with the Amalgamated Copper Co. the office of vice-president of the greater Anaconda company. He was also president of the Raritan Copper Works, Anaconda Sales Co., Electrolytic Zinc Process Co., and Santiago Mining Co. In 1914 Mr. Thayer served as president of the American Institute of Mining Engineers. The following year he was appointed to the United States Naval Consulting Board because of his expert knowledge of explosives.

Thayer, Russell. American civil engineer, died at Mount Airy, Philadelphia, Pa., Oct. 21, 1933. He was born in Philadelphia, Dec. 24, 1852, and received his education at the University of Pennsylvania and the United States Military Academy, where he became assistant instructor in artillery after his graduation in 1874. The following year he gave up the army as a career, although he was later for six years brigadier-general of the 2d Brigade of the Pennsylvania National Guard. After serving for a time as assistant supervisor for the Pennsylvania Railroad, he was appointed chief engineer of Fairmount Park in Philadelphia. In that post, which he held for 23 years, he designed and carried out a number of park improvements. In 1899 he became connected with the United Gas Improvement Co., where he remained for 17 years. He was also president of several lighting companies. Mr. Thayer was known for a number of inventions. His interest in aeronautics led him to submit plans for an Army dirigible as early as 1885. These plans were approved by the Army Ordnance Department, but apathy on the part of Congress failed to secure the necessary appropriation for the construction of the airship. Among his patents was one for the gyroscopic control of airships. The gold separator machine for recovery of gold lost in amalgamation on plates was another of his inventions.

Thayer, Webster, died Apr. 18, 1933.

Thompson, Charles Edwin. American steel manufacturer, died in Washington, D. C., Oct. 4, 1933. He was born at McIndoe Falls, Vt., July 16, 1870, and, after receiving a preparatory school education in Boston, entered business in 1892 as manager of telephone companies in Cleveland and Dallas. In 1900 he became associated with the Cleveland Cap Screw Co., of which he became general manager in 1905. He remained throughout his career with this company, which later became known as the Electric Welding Products Co., acquired two other companies by merger in 1916, and was incorporated as Thompson Products Co. under his presidency in 1924. This organization was known for its improvements in valve manufacture. Mr. Thompson having devised at the outset a method of electrical welding. The first alloy valve was produced in 1907 and 10 years later a one-piece valve of alloy steel, which was universally adopted. On the formation of the Thompson Aeronautical Corp. Mr. Thompson's interest in aviation expanded, causing him to offer each year after 1930 the Thompson Trophy with cash prizes amounting to \$15,000 for the winner of the land plane speed race in connection with the National Air Race meeting. He assisted in organizing the Glenn L. Martin Co., manufacturers of aeroplanes, and the Trans-American Airlines, later merged with American Airways, and developed the silerome aviation valve. He was twice president of Motor and Accessory Manufacturers Association and was a director of Automotive Parts and Equipment Association.

Thompson, William Oxley. American educator, died in Columbus, Ohio, Dec. 9, 1933. Born at Cambridge, Ohio, Nov. 5, 1855, he was graduated from Muskingum College in 1878, receiving the M.A. degree three years later, and from the Western Theological Seminary in Allegheny City, Pa., in 1882. Ordained in the ministry of the Presbyterian Church in the latter year he served a pastorate at (Odebolt, Ia., until 1885 and then because of his wife's health removed to Longmont, Colo., where he was for six years president of Longmont College and pastor of the local church. Upon his return to Ohio in 1891 he became president of Miami University in Oxford. In 1899 he was called to the presidency of the Ohio State University, a position which he filled for more than 25 years. When he retired as president emeritus in 1925, the university occupied a plant valued at \$15,000,000 and the enrollment had increased during his administration from 1200 to almost 10,000. Dr. Thompson continued in active participation in religious activities, serving as president of the International Sunday School Association in 1918 and as moderator of the General Assembly of the Presbyterian Church in the United States of America in 1926-27. Also considered an authority on matters pertaining to agriculture, he was chairman of the Agricultural Commission sent to England and France in 1918 to study agricultural conditions in Allied countries. In 1920 he was chairman of the commission appointed by President Wilson to settle the anthracite coal controversy.

Thomson, Sir (John) Arthur, died Feb. 12, 1933.

Thomson, John Millar. British scientist, died in London Mar. 22, 1933. He was born in the Old College of Glasgow Mar. 7, 1849, and educated at the University of Glasgow. He was appointed Assistant Demonstrator of Chemistry in King's College, London, in 1871 and Senior Demonstrator in 1879. The following year he went to Queen's College, London, as professor of chemistry, remaining there until 1887. He returned to King's College in that year as professor of chemistry, serving also as vice-principal from 1905 to 1914, when he retired as professor emeritus. Dr. Thomson held several offices in

the Chemical Section of the Society of Arts and the Chemical Society of London and was president, 1900-08, of the Institute of Chemistry of Great Britain and Ireland. He published a number of papers and addresses on chemical subjects.

Thorndike, Ashley Horace. American English scholar, died in New York City Apr. 17, 1938. He was born at Houlton, Me., Dec. 26, 1871, and was graduated from Wesleyan University in 1893 and from Harvard University with the Ph.D. degree in 1898. He then became an associate professor at Western Reserve University but in 1902 was called to Northwestern University as professor of English literature. After 1906 he was professor of English at Columbia University. Dr. Thorndike wrote *The Influence of Beaumont and Fletcher on Shakespeare* (1901); *Elements of Rhetoric and Composition* (1905); *Tragedy* (1908); *Everyday English* (1913); *Facts about Shakespeare* (1915); *Shakespeare's Theatre* (1916); *Literature in a Changing Age* (1920); *A History of English Literature* (1920); *English Comedy* (1929); and *The Outlook for Literature* (1931). Also he edited the *Tudor Shakespeare, Library of the World's Best Literature, Longman's English Classics*, and the *Modern Readers' Series*. He was a member of the National Institute of Arts and Letters and in 1927 delivered the annual Shakespeare lecture before the British Academy.

Thornton, Sir Henry Worth, died Mar. 14, 1933.

Thurston, E(rnest) Temple. British novelist, died in London Mar. 19, 1933. Born at Halesworth Sept. 23, 1879, he published his first work, two volumes of verse, at the age of 16. His first novel, *The Apple of Eden*, was written two years later but was not published until 1905. In 1902 his first play, *Red and White Earth*, appeared. Three years later he dramatized as *The Masquerader* the novel *John Childe, M.P.*, written by his first wife Katherine Cecil Alden Thurston. Mr. Thurston's novels won popular appeal through a certain poetic sentiment, admirably illustrated in *Traffic* (1906), *The Rentier* (1907), *Sally Bishop* (1908), *The City of Beautiful Nonaenae* (1909), *The Greatest Wish in the World* (1910), and *The Garden of Resurrection* (1911). He wrote also *The Antagonists* (1912), *Richard Furlong* (1913), *The Passionate Crime* (1915), *The Five-Barred Gate* (1916); *Enchantment* (1917), *The Forest Fire* (1919), *The World of Wonderful Reality* (1920); *The Green Bough* (1921); *The Eye of the Wife* (1922), *May Eve* (1924); *Mr. Bottleby Does Something* (1925); *The Rosetts* (1926); *The Goose-Feather Bed* (1926); *Come and Listen* (1927); *Portrait of a Spy* (1928); *Man in a Black Hat* (1930), and *A Hank of Hair* (1932). His plays included *The Greatest Wish* (1912), *Drogen* (1914), *The Coat* (1914), *The Wandering Jew* (1923), *A Roof and Four Walls* (1923); *Judas Iscariot* (1923), *The Blue Peter* (1924); *Emma Hamilton* (1929); and *Charmeuse* (1930).

Tiffany, Louis Comfort, died Jan. 17, 1933.

Tilton, Edward Lippincott. American architect, died at Scarsdale, N. Y., Jan. 5, 1933. He was born in New York City, Oct. 19, 1861, and at the age of 18 started work in a banking house. He soon abandoned the banking business, however, in order to study architecture with the firm of McKim, Mead, and White, and in 1887 he went to Paris for three years, where he studied at the École des Beaux Arts. The year following his return to New York he entered a partnership with William A. Boring and the two shortly afterward won the competition for the Ellis Island Immigration Station. When Mr. Boring retired in 1916, Mr. Tilton continued practice with Alfred Morton Githens as partner. He specialized in libraries, museums, and buildings of a similar nature, and designed the Welch Medical Library at the Johns Hopkins University, the Currier Museum at Manchester, N. H., the Springfield and Somerville (Mass.) libraries, and other notable buildings. During the World War he designed almost 100 libraries and theatres for the government military camps. He was awarded a gold medal at the Paris Exposition in 1900 and the gold medal of the American Institute of Architects in 1925 for the Public Library at Wilmington, Del. He received other medals at the Pan-American Exposition of 1901 and the Louisiana Purchase Exposition of 1904. He was a former president of the Society of Beaux Arts Architects. Mr. Tilton was also known as an archaeologist. When the Archaeological Institute of America excavated the Argive Heraeum in Argos in Greece in 1895, he was architect for the expedition. He contributed the chapters on Greek architecture to the *Dictionary of Architecture* (1901) and wrote a monograph entitled *The Architecture of the Argive Heraeum* (1902).

Titworth, Paul Emerson. American educator, died at Alfred, N. Y., Dec. 10, 1938. Born at Ashaway, R. I., May 31, 1881, he was graduated from Alfred University in 1904 and received the Ph.D. degree from the University of Wisconsin in 1911. He spent most of the years between 1904 and 1923 on the faculty of Alfred University, becoming professor of modern languages in 1909, professor of English in 1919, and dean in 1920. He served as president of Washington College at Chester-

town, Md., from 1923 to 1938, and returned, less than two months before his death, to Alfred University as president. Dr. Titworth was a well-known Rotarian. He founded the first Rotary Club in Chestertown, Md., and was appointed governor in 1931 of the 84th district of Rotary International. He was one of the two United States representatives of the international service committee of Rotary International. He compiled a *Bibliography for High School Teachers of Modern Languages* (1902) and collaborated in the translation from the French of *Emancipation of Medieval Towns* (1906).

Tomaso, Antonio de. Argentine statesman, died Aug. 8, 1933, in Buenos Aires, where he was born in 1889. After taking a business school course he became clerk for a cereal export firm at the age of 16 and bookkeeper for the firm two years later. In that position he learned of the excessive profits of the employers and became an ardent member of the Socialist party. At the age of 20 he won by examination an appointment as stenographer in the Chamber of Deputies and began the study of law at the University of Buenos Aires, receiving his degree in 1914. In the same year, already acknowledged as a political leader, he was elected to membership in the Chamber of Deputies, which he retained until the dissolution of the Chamber in 1930. When the Socialist party split in 1927 he became a leader of the Independent Socialists, who were openly opposed to President Hipólito Irigoyen and helped precipitate the revolution in 1930. Gen. Agustín P. Justo, after his inauguration in February, 1932, appointed him Minister of Agriculture. In spite of illness, Dr. de Tomaso accompanied to London early in 1933 the embassy headed by Julio Roca and participated in the negotiation of a commercial treaty with Great Britain.

Torrence, Ernest. American motion-picture actor, died in New York City May 15, 1933. Born in Edinburgh, Scotland, June 26, 1878, he prepared for a musical career at the Edinburgh Academy of Music and the Conservatory in Stuttgart, Germany. In 1901 he joined the Savoy Opera Company, singing the baritone rôles in several Gilbert and Sullivan productions, and during the next 10 years appeared on the London stage in *The Emerald Isle* and other comic operas. He made his New York début in 1911 as the Scotch comedian in *The Only Girl*, but his greatest success on Broadway came nine years later as the captain in *The Night Boat*. Cast as the villain in the film *Tolable David* in 1922, he thereafter achieved considerable fame for his character delineations in *The Covered Wagon*, *Peter Pan*, *Captain Blood*, *The Blind Goddess*, *The Pony Express*, *The King of Kings*, *The Bridge of San Luis Rey*, *The Unholy Night*, and *Untamed*.

Tourian, Archbishop Leon. Prelate of the Armenian Church, died by assassination in New York City, Dec. 24, 1933. He was born about 1878 in Constantinople (later Istanbul), Turkey, where he was educated for the priesthood at an Armenian seminary. He held high offices in this denomination more properly known as the Gregorian Church, having been Primate of Smyrna, Vicar-Patriarch of Constantinople, Bishop of Bulgaria, and Archbishop of England, residing at Manchester. In 1931 he came to the United States as Primate of all of North and South America, except California. Archbishop Tourian had supported the establishment of a Soviet Armenian government at Erivan in 1920. After assuming his duties in New York City his stand at that time was criticized by opponents of the Soviet Government's domination in the Republic of Armenia, and during the last year of his life attacks on him grew more and more frequent. On July 2, 1933, supporters of an independent Armenian republic stopped him while he was making an address at the Century of Progress Exposition in Chicago. In August he was assaulted at Westboro, Mass., when about to give his blessing to a large congregation by five members of the Armenian Revolutionary Federation. A convention of the Armenian Apostolic Church, meeting in New York City in September, voted him out of office, but as his supporters continued to express confidence in him he refused to recognize their action. On December 24, however, he was stabbed to death in the aisle of the Holy Cross Armenian Church in New York City, while participating in the grand processional. The slaying was perpetrated by four Armenian revolutionists.

Towse, J(ohn) Ranken. American dramatic critic, died Apr. 12, 1933, at Streatham, Surrey, England, where he was born Apr. 2, 1845. Educated at Cambridge, he came to the United States in 1869 and the following year joined the staff of the New York *Evening Post*, serving as its dramatic critic from 1874 to 1927. For 17 of those years he was also city editor. He published *Sixty Years of the Theatre* (1916).

Treowen, Ivor John Caradoc Herbert, First Baron. British soldier, died at Llanarth Court near Abergavenny, Monmouthshire, Oct. 18, 1938. Born July 15, 1851, and educated at St. Mary's College, Oscott, he entered the Grenadier Guards in 1870 and received rapid promotion to brevet-colonel in 1889. He served in the Egyptian campaign of 1882 and in the Nile Expedition of 1884-

85, taking part in the actions at Abu Klea, Gubat, and Metemneh. After acting as military attaché at the British embassy in St. Petersburg (later Leningrad) from 1886 to 1890 he was for five years commander of the Canadian militia in Canada with the local rank of major-general. At Queen Victoria's Diamond Jubilee in 1897 he commanded the entire body of colonial troops in England. Lord Treowen served also in the Boer War as assistant adjutant-general of the Field Force. After his retirement from the army in 1908 he was promoted to the rank of major-general. He was active in political affairs, being Liberal Member of Parliament for South Monmouthshire from 1906 to 1917. In 1913 he became Lord Lieutenant of Monmouthshire. Named a Companion of the Bath in 1890 and a Companion of St. Michael and St. George in 1895, he was created a baronet in 1907 and a baron in 1917. In 1929 he accepted the presidency of University College of South Wales and Monmouthshire.

True, John Preston, American author, died at Waban, Mass., Jan. 4, 1933. He was born at Bethel, Me., Feb. 13, 1859, and attended Exeter Academy and the Roxbury Latin School in Boston. In 1879 he entered the educational department of Houghton, Mifflin and Co., publishers, an association which he continued for 40 years, retiring in 1919. He was the author of a number of books for boys, including: *Their Club and Ours* (1883); *Shoulder Arms* (1889); *The Iron Star* (1899); *Scouting for Washington* (1900); *Morgan's Men* (1901); *On Guard Against Torv and Tarleton* (1902), and *Scouting for Light Horse Harry* (1911).

Turner, William Thomas (Everton), British sea captain, died at Great Crosby near Liverpool June 23, 1933. Born about 1856, he began his sea career at the age of 8 as a deck boy on his father's bark, the *Grasmere*, and during the next 25 years saw considerable service on sailing vessels. In 1883 he entered the employ of the Cunard Steamship Co., Ltd., becoming a captain 10 years later and subsequently commanding the transatlantic liners *Aquitania*, *Mauveania*, and *Lusitania*. When the *Lusitania* was torpedoed by a German submarine on May 7, 1915, some miles southwest of the Old Head of Kinsale on the Irish coast, Captain Turner was on duty. He went down with his ship but succeeded in saving himself with the aid of an oar and was rescued two hours later. In the investigation of the tragedy he was exonerated from all blame, as the vessel was unarmed and carried no high explosives, guns, or loaded shells. The casualties numbered 1152, of whom 114 were Americans. The fact that the attack was made in violation of all principles of international law produced a feeling of widespread horror and indignation in the United States and resulted in the eventual entry of that country into the World War. Captain Turner had another harrowing experience when the *Feorna* which he was commanding was torpedoed in the Mediterranean while carrying British troops to Saloniki. Thereafter until his retirement in 1919 he served as relief captain at Glasgow and Liverpool. He was decorated in recognition of his War services, with the Order of the British Empire.

Tweed, John, British sculptor, died in London Nov. 12, 1933. A native of Glasgow, Scotland, he studied at the Royal Academy Schools and later at the Ecole des Beaux Arts in Paris under Falguere. He devoted his talents to the creation of monuments and commemorative statues and received a number of important commissions from cities in various parts of England and the Dominions. Among the most famous of his public works are the national memorial to Earl Kitchener of Khartum in the Horse Guards Parade, the memorial to Lord Beresford in St. Paul's Cathedral, the War Memorial of the 60th Rifles for Winchester, a marble bust of Joseph Chamberlain in Westminster Abbey, statues of Queen Victoria at Aden and Madras, statues of Lord Clive in London and Calcutta, statues of Cecil J. Rhodes at Bulawayo, Salisbury, Rhodesia, and Mafeking, and the Rifle Brigade War Memorial in Grosvenor Gardens. He completed also the Alfred Stevens monument to the Duke of Wellington in St. Paul's Cathedral.

Unwin, William Cawthorne, died Mar. 17, 1933.

Urban, Joseph, died July 10, 1933.

Urquhart, John Leslie, British mining engineer, died in London, Mar. 14, 1933. Born in 1874, he was sent abroad to study languages, then took up mining engineering at the Universities of Glasgow and Edinburgh. After operations in the petroleum fields near Baku, Caucasus, where he was engaged between 1896 and 1906, he undertook the ownership and management of mines in the Ural Mountains, Siberia, and in various parts of European Russia, serving as chairman of the Russo-Asiatic Consolidated Mining Trust, the largest foreign enterprise in the old Russian empire. After the Bolshevik revolution of 1917 he headed, as chairman, the Association of British Creditors of Russia, while at the post-war conferences in Geneva and The Hague, he acted as adviser to Lloyd George on Russian economic matters. On the signing of the Anglo-Soviet Trade Agreement in March, 1921, Urquhart negotiated with Krassin, the Soviet Minister of Trade and Commerce, for the restora-

tion of 2,500,000 acres of land belonging to the Russo-Asiatic Consolidated Mining Trust and for compensation amounting to \$280,000,000. Lenin, however, vetoed this arrangement the following year. In 1923 Urquhart was reputed to control the Turkish import and export trade. He was engaged thereafter in mining enterprises in France, Australia, and New Guinea, directing in the latter country the New Guinea Goldfields. Among the honors conferred on him were the Albert Gold Medal, first class, by King Edward in 1906 and the Silver Medal of the Royal Society of Arts in 1916.

Uyehara, Yussaku, Viscount, Japanese army officer, died in Tokyo, Nov. 8, 1933. Born at Hyuga in 1856, he was commissioned a sub-lieutenant of engineers in the Japanese Army in 1879, and in 1889 was among the first officers sent to France to study military history and tactics. During the war with China five years later he served as staff officer of the 1st Army. He also represented the Emperor in 1894 at the coronation of Czar Nicholas II of Russia. Created a baron in 1897 he was delegated to attend The Hague Peace Conference in 1899. On the outbreak of the Russo-Japanese War of 1904-05 he was chief of staff to Marshal Nogi and in 1908 became commander of the 7th Army Division. He served as Minister of War during 1912-13, as chief of the Military Education Board in 1914, and from 1918 to 1923 as chief of the general staff of the Japanese Army, having been elevated to the rank of Field Marshal in 1919. At the time of his death he was a member of the Board of Marshals and Fleet Admirals.

Uzès, Anne, Duchesse d', French sculptor and author, died in Paris Feb. 3, 1933. A daughter of Louis de Rochechouart, Comte de Mortemart, she was born in Paris Feb. 10, 1847, and was married at the age of 19 to Emmanuel, the twelfth Duc d' Uzès. Widowed in 1878, she devoted herself with enthusiasm to politics, to sports, to literature and art, and to her position of social leader of the French nobility. During the '80s she financed the activities of Gen. Georges Boulanger in the hope of restoring the House of Orleans and the monarchy. Through her skill in the hunting-field she became the master of the hunt at Bonnelles-Rambouillet and in 1923 was awarded the ancient title of Wolf Lieutenant in her district. She was one of the first motorists to be licensed in France and founded the Woman's Automobile Club of Paris. Under the pseudonym of "Manuella" the Duchess exhibited her sculpture at the Salon of French Artists and won honorable mention. Notable pieces were: "Diane Surprised," "St. Hubert" in the Church at Montmartre, "Notre Dame de Poissy" in the Church at Poissy, "Jeanne d'Arc" at Pont-à-Mousson, "Jeanne d'Arc" at Mehun-sur-Yèvre, and "Notre Dame de France" at Rheims. She was president of the Union of Women Painters and Sculptors. The Duchess wrote two novels, *Pauvre petite* and *Juven Masly*; *Le Voyage de Mon Fils au Congo*, an account of her son Jacques's fatal exploring expedition to the Congo, *L'Arrondissement de Rambouillet*, and several plays, among them *Le Cœur et le Sang*, *Une Saint-Hubert sous Louis XV*, *Un Cas*, and *La Sourde*. Among the numerous honors bestowed on her were the medal of Queen Elizabeth of Belgium and the decorations of Chevalier of Serbian Charity, and Chevalier of the Legion of Honor.

Vaihinger, Hans, died Dec. 19, 1933.

Vance, Louis Joseph, American novelist, died in New York City Dec. 16, 1933. He was born in Washington, D. C., Sept. 19, 1879, and attended the preparatory school of the Brooklyn Polytechnic Institute. After attaining success with the *Brass Bowl* in 1907 he devoted himself to tales of mystery and adventure, becoming one of the most popular and prolific writers in that field. Among his 35 novels were: *The Black Bag* (1908), *The Bronze Bell* (1909), *The Fortune Hunter* (1910), *The Handbox* (1912), *Joan Thursday* (1913), *The Lone Wolf* (1914), *Sheep's Clothing* (1915), *The False Faces* (1917), *Beau Revel* (1919), *Red Masquerade* (1921), *Alias the Lone Wolf* (1921), *The Lone Wolf Returns* (1923), *The Road to En-Dor* (1925), *The Dead Ride Hard* (1926), *The Woman in the Shadow* (1930); and *The Trembling Flame* (1931).

Van Dyke, Henry, died Apr. 10, 1933.

Van Dyke, Paul, died Aug. 30, 1933.

Van Royen, Jan Herman, Dutch diplomat, died at The Hague, Aug. 31, 1933. Born at Zwolle, the Netherlands, Mar. 28, 1871, he attended the local schools and the University of Groningen. After his appointment as attaché in the Dutch diplomatic corps in 1897 and as secretary in 1899, he served at the legations in Berlin (1900-1), Washington (1901-04), and Constantinople (1904-7), being advanced to counselor in 1906. In 1907 he was secretary to the Peace Conference at The Hague. His appointment as Minister to Japan in 1908 was followed by transfers to Spain in 1914, to Italy in 1919, and to the United States in 1927, succeeding in the latter post Andre de Graaff, who had been made Governor-General of the Dutch East Indies (later Netherlands India). Dr. Van Royen strengthened the historic ties between the Netherlands and the United States by

his cooperation in securing the extension of the Root treaty of arbitration in 1929, whereby the United States might adhere to the Permanent Court of International Justice at The Hague. The Formula set forth in this treaty allowed an American objection to have the same force and effect as would attach to a vote by a member of either the Assembly or the Council of the League of Nations and permitted the American government to withdraw if it did not wish to submit an issue to the World Tribunal. When American abandonment of the gold standard proved disadvantageous to Dutch foreign trade, Dr. Van Royen preserved friendly feelings between the two nations by asserting emphatically the intention of his government to cooperate with the United States in attempts to reduce tariff barriers and other obstacles to trade. He was author of *The Consular Jurisdiction of Japan*, 1895.

Varona y Pera, Enrique José, Cuban philosopher, statesman, and author, died at Vedado Nov. 19, 1933. Born at Camagüey Apr. 13, 1849, he attended the University of Havana, receiving the Ph.D. degree and holding there for many years the chair of psychology, moral philosophy, and sociology. Previous to the Cuban Revolution he was for a brief period one of the Cuban Deputies in the Spanish Cortes. He edited also from 1885 to 1895 *Revista Cubana* and founded *Patria*, the organ of the Revolutionary party. Dr. Varona fought in the Spanish-American War and during the first American occupation of Cuba (1899-1902) was Secretary of Public Instruction. One of the founders of the Conservative party, he was elected in 1912 vice-president of the republic on the ticket with Mario G. Menocal, holding the office for four years. During his later years he was a bitter opponent of President Machado. Among Dr. Varona's works were: *Odas Anacrónicas* (1868); *Poesías* (1878); *Estudios Literarios y Filosóficos* (1883); *Los Cubanos en Cuba* (1891); *Cuba contra España* (1895-98); *Noções de Lógica* (1902); *Curso de Psicologia* (1905-08); *El Fundamento de la Moral* (1903); and *Por Cuba, Discursos* (1918).

Villa-Urrutia, Wenceslao Ramírez, Marqués de, died Apr. 21, 1933.

Vitale, Ferruccio, American landscape architect, died in New York City, Feb. 26, 1933. Born in Florence, Italy, Feb. 5, 1875, he was educated at the Royal Military Academy at Modena and was commissioned in the Italian Army. While a military attaché at the Italian Embassy in Washington, D.C., during 1898-99 he was sent to the Philippines with the United States Army as a military observer. In 1904 he resigned his commission in the Italian Army and established himself in New York City as a landscape architect. He drafted the designs for Meridian Hill Park in Washington, D.C., and the plans for the towns of Scarsdale and Pleasantville, N. Y., besides carrying out Federal government commissions in several Western national parks and laying out many private estates near New York, Chicago, Philadelphia, and Pittsburgh. He was instrumental in arranging scholarships at the American Academy at Rome, of which he was a trustee, and in establishing a department of landscape architecture there. He became a citizen of the United States by naturalization in 1921. President Coolidge appointed him a member of the National Fine Arts Commission for the term 1927-31, and at the time of his death he was serving on the Architectural Commission of the Chicago Century of Progress Exposition. For his work in the Philippines in 1898 he was created a Chevalier of the Crown of Italy. In 1920 there was awarded to him the gold medal of the Architectural League of New York City. He was a member of the Foundation for Architecture and Landscape Architecture at Lake Forest, Illinois.

Vonnoh, Robert, died Dec. 28, 1933.

Wakefield, The Rt. Rev. Henry Russell, British Clergyman and social reformer, died in London, Jan. 9, 1933. Born at Mansfield, Nottinghamshire, Dec. 1, 1854, he was educated at the Lycée Bonaparte in Paris and at the University of Bonn. His ecclesiastical career, which began in 1877, was distinguished by his participation in social services and by his popularization of social questions among laymen of the Church of England and of other communions. After acting as prebendary of St. Paul's during 1908-9 and as Dean of Norwich during 1909-11, he was consecrated Bishop of Birmingham but resigned this see in 1924 to devote all his time to his social interest. Under his presidency, from 1913 to 1924, the National Council of Public Morals undertook inquiries into such problems as adolescence, the birth-rate, and the motion picture. During the World War Bishop Wakefield traveled more than 18,000 miles in the United States and Canada on an official mission to set forth the moral issues which required American support of the Allies in that conflict, receiving in recognition of these services commanderies in the Order of the British Empire (1920) and the Order of Leopold II of Belgium. Other offices held by him were: Chairman of the Central Committee of the Unemployed; president of the Free and Open Church Society; and president of the Christian Counter-Communist Crusade.

Walden, Lionel, American marine painter, died at Chantilly, France, July 12, 1883. Born at Norwich, Conn., May 22, 1861, he studied under Carolus-Duran in Paris and exhibited widely both in the United States and abroad. Among the awards accorded him were silver medals at the Paris Exposition of 1900, the Louisiana Purchase Exposition in St. Louis in 1904, and the Panama-Pacific International Exposition in San Francisco in 1915. His best known works are "Fishing in the Roadstead" in the Wiltach Collection at Philadelphia and "Cardiff Docks" in the Luxembourg Gallery in Paris. He was also represented in the Cardiff (Wales) Museum, the Honolulu Academy of Arts, and the Corcoran Gallery in Washington. In 1910 he was made a Chevalier of the French Legion of Honor.

Waldo, Frederick Joseph, British physician and barrister, died in London Nov. 2, 1893. Born in Bristol Oct. 18, 1852, he was educated at Clifton College and at St. John's College, Cambridge, receiving from the latter the A.M. and M.D. degrees. After serving his internship at St. Bartholomew's Hospital, London, he did research work during 1889-91 in the laboratories of Louis Pasteur in Paris, Robert Koch in Berlin, and Max von Pettkofer in Munich. On his return to England he was appointed house physician at St. Bartholomew's Hospital, serving also from 1892 to 1900 as tutor in public health at the St. Bartholomew's Hospital Medical School. He was connected with the City of London Hospital for Diseases of the Chest as house physician and with the East London Hospital for Children as senior resident medical officer. Combining his interest in medicine with law, Dr. Waldo served after his admission to the bar in 1896 as the first medical officer of the Inner and Middle Temples and, at the time of his death, was considered one of the foremost authorities on medical jurisprudence. He held also the office of coroner of the City of London and Southwark from 1901 to 1932 and during 1915-16 was president of the Coroner's Society of England and Wales. In 1900 he delivered the Milroy Lectures before the Royal College of Physicians and in 1904 was special lecturer on medical jurisprudence for the Council of Legal Education. He was a Knight of Grace of the Order of St. John of Jerusalem in England.

Walsh, Thomas James, died Mar. 2, 1933.

Ward, George Clinton, American engineer, died in Los Angeles, Calif., Sept. 11, 1933. Born at White Plains, N. Y., Jan. 9, 1863, he was educated at Phillips Academy, Andover, Mass. His engineering career began in 1882, when he joined the construction corps of the New York, West Shore, and Buffalo Railroad (later part of the New York Central system). Surveying and construction for other railroads occupied him from 1884 to 1902 when he accepted the post of engineer in charge of the modernization of the city water supply at Washington Court House, Ohio. For the Henry E. Huntington he undertook the construction of hydroelectric plants in California, becoming vice-president and general manager in 1905 of the Huntington Land and Improvement Co. He resigned in 1912 to become vice-president of the Pacific Light and Power Corp. In 1917 he was elected vice-president of the Southern California Edison Co., and in 1932 president.

Wauters, Emile Charles Marie, died Dec. 11, 1933.

Wells, Amos Russel, American author and editor, died at Auburndale, Mass., Mar. 6, 1933. He was born at Glens Falls, N. Y., Dec. 23, 1862. Upon graduation from Antioch College in 1883, he served as professor of Greek and geology there until 1891 when he became associated with the Rev. Francis E. Clark, the founder, in pioneering the establishment of the World's Christian Endeavor Union. After 1891 he edited the society journal, the *Christian Endeavor World*, and was a contributing editor to the *Christian Herald*. Dr. Wells was the author of more than 100 books, some of which are *Golden Rule Meditations* (1893), *When Thou Hast Shut Thy Door* (1895), *Little Sermons for One* (1898), *The Business Man's Religion* (1900), *The Cheer Book* (1901), *Rolling Rhymes* (1902), *The Young People's Pastor* (1905), *The Living Bible* (1908), *Why We Believe the Bible* (1910), *The Arithmetic of Friendship* (1913), *Bible Snapshots* (1925), *Go Tell You Guess* (1929), *Walk in His Ways* (1930), and *The Devotional Year-book* (1931). His interest in Sunday school work was demonstrated by such volumes as *Sunday School Problems* (1905), *The Teacher That Teaches* (1907), *Sunday School Essentials* (1911), *The Ideal Adult Bible Class* (1912), *A Successful Sunday School Superintendent* (1915), and the annual volume of *Peloubet's Notes on the Sunday School Lessons*. Always an earnest advocate of prohibition, he served on the temperance commission of the Federal Council of the Churches of Christ in America.

Wentworth, Cecile de, American painter, died at Nice, France, Aug. 28, 1893. Born in New York City, she attended the Sacred Heart Convent there and in 1886 went to Paris where she studied under Alexander Cabanel and Edward Detaille. She first exhibited at the Paris Salon in 1889, won honorable mention for

a portrait in 1891, and continued to exhibit annually until her death. With Rosa Bonheur she shared the rare distinction among women painters of decoration with the cross of the Legion of Honor and of purchase for permanent exhibition by the Musée du Luxembourg. She received commissions from many notable personages. Her portrait of Queen Alexandra of England, executed for the King of Spain, was admired by King Edward VII at the Paris Salon, while Pope Leo XIII was so pleased with his portrait which received a medal at the Paris Exposition in 1900 that he made her a grand commander of the Order of the Holy Sepulchre. President Taft and President Theodore Roosevelt were famous American subjects for her brush. Examples of her work are displayed at the Luxembourg in Paris, the Vatican Museum in Rome, the Metropolitan Museum in New York City, and the Corcoran Art Gallery in Washington, D.C. She held the papal title of marquise.

Wester Wemyss, Rosslyn Erskine Wemyss, 1st Baron of Wemyss, died May 24, 1933.

Westinghouse, Henry Herman, American mechanical engineer, died at Goshen, N. J., Nov. 18, 1933. Born at Central Bridge, Schoharie Co., N. Y., Nov. 16, 1853, the youngest of seven sons, he was graduated from the Union High School, Schenectady, N. Y., in 1871 and studied mechanical engineering at Cornell University during 1871-72. His family bent was strongly mechanical, for his father was a machinist, inventor, and manufacturer of agricultural implements, and his brother George, with whom he was closely associated in business enterprises, was the famous inventor of the air-brake and other mechanical appliances. In the Westinghouse Air Brake Co., established in Pittsburgh by his brother in 1869, he began work in the foundry in 1873, continued in the machine-shop and the drafting-room, became general agent, then rose to the office of general manager in 1887, vice-president in 1899, and, after the death of his brother, president in 1914. At the time of his death he was chairman of the board of directors. Mr. Westinghouse himself invented the single-acting steam-engine, which proved to be an important factor in the development of the electric power industry. He organized the Westinghouse Machinery Co. in 1880 to manufacture this engine and founded the engineering firm of Westinghouse, Church, Kerr and Co., in 1885, which marketed the single-acting steam-engine all over the world. He was also chairman of the board of directors of the Canadian Westinghouse Co., Ltd.; director of the Westinghouse Electric and Manufacturing Co., and of the Westinghouse Brake and Saxby Signal Co., Ltd., London; president and director of La Compagnie des Freins Westinghouse, Paris, and director of the Westinghouse Brake Co. of Australasia, Ltd., Sydney, N.S.W. Brake Subsidiaries, Ltd., London, and the Union Switch and Signal Co.

Weston, Charles Valentine, American civil engineer, died in Chicago, Ill., Jan. 27, 1933. Born at Kalamazoo, Mich., Feb. 14, 1857, he received a public school education there and was engaged on railroad engineering and construction projects in the Southwest from 1880 to 1888. In the latter year he came to Chicago to construct intake cribs and water-supply tunnels for the suburb of Lake View. While chief engineer of the Northwestern Elevated Railroad during 1890-94, he built the Van Buren St. street car tunnel. With his brother George in 1901 he formed the firm of Weston Bros., consulting and construction engineers, and together they built electric railways in Illinois and Michigan. In 1903 he became chief engineer and in 1908 president and general manager of the South Side Elevated Railroad Co., holding the latter office until the unification of the Chicago elevated lines in 1911. From 1918 to 1920 he was operating manager of the Market Street Elevated Railways in Philadelphia. He was also after 1920 consulting engineer for the Chicago Surface Lines.

Whitehead, Thomas Henderson, British banking manager, died in London, May 16, 1933. Born in Dunblane Parish, Scotland, in 1851, he received six years of legal and commercial training in Dunblane and Liverpool. Then going to London he joined the staff of the Chartered Bank of India in 1873 and until 1902 was engaged in banking activities in the Far East, particularly in India, Ceylon, Japan, and China, serving after 1893 as superintendent of Far Eastern Branches. On his return to England he acted as the bank's London manager from 1902 until his retirement in 1920. For his political and financial aid Mr. Whitehead was held in high esteem by Chinese merchants, bankers, and statesmen. In 1895, on behalf of the Hongkong tax payers, he petitioned the Imperial Parliament for constitutional reform of the municipal government, and in October of the same year informed the London *Times* of the secret arrangement made by Russia with China for the occupation of Port Arthur, Manchuria. In 1900 and in 1908 he refused the post of financial adviser offered by the Chinese Government.

Williams, Charles Turner, American banker and Red Cross official, died in Baltimore, Md., July 27, 1933.

Born at Warrenton, N. C., Oct. 17, 1874, he received a public school education and then worked as a stenographer and as a reporter on the Raleigh *News and Observer*. He was also employed for a while by the Seaboard Airline Railroad, being promoted to division superintendent. His banking career began in 1904 when he became associated with John L. Williams and Sons, private bankers of Richmond, Va. Removing to Baltimore, he acted as investment manager for the Fidelity Trust Co. from 1912 to 1919 and as vice-president of the Fidelity Securities Corp. from 1920 to 1923. After the latter date he was president of C. T. Williams and Co., investment bankers. During the World War Mr. Williams served as treasurer of the American Red Cross Mission to Rumania, directing the transportation via Siberia and Russia of the first supplies sent out from the United States to that country. In 1918 he was promoted to the rank of major and placed in charge of the American Red Cross Mission which took relief supplies to the White Russian refugees in Archangel. In recognition of these activities the Rumanian Government decorated him in 1920 with the Order of Cross of Queen Maria.

Williamson, Alice Mariel (Livingston), British novelist, died at Bath, England, Sept. 24, 1933. Born in Virginia about 1870, she received a private education and in 1895 was married to Charles Norris Williamson, editor of the English periodical, *Black and White*. Jointly as "C. N. and A. M. Williamson" they produced a group of lively, breezy, popular romances in several of which the newly invented automobile was conspicuous: *The Lightning Conductor* (1903); *The Princess Faeus* (1905); *My Friend the Chauffeur* (1905); *The Car of Destiny* (1906); *Set in Silver* (1909); and *The Motor Maid* (1910). They wrote also *The Heather Moon* (1912); *The Love Pirate* (1913); *It Happened in Egypt* (1914); *The War Wedding* (1916); *Crucifix Corner* (1918); and *The Lion's Mouse* (1919). After her husband's death in 1920 Mrs. Williamson continued to publish her books under the joint name. The more important of these were *The Lure of Monte Carlo* (1921), and *The Brightener* (1922).

Wilson, Henry Harrison, American engineer, died in Baltimore, Md., May 31, 1933. Born at "Bonbrook", Cumberland Co., Va., Jan. 15, 1882, he was graduated from the Virginia Polytechnic Institute in 1907. In 1908 he became construction engineer for Winston and Co., serving on the Ashokan dam, and head-works of the Catskill aqueduct of the New York City water supply, and other projects until 1911. As a partner in Sneed and Wilson he engaged in highway construction near Cropseyville, N. Y., during 1912-13, then became a special partner of Winston and Co. in highway and railway construction from 1914 to 1925, and was managing associate of Winston Brothers Co. and Wilson on bridge and other construction work from 1925 to 1931. After 1930 he was president and treasurer of the Lime Bluff Co. Mr. Wilson was prominent in engineering associations, organizing the Associated Pennsylvania Constructors and serving as president and chairman of the executive committee after 1924. For 11 years he was also vice-president of the Associated General Contractors of America. He was the author of *Cost Keeping for Highways* (1924) and editor of the *Highway Builder*, organ of the Associated Pennsylvania Constructors.

Wilstach, Frank Jenners, American theatrical manager and author, died in New York City Nov. 28, 1933. Born at Lafayette, Ind., Oct. 20, 1865, he attended Purdue University, 1879-81, and Seton Hall, 1882-84, then became advance press agent for circuses and Wild West shows. His first theatrical venture was in 1889 as business manager for De Wolf Hopper, with whom he was associated for 12 years. Among his other noted clients were Viola Allen (1902-08), William Faversham (1908-10), Mrs. Leslie Carter (1911-12), and E. H. Sothern and Julia Marlowe (1912-15). From 1916 to 1923 he was advance publicity representative for the Shubert Theatrical Co. and served also in the same capacity for brief periods to Sam H. Harris and Douglas Fairbanks. After 1927 he was associated with the Motion Picture Producers and Distributors of America as assistant to Will H. Hays. Mr. Wilstach contributed to the art of letters as well as to the stage. About 1908 he created a literary furor by a series of newspaper articles that called attention to an English novelist, Robert Smith Surtees, to whose stories of a cockney grocer the origin of Charles Dickens's *Pickwick Papers* has been attributed. His flair for picturesqueness and novelty were so successfully combined that his biography, *Wud Bul Hickok, the Prince of Pistolero* (1926), rekindled interest in western characters of frontier days. The same qualities inspired the compilation from both classical and modern authors of his most noted work, *Wilstach's Dictionary of Similes*, published in 1916, revised in 1924, and annually supplemented from the pages of current newspapers, magazines, and books.

Winship, Albert Edward, American editor, died in Cambridge, Mass., Feb. 17, 1933. He was born at West Bridgewater, Mass., Feb. 24, 1845, and served during

the latter part of the Civil War with the 60th Massachusetts Volunteers. After a teaching experience of several years at the Newton (Mass.) grammar school and the Bridgewater State Normal School he attended the Andover Theological Seminary in 1875 and the following year became pastor of the Prospect Hill Congregational Church in Somerville, Mass. In 1883, however, he decided to resume his educational work, serving during the next three years as district secretary of the New West Educational Commission. In 1886 he became editor of the *Journal of Education*, published in Boston, which grew to be one of the leading popular educational magazines of the United States. In addition to serving as president of the National Education Press Association in 1895 and of the American Institute of Instruction in 1896 he was from 1903 to 1909 a member of the Massachusetts State Board of Education. Dr. Winship published *Life of Horace Mann* (1896); *Great American Educators* (1900); *Educational Preparedness* (1919); and *Educational History* (1929). He was also a staunch believer in the importance of heredity in molding human character, publishing *Jukes-Edwards* (1900) and *Heredity* (1919).

Wolfe, John Frederick, died Jan. 12, 1933.

Wood, William Robert, American lawyer and congressman, died in New York City Mar. 7, 1933. He was born at Oxford, Ind., Jan. 5, 1861, and after attending rural schools learned the trade of harness-making, taught school for several years, then attended the University of Michigan law school, from which he was graduated in 1882. Admitted to the Indiana bar in 1882, he practiced at Lafayette with W. Dewitt Wallace until 1884, with W. H. Bryan until 1891, and with J. Frank Hanly until 1904. After 1904 he practiced alone. Mr. Wood's political career began in 1890 with his election to the office of prosecuting attorney of Tippecanoe Co. In 1896 he was elected to the Senate of the Indiana Legislature and, being four times re-elected, he served until 1914, twice acting as president pro tem. The Republican constituents of the 10th Indiana District elected him to the House of Representatives in 1914. A vigorous supporter of Charles Evans Hughes in the 1916 presidential campaign, he was equally conspicuous after Wilson's inauguration in opposing his policies. His last appointments were as chairman of the House Appropriations Committee and of the Republican National Congressional Committee in the 72d Congress.

Woodbury, Helen Sumner, American social worker, died in New York City Mar. 10, 1933. She was born at Sheboygan, Wis., Mar. 12, 1876, and was graduated from Wellesley College in 1898, receiving the Ph.D. degree from the University of Wisconsin in 1908. After 1904 she was associated with the American Bureau of Industrial Research. She served also as special investigator during 1906-07 of equal suffrage in Colorado for the New York Collegiate Equal Suffrage League. In 1913 she entered the Children's Bureau of the Department of Labor as an industrial expert, being advanced in 1915 to assistant chief and remaining with that organization until her marriage in 1918 to Robert Morse Woodbury, the economist. During 1924-26 she was connected with the Institute of Economics. Dr. Woodbury's writings include *The White Slave* (1896); *Labor Problems* (with Thomas S. Adams, 1905); *Equal Suffrage* (1909); *History of Women in Industry* (vol. 1, *Report on Women and Children in Industry*, United States Labor Bureau, 1911); *Child Labor Legislation in the United States* (with Ella A. Merritt, 1915); *Administration of Child Labor Laws in Connecticut and in New York* (with Ethel E. Hanks, 1915); *History of Labor in the United States* (with John R. Commons and others, 1918); *The Working Children of Boston* (1923); *Standards Applicable to the Administration of Child Labor Laws* (1924). In 1910 she served as associate editor of the *Documentary History of American Industrial Society*.

Wright, The Most Rev. John Charles, Australian prelate of the Church of England, died at Christchurch, New Zealand, Feb. 24, 1933. Born Aug. 19, 1861, he was educated at Merton College, Oxford. After his ordination in 1885 he served populous parishes in Bradford (1888-93), and Leeds (1895-1904) until his appointment as a resident canon of Manchester Cathedral in 1904. In 1909, following his appointment as Archdeacon of Manchester, he was elected Archbishop of Sydney and Metropolitan of New South Wales. The following year he was translated Primate of Australia. A staunch adherent to the Evangelical traditions of the Anglican Church, he was an active participant in the organization of the Pan-Anglican Congress. In 1929 he was appointed a sub-prelate of the Order of St. John of Jerusalem.

Wright, R(obert) Ramsay, British biologist and educator, died at Droitwich, England, Sept. 7, 1933. He was born at Alloa, Scotland, Sept. 23, 1852, and was graduated from the University of Edinburgh in 1873. The following year he was called to University College, Toronto, as professor of natural history. In 1887 he was transferred to the University of Toronto as professor

of biology, serving also from 1901 until his retirement in 1912 as vice-president of the institution and dean of the faculty of arts. Dr. Wright was a past president of the Canadian Institute, the American Association of Anatomists, and the Royal Society of Canada. He contributed many papers on comparative anatomy of vertebrates to scientific periodicals. After his retirement as professor emeritus he made his home at Oxford.

Yamamoto, Gombel, Count, died Dec. 8, 1933.

Yohn, Frederick Coffay, American illustrator, died at Norwalk, Conn., June 5, 1933. Born in Indianapolis, Ind., Feb. 8, 1875, he attended the Indianapolis Art School and the Art Students' League in New York City. Noted for his spirited battle scenes, he was commissioned to illustrate a book of frontier sketches by Theodore Roosevelt, serials by James Barnes and Molly Elliott Seawell, John Lodge's *Story of the Revolution*, and Gen. Frederick Funston's *Memoirs of Two Wars*. His illustrations appeared also in *Scribner's Magazine* and *Collier's Weekly*. In 1930 he painted several historical scenes for the Massachusetts Bay Tercentenary.

Yoshida, Isaburo, Japanese diplomat, died in Angora, Turkey, Apr. 24, 1933. Born at Kyotofu, Japan, in 1878, he was graduated from the Imperial University at Tokyo in 1903, qualified for the diplomatic service in 1904, and was sent as attaché to the Japanese embassy at Washington, D.C., being advanced to third secretary in 1908. In 1911 he returned to the Foreign Office in Tokyo but the following year was sent to London as second secretary to the Japanese embassy, becoming first secretary in 1916. In 1921 he was transferred as embassy counselor to Peking where he served on the Japan-China joint committee for the settlement of the Shantung question. For two years (1924-25) he was embassy counselor in Washington, D.C., and then was transferred to London in the same capacity. Mr. Yoshida was appointed Minister to Switzerland in 1926 and in 1930 was given the highly regarded post of Ambassador to Turkey. In 1932 he was named Japan's assessor on the commission appointed by the League of Nations to study the situation in Manchuria, with the Earl of Lytton as chairman.

Yudenitch, Gen. Nikolai Nikolaevitch, Russian soldier, died in Paris, France, Oct. 5, 1933. Born July 18, 1862, he attended the Alexandrovski Military School in Moscow and after entering the Imperial Army in 1879 saw service as a regimental commander in Turkestan and during the Russo-Japanese War. He served also on the general staff after 1887, being made assistant chief on his promotion in 1907 to the rank of major-general. Six years later he was commissioned lieutenant-general and chief of staff of the military district of the Caucasus. At the beginning of the World War he rendered great service to the Allied cause as commander of the Russian forces in the Caucasus, stemming the Turkish invasion by his brilliant feats at Erzerum, Sarikamys, and Ardahan. When in 1917, however, the revolution caused a complete breakdown of the Russian military organization Yudenitch, by a masterly retreat, succeeded in extricating his men from a difficult position. From Estonia in 1919 he attempted as commander of the army of the new provisional government to overthrow the Soviet régime but was defeated. His declining days were spent in France.

Zoller, Hugo, German journalist and explorer, died in Munich, Jan. 11, 1933. Born at Oberhausen near Schleiden Jan. 12, 1852, he studied jurisprudence and natural science but was forced by ill health to abandon them. While recuperating in Spain in 1873, he sent articles commenting on the current civil war to the *Kölnische Zeitung*. He was made a special correspondent and thereafter became a confirmed explorer and traveler. In 1882, as a correspondent for his paper, he was present at the battle of Tell el Kebir between the British and Egyptian insurgents and in 1885-86, as a government representative, visited Buea, West Africa. His paper sent him with an exploring party to New Guinea in 1888, where he was the first to scale the highest mountain peak, which later bore his name. He was said to have discovered the Buka Straits, while a group of islands in the Solomon Archipelago and a bay of New Pomerania in the Bismarck Archipelago were likewise named for him. In 1902 he accompanied Prince Henry of Prussia, the Kaiser's brother, to the United States. Among his books were: *Rund um die Erde* (2 vols., 1881); *Der Panama-Kanal* (1882); *Die Deutschen im brasilianischen Urwald* (2 vols., 1883); *Pampas und Anden* (1884); *Die deutschen Besitzungen an der westafrikanischen Küste* (1885); and *Deutsch-Neuguinea* (1891).

NEGRI SEMBILAN. See FEDERATED MALAY STATES.

NEJD. See ARABIA under Kingdom of Saudi Arabia.

NELSON, CHARLES ALEXANDER, An American librarian, died at Swarthmore, Pa., Jan. 12, 1933.

He was born at Calais, Me., Apr. 14, 1839, and was graduated from Harvard University in 1860, later attending the Lawrence Scientific School of that institution. During the Civil War he served as a civil engineer in the quartermaster's department of the Federal Army, and from 1865 to 1873 was superintendent of schools and justice of the peace in New Bern, N. C., where he had been sent to carry out reconstruction provisions. The following six years were spent in the book business and in library work in Boston.

After a brief period as professor of Greek at Drury College, Springfield, Mo., Charles Nelson joined in 1881 the Astor Library (later incorporated in the New York Public Library) as catalogue librarian. In 1888, he served as librarian in the Howard Memorial Library, New Orleans, and in 1891 assistant librarian in the Newberry Library, Chicago. Returning to New York City in 1893, he was appointed deputy and reference librarian at the Columbia University Library, which post he held until his retirement in 1909. From 1913 to 1926 he was connected with the Mercantile Association Library, New York City. Elected in 1927 an honorary member of the American Library Association, of which he was one of the founders, he was known at the time of his death as the Dean of American Librarians.

NELSON ART GALLERY. See ART MUSEUMS.

NEPAL, nē-pōl'. An independent kingdom in the Himalayas between Tibet and British India, under British influence. Area, about 54,000 square miles; population, estimated at 5,600,000. Capital, Kathmandu (80,000 inhabitants); reigning sovereign in 1933, Maharajadhiraja Tribhubana Bir Bikram.

NETHERLAND EAST INDIES. See NETHERLAND INDIA.

NETHERLAND INDIA (NEDERLANDSCH INDIE). A group of large islands in the East Indies forming a colony of the Netherlands. Capital, Batavia, on the island of Java.

AREA AND POPULATION. With a total area of 733,494 square miles, Netherland India had a population in 1930 of 60,728,733 (Java and Madoera, 41,717,232; Outer Islands, 19,011,501). The 1920 census population was 49,350,834. The area, population, and population density of the various island groups in 1930 are shown in the accompanying table from the *U. S. Commerce Yearbook*.

NETHERLAND INDIA: AREA AND POPULATION BY ISLANDS

Group of islands	Area,	Population,	Density
	sq. miles, 1930	1930	per sq. mile
Java and Madoera	51,219	41,717,232	817
Sumatra	168,138	7,661,399	47
Riouw-Lingga	12,507	298,829	24
Bangka	4,549	205,438	45
Billiton	1,878	78,409	39
Borneo:			
West District	56,688	827,898	15
South and East Districts	149,277	1,866,638	9
Island of Celebes:			
Celebes	86,200	8,087,385	81
Manado	84,980	1,139,251	33
Molukka Islands and New Guinea	192,453	898,080	5
Timor Archipelago	24,537	1,656,636	68
Bali and Lombok	4,072	1,802,146	443
Total	733,494	60,728,733	83

In Java and Madoera in 1930 there were 40,890,244 natives, 635,662 other Orientals (chiefly Chinese), and 193,618 Europeans. The chief cities

(all in Java except as noted), with their 1930 populations, were: Batavia, 435,184; Soerabaja (Surabaya), 336,814; Semarang, 217,775; Soerakarta, 163,013; Bandoeng, 166,395; Djokjakarta (Jogjakarta), 136,554; Malang, 86,567; Bandjermasin (Borneo), 64,223; Palembang (Sumatra), 109,069; Makassar (Celebes), 86,662; Medan (Sumatra), 74,976.

EDUCATION. The number of children of school age in 1920 was 12,058,000. The school attendance in 1930-31 was: Primary, 1,801,157; higher elementary and secondary, 16,774. In addition there were a few teachers' training, professional, and technical schools.

PRODUCTION. Agriculture is the main occupation, but there is some mining and manufacturing. The area under cultivation in Java and Madoera in 1932 was about 18,962,000 acres (58 per cent of the total area); in the Outer Provinces, 3,395,000 acres. Production of the chief crops in 1932 (1931 in parentheses) was: Sugar (Java only, 1932-33 season), 1,358,000 metric tons (2,631,000 in 1931-32); rubber, 215,000 metric tons (261,000); coffee (European estates only), 138,228,000 pounds (227,612,000 pounds, all producers, 1931); tea, 177,470,000 pounds (179,254,000); rice (Java and Madoera), 284,231,000 bushels (257,739,000); corn (Java and Madoera), 77,662,000 bushels (75,217,000); groundnuts (Java and Madoera), 356,930,000 pounds (311,955,000); tobacco (east coast Sumatra), 26,984,000 pounds (all production, 1931, 242,759,000); copra (exports), 1,054,240 pounds (794,033,000); cinchona (estate production), 20,944,000 pounds (23,424,000); palm oil (estate production), 196,496,000 pounds (142,108,000). Kapok, citronella oil, cassava roots, and sisal and agave are other products.

Mineral output in 1932 was: Gold, 77,959 troy ounces (100,092 in 1931); silver, 842,000 troy ounces (1,473,000); diamonds, 267 carats (287); tin (1932-33), 26,201 metric tons (27,814 in 1931-32); coal, 1,050,000 metric tons (1,404,000); petroleum, 39,028,000 barrels (35,859,000); natural gas, 899,683 metric tons (682,464); manganese ore, 8287 metric tons (14,541); iodide of copper, 449,961 (418,288); salt, 212,373 metric tons in 1931.

Sugar and rubber refining, rice milling, and the preparation of tea, vegetable and animal oils are the chief manufacturing industries.

COMMERCE. Imports in 1932 were valued at 384,324,000 florins (\$154,498,000 at par), compared with 572,405,000 florins (\$230,107,000) in 1931. Exports totaled 543,493,000 florins (\$218,484,000) as against 749,029,000 florins (\$301,110,000) in 1931. The leading imports in 1932 were: Cotton piece goods, 73,157,000 florins (19.84 per cent of the total); foodstuffs, 41,995,000 florins (11.39); husked rice, 33,678,000 florins (9.13); other piece goods, 26,327,000 florins (7.14); machinery and tools, 17,558,000 florins (4.76); iron and steel, 16,742,000 florins (4.54). The chief 1932 exports were: Sugar, 97,712,000 florins (18.05 per cent of the total); mineral oil, 90,900,000 florins (17.90); leaf and cut tobacco, 45,830,000 florins (8.65); copra, 42,299,000 florins (7.81); coffee, 35,195,000 florins (6.50); rubber, 34,012,000 florins (6.28); tea, 32,549,000 florins (6.01); tin, 17,854,000 florins (3.30); pepper, 16,159,000 florins (2.99); and palm oil, 11,844,000 florins (2.19).

Japan in 1932 supplied 21.24 per cent of the total imports (16.98 in 1931); the Netherlands, 15.75 per cent (15.38); Singapore, 12.55 (11.35);

Germany, 7.69 (9.37); United States, 6.66 (9.33); Great Britain, 9.63 (7.95). Of the total 1932 exports, the Netherlands took 19.15 per cent (17.42 per cent in 1931); Singapore, 16.64 (18.89); United States, 12.11 (11.77); Great Britain, 8.94 (9.18); British India, 5.47 (7.79); and Japan, 4.37 (4.42). In 1933, exports to the United States were valued at \$33,076,118; imports from the United States were \$6,890,197.

FINANCE. Budget operations during the period 1930-34 showed substantial deficits, as indicated in the accompanying table. The totals include ordinary and extraordinary receipts and expenditures.

NETHERLAND INDIA: BUDGET OPERATIONS
[In 1,000 florins: florin equals \$0.402 at par]

Year	Revenue	Expenditure	Deficit
1930	755,162	892,436	137,274
1931 *	598,151	766,719	168,568
1932 *	710,718	808,126	97,408
1933 *	561,120	660,449	99,329
1934 *	289,000	312,000	23,000

* Provisional returns. * Budget estimates.

The total public debt on June 30, 1932, amounted to 1,392,615,400 florins (floating debt, 292,304,000 florins). The funded debt Dec. 31, 1932, was 1,113,231,000 florins.

COMMUNICATIONS. There were 4610 miles of railway line in 1931 (government lines, 2720 miles). Passengers carried in that year numbered about 106,981,000; gross receipts were 88,286,000 florins and operating expenses 67,715,000 florins. Highways extended about 35,900 miles, most of them suitable for motor traffic. Airlines connected the chief towns of Java and Sumatra and extended to Singapore. The Royal Dutch Airlines operated a weekly mail and passenger service between Batavia and Amsterdam. On June 30, 1933, telephone service was opened between Palembang and Benkulen in South Sumatra. Radio-telephone service between Java and the port of Makassar in Celebes was inaugurated in July, 1933.

GOVERNMENT. Administrative and executive authority rests in the hands of a Governor-General, assisted by an advisory council of seven members. Both the Governor-General and the Council members are nominated by the Queen of the Netherlands. An assembly (Volksraad) of appointive and elective members shares legislative powers with the Governor-General. It consists of 30 natives, 25 Dutch, and not more than five foreign-born subjects, such as Chinese. The provinces are administered by governors, local affairs being controlled almost entirely by native civil servants, headed by Regents. Governor-General in 1933, Jhr. Dr. B. C. de Jonge, appointed May 8, 1931.

HISTORY. The Dutch authorities in Netherland India placed in effect during 1933 various measures designed to raise prices of local products and relieve the acute economic depression. As a result of a tea-restriction scheme a gain of about 35 per cent in tea prices was recorded during the second quarter of the year. A small tax was levied on all estate-produced exports to finance research work on tea, rubber, coffee, cacao, and cinchona cultivation. East Indian sailors on the Dutch warship *De Zeven Provinciën* mutinied at a port in Northern Sumatra on Feb. 5, 1933, and sailed away with the ship. Pursued by other vessels and airplanes they were forced to surrender five days later after an airplane dropped a bomb on the deck, killing 22 sailors. The incident reflected the unrest aroused in the islands by the economic depression and the government's reductions of sal-

aries and public works. See **NETHERLANDS, THE**, for the trial of the mutineers. For Japan's growing interest in Netherland India and Dutch uneasiness aroused thereby, see **JAPAN under History**. Consult Thomas Steep, "White Failure in the East Indies," *Current History*, September, 1933.

NETHERLANDS, THE (HOLLAND). A constitutional monarchy of northwestern Europe. Capital, Amsterdam. Seat of the government, The Hague. Sovereign in 1933, Queen Wilhelmina Helena Pauline Maria, who succeeded to the throne Nov. 23, 1890.

AREA AND POPULATION. The Netherlands has an area of 13,197 square miles and a population estimated on Jan. 1, 1933, at 8,183,392 (7,935,365 at the census of 1930). Of the 1930 population 7,475,305 (94 per cent) were in urban communities of 2000 or more. In 1932 there were 178,542 living births, 73,043 deaths, and 55,838 marriages. The birth rate per 1000 was 22.0; death rate, 9.0. Estimated populations of the chief towns on Jan. 1, 1932, were: Amsterdam, 766,263; Rotterdam, 587,316; The Hague, 449,614; Utrecht, 156,194; Haarlem, 122,386; Groningen, 107,158. Emigration was 2756 in 1930 and 158 in 1932.

EDUCATION. Less than 1 per cent of the adult population are illiterate. Enrollment in educational institutions in 1931 was: Primary, 1,208,724; secondary, 26,780; preparatory and lyceums, 21,676; universities, 9876. The four public universities are at Leiden, Utrecht, Groningen, and Amsterdam.

PRODUCTION. Of the 3,185,563 gainfully employed persons at the census of December, 1930, 1,235,810 (39 per cent) were engaged in industry; 639,023 (20 per cent) in farming; 398,681 (12 per cent) in commerce; and 296,707 (9 per cent) in transportation. Arable land (1931) totaled 2,249,000 acres (27 per cent of the total); meadow, 3,291,000 acres; woods and forests, 597,000 acres. Livestock in 1930 was (in thousands): Cattle, 2366; swine, 2018; sheep, 485; goats, 131; horses, 299. Butter output in 1932 was 187,866,000 pounds (186,921,000 in 1931); cheese, 263,426,000 pounds (292,837,000). Production of the chief crops in 1932 (thousands of units, bushels except as specified), with 1931 figures in parentheses, was: Wheat, 12,838 (6751); rye, 13,863 (14,167); barley, 2541 (3274); oats, 19,104 (19,784); potatoes, 126,472 (100,535); sugar beets (metric tons), 1533 (1028); beet sugar (metric tons, seasons of 1932-33 and 1931-32), 229 (167); flax (pounds of fibre), 3086 (3918).

The output of the chief minerals in 1932 was: Coal, 12,756,000 metric tons (12,901,000 in 1931); lignite, 113,000 metric tons (122,000); salt, 61,000 metric tons (56,141). Factory production (1931) included: Briquets, 1,096,000 metric tons; cotton yarn, 53,792,000 pounds; wool yarn, 9,370,000 pounds; boots and shoes, 9,010,000 pairs; margarine, 290,289,000 pounds; bicycles, 320,500; vessels launched, 120,276 gross tons (26,000 in 1932). Leading industries, by value of production in 1932, were: Cotton textiles, 89,240,000 florins; flour milling, 69,846,000 florins; shipbuilding, 47,104,000 florins; machinery, 42,120,000 florins; woollen textiles, 40,762,000 florins; cocoa and chocolate, 37,052,000 florins. Shipping tonnage launched (1932) was 26,232 gross tons.

COMMERCE. Dutch imports for consumption in 1932 were valued at 1,299,427,000 florins (\$522,370,000 converted at par), compared with 1,892,733,000 florins (\$760,879,000) in 1931. Exports

amounted to 846,128,000 florins (\$340,143,000), compared with 1,311,814,000 florins (\$527,349,000) in 1931. The principal import items (1932) were: Textile manufactures, \$75,508,000; iron and steel, \$28,626,000; coal, coke, and briquets, \$25,719,000; corn, \$24,153,000; machinery, \$30,881,000. Gold imports in 1932 amounted to \$257,562,000. The chief exports were: Gold, \$141,411,000; coal, coke, and briquets, \$24,278,000; radio apparatus, \$15,453,000; cheese, \$14,442,000; fresh vegetables, \$14,338,000; condensed and other milk, \$13,018,000; fertilizers, \$12,450,000. Of the total value of 1932 imports, Germany furnished 30.8 per cent; Belgium, 10.4; United Kingdom, 9.1; and United States, 6.6 per cent. Germany purchased 21.4 per cent of all the exports; United Kingdom, 19.1 per cent; Belgium, 14.1; France, 10.2; and the United States, 3.5 per cent.

Both imports and exports declined in value in 1933. Imports totaled 1,209,000,000 florins and exports 726,000,000 florins. Imports from the United States (1933) were valued at \$48,716,550 (\$45,254,154 in 1932) and exports to the United States were \$30,949,428 (\$22,430,220 in 1932).

FINANCE. The budget for 1934 was framed in anticipation of a considerable deficit, with ordinary expenditures estimated at 730,000,000 florins and ordinary revenues at 539,000,000 florins. This anticipated deficit was eliminated by provision for economies of 84,000,000 florins and for new taxation calculated to bring in 107,000,000 florins. In the capital accounts for 1934, expenditures were fixed at 73,000,000 florins and receipts at 22,000,000 florins. There was a budget surplus of 28,000,000 florins in 1930, a deficit of 46,000,000 florins in 1931, and an estimated deficit of 77,000,000 florins in 1932. In the latter year actual ordinary revenues amounted to 516,000,000 florins, or 42,000,000 less than in 1931. The 1933 budget estimates placed total revenues at 541,000,000 florins and expenditures at 642,000,000 florins.

On Jan. 1, 1933, the public debt totaled 3,093,650,000 florins (2,475,282,000 funded and 618,368,000 florins of floating debt). This was equivalent to \$1,243,647,000 (\$995,063,000 funded and \$248,584,000 floating). The florin exchanged at an average of \$0.4022 in 1930, \$0.4023 in 1931, and \$0.4029 in 1932.

COMMUNICATIONS. There were 2261 miles of railway line (1931) owned by two private companies in which the government held a controlling interest. During 1931 these lines carried 56,174,000 passengers and 21,977,000 metric tons of freight, the gross receipts totaling 164,296,000 florins (\$66,047,000). There are 4660 miles of navigable rivers and canals. Highways extended 15,534 miles (10,563 miles of macadam). Royal Dutch Air Lines planes in 1932 flew 1,919,505 miles (961,305 in Europe and 958,200 miles on the India line). They carried 20,600 passengers, 912 tons of merchandise, and 143 tons of mail on the European lines and 450 passengers, 11,000 pounds of freight, and 58,300 pounds of mail on the Amsterdam-Batavia line. A 2994-foot bridge over the Waal River near Zaltbommel, costing about \$2,611,000, was opened Nov. 18, 1933. It eliminated the ferry service which had provided the only link for highway traffic between the north and south of Holland. The Dutch merchant marine on June 30, 1932, comprised 1445 ships of 2,963,840 gross tons. The shipping tonnage idle on Oct. 1, 1933, was 226,000 (841,000 on Oct. 1, 1932).

GOVERNMENT. Executive power is vested in the sovereign and legislative power conjointly in the

sovereign and the States-General (parliament). The Upper Chamber consists of 50 members elected by the Provincial states for six years and the Lower Chamber of 100 members elected directly for four years. The sovereign rules through a Council of Ministers, which is quasi-independent of Parliament.

HISTORY

BEERENBROUCK MINISTRY OVERTHROWN. The cabinet headed by Jonkheer Dr. Ch. J. M. Ruys de Beerenbrouck (Catholic), which had been in office since Aug. 10, 1929, was defeated in the Lower House of the States General on Feb. 9, 1933. Late in 1932, the cabinet had adopted a policy of rigid financial retrenchment in an effort to wipe out a large budget deficit. The growing revolt against this policy came to head in a vote on proposed economies in the judicial and penal institutions. The ministry was defeated, 51 to 38. Queen Wilhelmina, who had been on vacation in Switzerland, hurried home and dissolved Parliament.

New elections, called for April 26, unexpectedly resulted in gains for the bourgeois, anti-revolutionary parties and losses for the Social Democrats. The various Fascist groups, which made their appearance in the Netherlands during 1932, won no seats. The standing of the parties in the new Lower Chamber, with the previous standing in parentheses, was: Catholics, 28 (30); Social Democrats, 22 (24); Anti-Revolutionary, 14 (12); Christian Historical, 10 (11); Liberal, 7 (8); Liberal Democrats, 6 (7); Communists, 4 (2); minor parties, 9 (6). The election marked the further decline of the once powerful Catholic party, which had wielded a predominant influence on Dutch politics over half a century, and added to the political prestige of Dr. Hendrik Colijn, a Protestant and a leader of the Anti-Revolutionary party. A former Prime Minister, he had represented the Netherlands in various capacities at the League of Nations and successive international conferences.

The new cabinet, appointed May 24, 1933, was headed by Dr. Colijn as Prime Minister and Minister of Colonies. Other members were: Foreign Affairs, Dr. A. C. D. de Graeff; Interior, Dr. J. A. de Wilde; Finance, Dr. J. P. Oud; Justice, Dr. J. R. H. van Schaik; Defense, Dr. L. N. Deckers; Public Works, Dr. J. A. Kalf; Economic Affairs, Dr. J. Th. Verschuur; Social Affairs, Dr. J. R. Slötemaker de Bruine; Education, Science, and Arts, Dr. H. P. Marchant.

ECONOMIC MEASURES. Under Dr. Colijn's leadership, the government took vigorous steps to check the economic decline and balance the budget. An "agricultural crisis" law, adopted by the States General May 5 and amended on August 5, went into effect Aug. 13, 1933. It gave the government extensive powers to aid agriculture and the fishing industry by limiting imports and other methods. Under this law the ministry restricted imports of grain, fruit, and vegetables during the year, and extended the measures taken in 1931 and 1932 to aid wheat growers, swine raisers, and producers of dairy products.

The Dutch tariff policy was extensively revised. On September 5 the government denounced the tariff truce concluded on May 12 for the duration of the World Economic Conference at London. About the same time it notified the League of Nations of its desire to denounce the 1927 treaty under which import and export prohibitions were abolished. The Lower Chamber on September 13

approved new import duties of 5 per cent on manufactured goods and of 12 per cent on articles of luxury. Import quotas were placed on wire goods, unbleached cotton, and various other articles in an effort to eliminate the adverse visible trade balance. The law of Nov. 17, 1933, extended to Jan. 1, 1938, the crisis importation (quota) law, which was to have expired on Jan. 1, 1935. The law was amended at the same time to increase the government's tariff bargaining powers.

At the opening of the States General for the fall session in September, the Queen's speech emphasized the need of increased taxation and economies to eliminate the estimated deficit of 267,000,000 florins in the 1934 budget. Shortly afterward a government sales tax bill passed the Lower House levying 4 per cent on general sales and 10 per cent on luxuries, with additional taxes on imported goods. The yield from these new measures was estimated at 85,000,000 florins (\$34,000,000 U. S. gold). Meanwhile the government held tenaciously to the gold standard, joining with France and Italy at the London Economic Conference in demanding stabilization of the dollar and the other non-gold currencies. Gold in the Bank of the Netherlands on Dec. 18, 1933, was 947,029,312 florins and the note issue was 898,120,295 florins. On Oct. 17, 1932, the gold reserve was 1,034,897,000 florins and the note issue was 976,866,000 florins.

RELATIONS WITH GERMANY. Dutch relations with Germany became somewhat strained during 1933 as a result of the agitation conducted by German Nazis in the border districts, the exclusion of Dutch agricultural products from their accustomed market in Germany, and other irritating developments. Disorders in the frontier towns led the government on August 24 to prohibit Germans from crossing the border while wearing the Nazi brown shirts or emblems. In October, for the first time in Dutch history, the Dutch Air Protection Service held manœuvres near the German border, with emphasis placed upon protection against gas attacks. The terms of the transfer moratorium on the German private foreign debt aroused indignation in Holland as well as in other creditor countries and led the Dutch government to lodge a protest at Berlin. On Dec. 27, 1933, the Dutch government requested the German government to commute the death sentence passed upon the Dutch citizen, Marinus van der Lubbe, who was convicted of setting fire to the German Reichstag building. See GERMANY under *History*.

NAVAL MUTINY. Pay cuts placed in effect for native and European marines in Netherland India provoked a mutiny on board the warship *De Zeven Provinciën* at a port in Northern Sumatra on Feb. 5, 1933. Some 400 native marines imprisoned their Dutch officers and sailed away. The ship was recaptured five days later after an airplane bomb had been dropped on the deck, killing 22 members of the crew. In Holland there was fear that the mutiny was the forerunner of Communist-instigated disorders and uprisings and accordingly the naval court-martial meted out severe punishment to the ringleaders. The court-martial was held at Soerabaja, Java. In November, 19 Javanese marines received sentences ranging from six to 18 years in prison, and in December the court sentenced five Dutchmen, accused of complicity in the mutiny, to prison for terms ranging from one to 16 years.

See JAPAN under *History* for the lively interest in Netherland India displayed by Japan during

1933 and the resulting Dutch apprehensions. Also see NETHERLAND INDIA.

NEUTRON. See CHEMISTRY; PHYSICS.

NEVADA. POPULATION. The population of the State on Apr. 1, 1930, according to the Fifteenth Census, was 91,058, as against 77,407 in 1920. The capital, Carson City, had (1930) 1596 inhabitants.

AGRICULTURE. The following table shows the acreage, production, and value of the principal crops for 1933 and 1932:

Crop	Year	Acreage	Prod. Bu.	Value
Hay (tame) . . .	1933	207,000	362,000*	\$1,810,000
	1932	200,000	401,000*	1,925,000
Wheat	1933	17,000	378,000	309,000
	1932	18,000	461,000	254,000
Potatoes	1933	2,000	250,000	175,000
	1932	2,000	300,000	135,000

* Tons.

MINERAL PRODUCTION. The total value of the mines' production of gold, silver, copper, lead, and zinc attained only \$5,135,792 for 1932, which came to but 15.6 per cent of the value of the corresponding total for 1929; for 1931 the total was \$11,673,787. Although general economic conditions favored the mining of gold, the production of this metal declined considerably, to \$2,695,607 (1932) from \$2,941,473 (1931), reckoned at \$20.67 an ounce. Nevertheless, the production of gold constituted (1932) for the first time in many years the chief part of the output, by value, of all metals produced in the State. The number of persons prospecting for gold in the placer areas was not great; it was estimated, for 1932, as between 600 and 700.

The yearly quantity of silver produced fell to 1,390,100 fine ounces (1932), from 2,562,071 (1931); of copper, to 31,473,600 pounds, from 72,634,497; of lead, to 1,195,200 pounds, from 15,860,634; of zinc, to 892,800 pounds, from 20,861,348.

It was estimated, for 1933, that mines produced gold, silver, copper, lead, and zinc to the value of \$5,720,815. This included gold to the value of \$2,170,543 (still reckoned at \$20.67 an ounce, though some of it fetched much more); silver, \$384,675; copper (38,900,000 pounds), \$2,489,600; zinc, \$500,950.

The total of gypsum sold or utilized by producers in the State fell for 1932 to 80,938 short tons, in value \$429,998, or about half the quantity and less than half the value of the product of 1930.

EDUCATION. Though lack of funds sufficient for normal scale of expenditure seriously handicapped some of the public schools, none of the schools were closed on account of this difficulty up to December, according to the *Journal* of the National Education Association. It was then expected that no school would provide instruction for less than six months of the academic year and that the majority would be open for nine months. There were organized, for adults, classes for brief courses in prospecting.

LEGISLATION. A regular session of the Legislature, convened on January 16, made provision for regulating the closing and opening of State banks. A State convention was created, to be composed of delegates to be elected by the voters on September 5, to act for the State with regard to the proposed repeal of the Federal Eighteenth Amendment.

POLITICAL AND OTHER EVENTS. On May 27 were

elected by popular vote the members of county conventions, who later in turn chose delegates to the State convention on the repeal of the Federal Eighteenth Amendment. The popular vote was reported to be heavily in favor of repeal. The State convention met on September 5 and voted the State's adoption of repeal through the superseding amendment proposed by Congress. The banks of the State had come into difficulties some months before the nation-wide banking panic of March. The greater part of them were reopened after the period of Federal closure, including several of the Wingfield banks, of which depositors signed waivers enabling reorganizations to proceed.

OFFICERS. The chief officers of the State, serving in 1933, were: Governor, Fred B. Balzar; Lieutenant-Governor, Morley Griswold; Secretary of State, W. G. Greathouse; Comptroller, Edward C. Peterson; Treasurer, George B. Russell; Attorney General, Gray Washburn; Superintendent of Public Instruction, Walter Anderson.

Judiciary. Supreme Court: Chief Justice, Edward A. Ducker; Associate Justices, Ben W. Coleman, J. A. Saunders.

NEVADA, UNIVERSITY OF. A coeducational State institution of higher education in Reno, Nev., founded in 1874. There was an enrollment of 911 students for the autumn term of 1933, distributed as follows: College of arts and science, 630; normal school, 39; college of agriculture: school of agriculture, 24; school of home economics, 38; college of engineering: school of mines, 45; school of civil engineering, 34; school of electrical engineering, 66; school of mechanical engineering, 35. There were 79 members on the faculty. The productive funds of the university amounted to \$335,437, and the income for the year to \$632,548. The library contained 55,820 volumes. President, Walter E. Clark, Ph.D., LL.D.

NEW BRITAIN. See NEW GUINEA.

NEW BRUNSWICK. One of the Maritime Provinces of Canada, between Nova Scotia and Quebec. Area, 27,985 square miles; population (1931 census), 408,219 compared with 387,876 in 1921. The principal cities were Saint John, with 47,514 inhabitants in 1931; Moncton, 20,689; Fredericton, the capital, 8830. In 1931, births numbered 10,801; deaths, 4644; marriages, 2544. Enrollment in the public schools totaled 86,355 in the same year and the average daily attendance was 66,810.

Agriculture, mining, manufacturing, fishing, and lumbering are the principal industries. The acreage under field crops in 1932 totaled 907,500 acres and the value of production amounted to \$12,029,000. Livestock (1931 census): horses, 51,157; cattle, 213,450; sheep, 143,677; swine, 85,012; poultry, 1,342,313. About half of the 21,476 square miles of forest is owned by the Province. The production of lumber and other sawmill products for 1931 was valued at \$3,534,442. The fish catch for 1932 was valued at \$2,972,706, of which lobsters represented \$1,041,845. The provisional value of mineral production for 1932 was \$2,243,879. Coal, copper, antimony, and gypsum, are mined. In 1931, the 872 manufacturing establishments, 13,107 employees, and a capital investment of \$128,859,472, produced manufactured products valued at \$55,209,818 gross and \$29,577,902 net.

Ordinary revenue and expenditure of the Province for the fiscal year ended Oct. 31, 1931, to-

taled \$5,980,914 and \$6,761,420 respectively. Government is vested in a lieutenant-governor and a legislative assembly of 48 members. The Province is represented in the Dominion Parliament at Ottawa by 6 members in the Senate and 11 members in the House of Commons. Lieutenant-Governor in 1933, Maj.-Gen. H. H. McLean; Premier and Attorney General, C. D. Richards. See CANADA.

NEW CALEDONIA, kâl'e-do'nî-â. A French colony in the South Pacific, consisting of the island of New Caledonia some 875 miles east of Australia and the following dependencies: Isle of Pines (58 square miles), Wallis Archipelago (40 square miles), Rutuna and Alofi (61 square miles), Loyalty Islands (800 square miles), Huon Islands. Total area, 8548 square miles; total population (1931 census), 62,919, of whom 28,502 were Polynesians and Melanesians. Noumea, the capital on the island of New Caledonia, had 10,708 inhabitants in 1931. In 1932 there were 115 primary schools with a total of 5690 students.

The chief agricultural products are cotton, coffee, copra, manioc, maize, tobacco, bananas, and pineapples. Livestock: cattle, 200,000; sheep, 25,000. The chief minerals produced are nickel, chrome, cobalt, iron, and manganese. Exports of nickel matte in 1931 amounted to 5334 tons valued at 25,636,523 francs. Total imports in 1931 were valued at 86,701,259 francs and exports at 89,085,656 francs (franc equaled \$0.0392 at par). The budget for 1932 was estimated at 32,626,212 francs. The colony is administered by a governor assisted by a privy council and an elective council of 15 members. Governor in 1933, L. Jore.

NEWFOUNDLAND, nû'fûnd-lând'. A large island at the entrance to the Gulf of St. Lawrence, forming, with the Atlantic watershed of Labrador (q.v.), a British colony. Capital, St. John's.

AREA AND POPULATION. The island has an area of 42,734 square miles and Labrador 110,000 square miles. The estimated population of the total area in 1932 was 282,021, compared with the 1921 census population of 263,033 (Newfoundland, 259,259; Labrador, 3774). In 1921 St. John's had 52,219 inhabitants including suburbs (58,000 in 1932); Bonavista, 4052; Harbour Grace, 3825; Grand Falls, 3789; Carbonear, 3320. In 1930-31 there were 1214 schools, all conducted by religious denominations, with 60,592 pupils.

PRODUCTION. Fishing, the main occupation, is supplemented by farming, mining, manufacturing, and lumbering. The codfish catch in 1933 was about 112,000,000 pounds (121,744,000 in 1932). The seal catch, which averaged 216,161 for the period 1926-30, totaled 87,866 in 1931 and 48,013 in 1932. Codfish prices in 1933 were about \$2 per quintal (112 pounds) higher than in 1932. There were 188,000 acres of farm land, against 9,600,000 acres of forests. Hay, potatoes, turnips, and cabbage are the chief crops. Livestock (1932) included 26,759 cattle, 60,000 sheep, 5850 swine, 14,495 horses, and 10,500 goats. The iron ore production in 1932 was 384,000 short tons (790,000 in 1931); lead and zinc concentrates, 184,000 (182,000 in 1931). Newsprint production in 1932 was 272,804 short tons (295,000 in 1931).

COMMERCE. For the fiscal year ended June 30, 1932, imports amounted to 18,136,000 Newfoundland dollars (\$16,373,000 U. S.), against \$25,262,000 in 1930-31. Exports totaled 26,690,000 Newfoundland dollars (\$23,172,000 U. S.) in 1931-32,

compared with \$32,909,000 in 1930-31. (Conversions to United States dollars made at the average exchange rate for 1931-32.) The chief 1931-32 imports were: Flour, \$1,401,000; bullion and coin, \$1,682,000; machinery, \$1,089,000; coal, \$986,000. The principal exports were: Paper, \$13,882,000; dried codfish, \$4,541,000 (\$7,725,000 in 1930-31); iron ore, \$1,173,000; lead concentrates, \$957,000; zinc concentrates, \$867,000. In 1931-32 Canada supplied 46 per cent of the total imports; the United States, 31.5 per cent; and the United Kingdom, 17.5 per cent. Of the exports, the United States took 30.8 per cent; United Kingdom, 29.6; and Canada, 4.9 per cent.

FINANCE. The critical financial condition of the government was responsible for the loss of Newfoundland's dominion status in 1933 (see *History*). Budget operations for the fiscal years ended June 30 were (in Canadian dollars): 1931-32, ordinary receipts, 7,931,000 (9,656,000 in 1930-31); current expenditures, 11,960,000 (12,899,000 in 1930-31); gross receipts, including loans, 14,078,000; gross expenditures, 13,780,000. The funded debt increased from 87,592,000 Canadian dollars on Dec. 31, 1931, to approximately 97,000,000 Canadian dollars on Dec. 31, 1932. The gold Newfoundland dollar is equivalent to the United States dollar at par.

COMMUNICATIONS. The island has 974 miles of railways, of which 905 miles were government owned. In 1933 the government railway was reported to be operating on a paying basis for the first time in years. Steamer lines connected various points on the island with the continent. There were more than 1000 miles of roads (about 880 miles passable to motor cars). The tonnage of vessels entered and cleared in 1930-31 was 2,503,243.

GOVERNMENT. Under dominion status, executive authority was vested in a governor, assisted by an executive council, and legislative power in an appointive council of not more than 24 members and an elected house of representatives of 40 members. Governor and Commander-in-Chief in 1933, Admiral Sir David Murray Anderson. Prime Minister, Frederick C. Alderdice (United Newfoundland party). For changes during 1933, see *History*.

HISTORY. As a result of an insupportable financial burden, fastened upon the island by gross financial incompetence and many years of political corruption, Newfoundland lost its position as a British dominion and reverted to the status of a Crown colony during 1933. For several years, Newfoundland had averted default on its obligations only through the aid of Canadian and British banks and firms doing business in the island. Of the interest due on the public debt Jan. 1, 1933, approximately half was met by the Newfoundland government and the remainder was advanced in equal parts by the British and Canadian governments. To meet the semi-annual interest payments due June 30 and July 1, 1933, Newfoundland received an advance of £400,000 from the British government. It became increasingly evident that complete financial collapse was in prospect unless more constructive measures could be taken.

Formulation of such measures was entrusted, in accordance with a campaign pledge made by Premier Alderdice in 1932, to a Royal Commission, appointed in March, 1933. It consisted of Lord Amulree (chairman), C. A. Magrath (nominated by the Canadian government), and Sir William Stavert (nominated by the Newfoundland

government). The commission considered the federation of Newfoundland with Canada, but was advised that Canada was not in a position to assume the financial obligations involved in such a transaction.

The report of the commission, made public in November, recommended: (1) Replacement of the existing form of government by a special commission, consisting of three Englishmen and three Newfoundlanders, with the Governor as president, the commission to have full legislative and executive authority and be subject only to supervisory control by the British government; (2) a readjustment and lowering of the customs tariff; and (3) assumption by the United Kingdom of responsibility for Newfoundland's finances until the island was self-supporting. The financial recommendations called for the conversion of Newfoundland debt certificates into new sterling 3 per cent stock fully guaranteed as to principal and interest by Great Britain. Certain trustee loans, held chiefly in England, were to receive special treatment and outstanding pre-war dollar loans, the 5½ per cent prosperity loan of 1932 guaranteed by the Petroleum Monopoly, advances from the Canadian banks secured by liens on customs receipts, and the 4 per cent sterling stock repayable in 1935 were all to be paid in full forthwith. The remaining obligations consisted mainly of dollar loans raised in the United States. Holders of these bonds were obliged to convert their securities into guaranteed 3 per cent stock or take their chance of collecting the higher rate of interest on the existing securities after all other obligations had been paid.

The recommendations were immediately accepted by the British government, subject to parliamentary approval. The Newfoundland Parliament, convened on November 27 to consider the report, approved it on November 29. A bill embodying the recommendations was then approved by the British Parliament and received the royal assent Dec. 21, 1933. The Chancellor of the Exchequer advised the House of Commons that in addition to guaranteeing Newfoundland's public debt of £19,000,000 the British government would be obliged to advance £2,550,000 as a free gift during the period 1933-36 to meet the Newfoundland budget deficit.

Largely as a result of these developments, an improvement in economic activity and political conditions was reported toward the end of 1933. Government bonds and bonds of the city of St. John's were quoted locally at about par.

NEW GUINEA, gin'ī. The name applied to both an island in the East Indies and to those territories in the western Pacific Ocean, including a part of the island of New Guinea, which are administered by Australia under mandate of the League of Nations. The area of the island of New Guinea is estimated at 310,000 to 335,000 square miles and the population at slightly below 1,000,000. The northeastern portion is included in the Australian mandated area; the section west of 141°E. longitude belongs to Netherland India; and the southeastern part constitutes the Territory of Papua (British Guinea) also administered by Australia. See **NETHERLAND INDIA**; **PAPUA**.

TERRITORY OF NEW GUINEA. This territory, administered by Australia, comprises the section of the island known as North-East New Guinea, 70,000 square miles; Bismarck Archipelago (New Britain, 13,000 square miles; New Ireland, 3000

square miles; Lavongai, 600 square miles; Admiralty Islands and North-Western Islands, 1000 square miles); Solomon Islands (Bougainville, 3200 square miles; Buka, 200 square miles). Total area, 91,000 square miles; the total native population was estimated to be 520,000. The estimated non-indigenous population on June 30, 1932, was 4362; total indentured native labor (1931) was 27,765. Rabaul, on the island of New Britain, is the administrative centre. The total area under cultivation on June 30, 1931 was 212,500 acres of which 204,100 acres were planted with coconuts. Coffee, cacao, and kapok, and tropical fruits are other crops. Mining is confined to gold (£132,239 exported in 1930-31) but various other minerals are present in the territory. Total imports (less specie) for 1931-32 amounted to £779,397; total exports, £1,108,619. For 1930-31 revenue totaled £290,233; expenditure, £293,378. Administrator in 1933, Brig.-Gen. Thomas Griffiths.

NEW HAMPSHIRE. POPULATION. The population of the State on Apr. 1, 1930, according to the Fifteenth Census, was 465,293, as against 443,083 in 1920. Manchester, the most populous city, had (1930) 78,384 inhabitants; Concord, the capital, 25,228.

AGRICULTURE. The following table shows the acreage, production, and value of the principal crops for 1933 and 1932:

Crop	Year	Acreage	Prod. Bu.	Value
Hay (tame) .	1933	336,000	322,000*	\$4,701,000
	1932	336,000	303,000*	3,989,000
Potatoes	1933	8,000	1,440,000	1,368,000
	1932	8,000	1,320,000	660,000
Corn	1933	15,000	600,000	396,000
	1932	14,000	560,000	224,000

* Tons.

CHARITIES AND CORRECTIONS. The chief administrative body of the State, with regard to the care and custody of persons under the system operating in 1933, was the State Board of Public Welfare. It was composed of the Governor and the secretary of the State Board of Health, both *ex-officio* members, and of five appointed members, named one each year by the Governor and Council. The board employed a secretary and staff. Its duties included supervision of neglected, delinquent, and defective children; aid toward enforcing laws to protect children; inspection of charitable and correctional institutions of the State and of the counties; and functions relative to mothers' aid, probation, parole, prevention of the marriage of mental defectives, and special aid to the deaf, blind, and aged. A statute of 1931, to provide public assistance to the needy aged, was in limited operation.

The State-conducted institutions of care and custody were: New Hampshire State Hospital (mental patients), at Concord; Laconia State School (feeble-minded children), Laconia; New Hampshire State Industrial School (committed minors), Manchester; State Prison, Concord; New Hampshire Soldiers' Home, Tilton; State Sanatorium (tuberculosis), Glencliff. The State maintained sufferers from tuberculosis in other institutions, besides its own. The employment of State prisoners by a private company manufacturing chairs ceased in 1932, because of Federal restrictions upon prison-made goods, and the prisoners were employed in 1933 in making the State's automobile license plates, cutting stone, and printing for State departments,

LEGISLATION. The regular session of the General Court convened on January 4. It gave the State's ratification to the pending child-labor amendment to the Federal Constitution. A law to establish minimum wages in industrial employment was passed; likewise, a measure requiring \$7 a week as the minimum to be paid an injured employee under the system of workmen's compensation. An interim commission was created and charged with the study of a project for dealing with future unemployment. Measures were adopted for supporting the credit of counties, cities, and towns.

With regard to the current banking difficulties, measures were passed to legalize the continuance of the general closure of State banks that had been effected by the Governor's proclamation of a banking holiday; to give the Governor extensive powers thereafter to declare banking emergencies and take steps therein for the protection of depositors; and to permit building-loan associations to become connected with the Federal Home Loan system.

The Legislature reversed its former trend with regard to liquor questions. It created a State convention of 10 delegates, to be elected at large at a popular election on June 20, who should act for the State on the subject of the proposed repeal of the Federal Eighteenth Amendment. A bill to repeal the State's prohibitory act and to provide State dispensaries for alcoholic liquors, in the event that Federal prohibition should end, passed the lower house but was rejected by the Senate, save for provisions permitting sale of 3.2 per cent beer under the State-control system. A further act was passed to set the alcoholic content of permissible beer and wine at 6 per cent in case the State convention should declare for Federal repeal and Federal repeal should become a fact.

Betting at horse races, under the pari-mutuel system, was made lawful and subjected to a State levy of a percentage on the total of bets laid.

POLITICAL AND OTHER EVENTS. There were chosen by popular vote, on June 20, delegates favorable to the repeal of the Eighteenth Amendment to the Federal Constitution; these met in State convention on July 11 and voted the State's adoption of repeal as provided in the Federal superseding amendment proposed by Congress. The popular vote of June 20 was reported as leaning to repeal in the proportion of 2½ to 1. A special master for the United States Supreme Court, after a hearing of the State's boundary dispute with Vermont, recommended in March that the boundary between the two States be declared to follow the low-water line of the Connecticut River on the Vermont side. The Attorney General of New Hampshire thereupon filed a brief against making a low-water mark in the stream a boundary.

The banks of the State were closed by executive action on March 4, shortly before President Roosevelt's order closing all banks to prevent their depletion by runs. Some 50 commercial banks and all the State's savings banks had been reopened by the middle of the month. Employees of the Amoskeag cotton mills at Manchester, 7800 in number, struck for an advance in pay on May 19 and rioted, necessitating the calling out of militia on May 22. Rioters clashed with the troops on May 23; they were persuaded on the 25th to accept an increase of 15 per cent in their

pay, which had previously been offered and rejected.

OFFICERS. The chief officers of the State serving in 1933 were: Governor, John G. Winant; Secretary of State, Enoch D. Fuller; Treasurer, Charles T. Patten; Attorney General, Francis W. Johnston; Commissioner of Education, James N. Pringle.

Judiciary. Supreme Court. Chief Justice, Robert J. Peaslee; Associate Justices, Peter Woodbury, John E. Allen, Thomas L. Marble, and Oliver W. Branch.

NEW HAMPSHIRE, UNIVERSITY OF. A co-educational State institution of higher learning at Durham, N. H., founded in 1806 in Hanover, N. H., and operated as coequal with Dartmouth College, transferred to Durham as State College in 1893, and made State university in 1923. It consists of a college of liberal arts, a college of agriculture, a college of technology, a graduate school, an agricultural experiment station, and an extension service in agriculture and home economics. The 1933-34 enrollment was 1653, of whom 1195 were men and 458 women. The summer session had a registration of 299. The faculty and research and extension staff totaled 243. The endowment amounted to \$1,209,079 and the income for the year was \$1,497,430. The basis of course accreditation was changed from the time-unit to the credit-hour in order to secure greater continuity of study, a "year-course" plan of study being adopted in fundamental courses for freshmen. An engineering experiment station, with an engineer with industrial training in charge, was established to furnish liaison between the smaller industrial plants of the State and the faculty of the college of technology for the purpose of conducting research on production problems of these concerns. The library contained 75,557 volumes. President, Edward Morgan Lewis, A.M., LL.D., Litt.D.

NEW HEBRIDES, hēb'ri-dēz. A group of islands in the South Pacific Ocean about 250 miles northeast of New Caledonia and 500 miles west of Fiji. The group includes Espiritu Santo, Malekula, Efate (or Sandwich Islands), Epi, Ambrym, Erromanga, Tanna, and Anietyūm. The islands of Tanna, Ambrym, and Lopevi each contain an active volcano. Approximately the total area is 5700 miles and the population 50,300, including 1150 Europeans, 5081 Asiatics, and about 50,000 natives. The area under cultivation is set at 43,000 acres. Copra, coconuts, cacao, cotton, coffee, maize, and cotton seed are the chief exports. Trade is chiefly with France, New Caledonia, and Australia. Port Vila is the capital and chief port.

The islands are under the joint administration of Great Britain and France, according to the Anglo-French Convention of 1906. Each country is represented by a High Commissioner and a Resident Commissioner.

NEW IRELAND. See NEW GUINEA.

NEW JERSEY. POPULATION. The population of the State on Apr. 1, 1930, according to the Fifteenth Census, was 4,041,334, as against 3,155,900 in 1920. Newark had (1930) 442,337 inhabitants; Jersey City, 316,715; Paterson, 138,513; Trenton, the capital, 123,356.

AGRICULTURE. The accompanying table shows the acreage, production, and value of the principal crops for 1933 and 1932.

MINERAL PRODUCTION. The mining of zinc was continued in spite of adverse conditions that

Crop	Year	Acreage	Prod. Bu.	Value
Hay (tame)	1933	202,000	850,000*	\$4,305,000
	1932	202,000	818,000*	4,134,000
Potatoes	1933	44,000	7,216,000	8,948,000
	1932	45,000	7,155,000	8,434,000
Corn	1933	167,000	6,012,000	8,126,000
	1932	165,000	6,980,000	2,911,000
Apples	1933	.....	3,880,000	2,704,000
	1932	.....	3,640,000	2,184,000
Peaches	1933	.....	987,000	1,086,000
	1932	.....	1,776,000	1,243,000
Sweet potatoes	1933	11,000	1,925,000	1,251,000
	1932	12,000	1,560,000	986,000

* Tons.

caused radical curtailment of this industry in many other States. The zinc produced in New Jersey came entirely from the mines of the New Jersey Zinc Company. There were mined 81,460 short tons of recoverable zinc (1932), as against 94,285 for 1931. The value of the product after smelting was estimated, for 1932, as \$7,993,650. The State's secondary and somewhat erratic yearly production of iron ore fell off by about 94 per cent, to 14,966 gross tons for 1932, from 239,722 for 1931.

EDUCATION. High schools in the State were subject to demand during the year for post-graduate instruction for alumni who could not obtain gainful employment and who sought further education. Effort to make particular provision for this group was made in the northern part of the State, with the aid of Federal funds. In Union County a junior college was opened for their instruction.

There were enrolled in the public schools of the State, in the academic year 1932-33, 825,827 pupils. Of these, 44,329 were in kindergartens, 575,985 in elementary schools, 45,951 in junior high schools, 27,871 in senior high schools, 122,472 in four-year high schools, and 9219 in special classes; all the figures were higher than for the year before, except those for the kindergarten and elementary groups, which were slightly lower. The year's expenditures for public-school education totaled \$100,492,876, which was some \$14,000,000 below the total for the year before. The year's total included \$18,252,676 for service of debt, but did not include capital outlays, radically reduced, which totaled, \$3,616,610; nor did it include \$3,596,209 paid by districts to other districts for tuition. The salaries of the 27,860 teachers averaged \$1996.64 for the year, which was almost 10 per cent below the average for the year before.

CHARITIES AND CORRECTIONS. Central functions of the State with regard to dependents, defectives, and delinquents were performed in 1933 by the Department of Institutions and Agencies, organized in 1918. Its duties included coordination of the activities of State public welfare institutions and agencies, establishment of general policies for them, supervision of their management and expenditure, preparation of their budget requests, the furnishing of expert staff services to local institutions and inspection of private, municipal, and county institutions.

The Department included a non-political Board of Control composed of nine non-salaried members, chosen by Governor's appointment to serve terms of nine years expiring in rotation. This board held the power to appoint boards of managers for the several State institutions, subject to the Governor's approval, and to name the commissioner of the department. Examination and classification of persons admitted to State

institutions, medical matters, social research, prison labor, charge of paroles, inspection, relief for the aged, and other functions were distributed respectively among divisions of the department.

The institutions directed by the department, with their populations of Sept. 30, 1933 were: for the insane, Greystone Park State Hospital (4246), Trenton State Hospital (2673), Marlboro (1531); for the feeble-minded, State School at Vineland (females, 1247), State Colony at New Lisbon (males 753), State Colony at Woodbine (males 551), North Jersey Training School at Totowa (females 524); State Village for Epileptics, at Skillman (1303); Sanatorium for Tuberculous Diseases, Glen Gardner (463); State Prison, Trenton (1405), and State Prison farms at Leesburg (230), and Bordentown (211); reformatories, at Rahway (males, 859), Annandale (males 407), and Clinton (females, 189); for juvenile delinquents, State Home for Boys at Jamesburg (529), and State Home for Girls at Trenton (266); Home for Disabled Soldiers, Menlo Park (54); Home for Disabled Soldiers, Sailors, Marines, and Their Wives and Widows, Vineland (224). The State Board of Children's Guardians had charge of 27,506 cases.

LEGISLATION. The regular annual session of the Legislature convened on January 10 and recessed on June 22. It gave the State's ratification to the proposed Federal Constitutional amendment as to child labor. To act for the State on the proposed Federal amendment to repeal prohibition it created a State convention to be composed of 226 delegates, who were to be chosen by popular election on May 16, 64 at large and the rest by districts. The traffic in beer of the strength permitted by Federal statute (3.2 per cent of alcohol) was permitted under a temporary system of control, at first until July 1, later extended on account of failure to enact a definitive system of regulation.

The banking panic of February and March led to the passage of the Altman act, empowering the commissioner of banking and insurance to forbid the payment of a State bank's depositors in whole or in part, when the condition of a bank should require delay, without suspending the management of the bank. A further act authorized the creation of a central clearing house under the commissioner's supervision, which might issue uniform State scrip against banks' assets. Other wide powers were given the commissioner with a view to conserving the resources of building-loan associations and insurance companies.

Falling revenues and high expenditure for the relief of the needy had brought the finances of the State and many of its subdivisions into a condition requiring legislative attention. Recommendations made in January, by a committee appointed by Governor Moore and headed by Prof. H. W. Dodds of Princeton, to the end of bringing the State's budget into balance without imposing further taxation, were in large part adopted. The statutory office of State finance commissioner was created, to be filled by Governor's appointment and to carry power of supervision over budgetary estimates of departments. In order to obtain the means with which to aid municipalities and to meet school needs, including back pay for teachers, it was provided that the State should receive bonds covering its share of contributions to the cost of the Camden-Philadelphia bridge, which bonds the State could sell. The temporary reductions that had previ-

ously been made in State salaries were kept in effect for another year.

An effort to legalize betting at race tracks under the pari-mutuel system failed of passage; it would have required the submission of an amendment to the provision of the State constitution against gaming. There was passed, however, a measure to permit under counties' option the operation of race tracks, the policing of which was to be left to agents of the tracks themselves. A narcotic law was enacted, giving the State department of health authority over the sale and use of narcotic drugs.

Reconvening in August, the Legislature failed again to agree on a permanent system of control for the beer traffic and further extended the temporary control of the beer traffic to November 28. A non-partisan commission was created, to formulate a plan for the State control of expected future commerce in other liquor. Municipalities were authorized to have receivers placed in charge of properties producing income, on which taxes were delinquent. A grant of \$5000 was made to be used in checking the Dutch elm disease in the 8 northern counties. Death was made the penalty for kidnaping for ransom, save that if the jury should recommend mercy the penalty should be 30 years of prison.

Again reconvened, the Legislature passed on December 6, over Governor Moore's veto, an act for the State control of liquor traffic; he had declared it to require amendment on the ground of constitutionality. It created the office of Alcoholic Beverage Commissioner and named the first incumbent; left bars free to operate; but left bars and Sunday sales to be restricted by local bodies. A separate revenue bill put State taxes on sales of alcoholic drinks. Sellers were put under licenses costing at the minimum rate \$200 a year.

POLITICAL AND OTHER EVENTS. During the banking panic the State-chartered banking institutions, late in February, began operating under the Altman act, whereby the State commissioner of banking and insurance put restrictions on withdrawals of a bank's deposits without suspending the management of the bank. However, it became necessary on March 4 to declare a banking "holiday" or general cessation of banking business throughout the State, and the cessation was prolonged until March 12, with regard to State banks, to permit of the organization of clearing houses and other protective measures. Thereafter business was resumed with reasonable promptness in most localities, though State banks in Atlantic and Passaic counties were in many instances unable to reopen without reorganization or outside aid.

At an election on May 16 there were chosen by popular vote, partly by districts and partly at large, 226 delegates, of whom 224 favored repeal of the Federal Eighteenth Amendment; the two others, who favored retaining the Amendment, were elected in constituencies where the opponent had either withdrawn or been disqualified. The popular vote, while light, favored repeal in the approximate proportion of 6½ to 1. The elected delegates met in State convention on June 1 and voted the State's adoption of repeal through the superseding constitutional amendment proposed by Congress. Beer of the alcoholic strength of 3.2 per cent was sold in the State up to the end of Federal prohibition under a system of temporary regulation, the Legislature having failed to enact a definitive system.

State Finances. The post of State Finance Commissioner, created by enactment and carrying authority to curtail or suspend appropriations, was filled on August 11 by the appointment of John Colt, a banker of Princeton. The State finished the fiscal year on June 30 with a reported deficit of some \$2,500,000. In order to provide means for the State's further expenditures to relieve the destitute, a plan to convert to this use \$5,000,000 of authorized but unissued highway bonds was proposed to the voters and was adopted by them on November 7. A similar proposal, to convert authorized but unissued water bonds to the amount of \$7,000,000 to use for special additional aid to distressed local public-school systems, was likewise carried on November 7. The improvement of the State's financial position by the sale of its bonds representing its share of the cost of the Delaware River bridge at Camden was blocked by inability to market the bonds at par, coupled with Pennsylvania's objection to a sale at a lower price. A strong effort on the part of some interests in the State to impose an income tax, with a view to reducing the burden of other taxation, failed to find general favor, and the effort to keep going without taking this step, through severe economy and budgetary control, was the alternative. The burden of poor-relief was heavy, both on the State and on localities, particularly during the early part of the year; some 115,000 of the State's 986,000 families were estimated to have been recipients in March.

Other State Bodies. A State milk-control commission was created and set prices to be paid starting with June 1 at 13 cents a quart for consumers and 5.2 cents for producers of Grade A. Chancellor Campbell appointed 12 advisory masters to hear divorce actions and other matrimonial cases throughout the State, with a view to doing away with abuses that he declared to exist in the procedure.

Lighterage Case. New Jersey's effort to have the Interstate Commerce Commission condemn the railroads' practice of furnishing free lighterage throughout New York harbor, as prejudicial to New Jersey, led to a report, rendered by the Commissioner's examiner, Earl M. Speer, recommending the abolition of the practice.

Local Occurrences. The city of Newark had much financial difficulty because of inability to collect taxes and was at times temporarily unable to meet payrolls. At Paterson a strike of the Associated Silk Workers began at the end of August, involving some 7000 workers in more than 500 shops. It was one of the labor troubles connected with the moves of the National Recovery Administration to put industries under close Federal control. The strikers' organization demanded a settlement of their status on a National basis and sought a 30-hour week at \$30 minimum. The strike spread to silk centres in other States. A disease called the Dutch elm blight, not previously prevalent in the United States, broke out among elm trees in the Oranges early in the summer and spread in Essex and seven other northeastern counties, passing also into New York State. It was combated by removing or pruning affected trees. The project of building a ship canal from Raritan Bay to the Delaware River at Federal cost was the subject of a favorable report by an Army engineer; the cost was estimated at \$173,000,000 for a depth of 25 feet. Morristown National Historical Park,

including the sites of Washington's headquarters and of the camp of his army, was delivered to the Federal government on July 4 by a group of persons who had obtained the land. Severe storms on the coast in August and September ate away much shore front, imperiling the Barnegat Light, which 75 years before had been a mile from the sea.

At the election of November 7 some 14 of the 21 counties voted to permit horse races in their respective territories. Republicans retained control of the State Assembly by a reduced margin of 6 seats. Some 14 municipalities approved referenda for the local permission of public amusements on Sundays and four defeated like proposals.

The Court of Errors and Appeals in a decision of November 23 held invalid the statutory provision of 1933 to prevent deficiency judgments against foreclosed mortgagors who had given mortgages before the act was passed.

OFFICERS. The chief officers of the State, serving in 1933, were: Governor, A. Harry Moore; Secretary of State, Thomas L. Mathis; Treasurer, Albert C. Middleton; Comptroller, John McCutcheon; Attorney General, William A. Stevens; Commissioner of Education, Charles H. Elliott.

Judiciary. Chancellor, Luther A. Campbell; Supreme Court, William S. Gummere (Chief Justice; died), Thomas W. Trenchard, Charles W. Parker, Frank T. Lloyd, Clarence E. Case, Joseph L. Bodine, Ralph W. E. Donges, Thomas J. Brogan (elevated to Chief Justice), Harry Heher, and Joseph Perskie.

NEW JERUSALEM, CHURCH OF THE. An organization which is also known as the New Church, and popularly called Swedenborgian because based upon the statement of Christianity set forth in the writings of Emanuel Swedenborg, Swedish scientist, philosopher, theologian, and seer (1688-1772). The two bodies that now compose it in the United States are the General Church of the New Jerusalem and the General Convention of the New Jerusalem.

THE GENERAL CHURCH OF THE NEW JERUSALEM. This body was organized in 1897 under episcopal government with headquarters in Bryn Athyn, Pa., where the church maintains a cathedral church of unusual architectural interest; the Academy of the New Church, with departments from kindergarten to junior college, theological, and normal schools, with an enrollment of 323 in 1933. The General Church, at the beginning of 1933 had a world-wide membership of 2074 with 3 bishops, 35 pastors, 4 ministers, 21 societies, and 5 "circles," 16 of which were in the United States and Canada, 3 in England, and others in France, The Netherlands, Sweden, Natal, New South Wales, and Brazil. A native mission was maintained in South Africa. Among the periodicals published by the General Church are *New Church Life*, its official monthly magazine, *New Church Sermons*, and *The Journal of Education*.

THE GENERAL CONVENTION OF THE NEW JERUSALEM IN THE UNITED STATES OF AMERICA. In 1933, the General Convention consisted of about 6000 communicant members. Educational institutions included a theological school in Cambridge, Mass., a junior college in Urbana, Ohio, and the Waltham school for Girls in Waltham, Mass. Periodicals included the *New-Church Messenger*, weekly, Brooklyn, N. Y.; the *New-Church Review*, quarterly, Boston, Mass.; the *Sweden-*

borg Student, monthly, New York City; the *New Church League Journal*, monthly, Boston, Mass.; *The Helper*, weekly, Philadelphia, Pa. The convention held its 112th annual meeting at Philadelphia, Pa., May 16-23, 1933. Officers elected were: President, the Rev. Fred Sidney Mayer, Baltimore, Md.; vice-president, Ezra Hyde Alden, Philadelphia, Pa.; treasurer, Albert P. Carter, Boston, Mass.; and secretaries, B. A. Whittemore, Boston, and J. Woodruff Saul, Chicago, Ill.

NEW MEXICO. POPULATION. The population of the State on Apr. 1, 1930, according to the Fifteenth Census, was 423,317, as against 360,350 in 1920. Santa Fe, the capital, had (1930) 11,176 inhabitants.

AGRICULTURE. The following table shows the acreage, production, and value of the principal crops for 1933 and 1932:

Crop	Year	Acreage	Prod. Bu.	Value
Hay (tame) ..	1933	164,000	352,000 ^a	\$3,274,000
	1932	167,000	322,000 ^b	2,415,000
Cotton	1933	92,000	86,000 ^b	4,171,000
	1932	112,000	72,000 ^b	2,016,000
Wheat	1933	245,000	1,485,000	1,013,000
	1932	276,000	2,027,000	618,000
Corn	1933	238,000	3,332,000	2,033,000
	1932	297,000	3,267,000	1,143,000
Grain sorghums	1933	372,000	5,200,000	1,927,000
	1932	392,000	3,763,000	677,000
Dry beans ...	1933	176,000	598,000 ^c	1,704,000
	1932	163,000	408,000 ^c	694,000

^a Tons. ^b Bales. ^c 100-lb. bags.

MINERAL PRODUCTION. The mines' production of gold, silver, copper, lead, and zinc declined in yearly value to \$4,812,793 for 1932, from \$9,494,766 for 1931. Of gold, the production was \$494,669 (1932), as against \$644,160 (1931); of silver, the quantity was 1,190,451 ounces (1932) and 1,041,859 (1931) and the value \$335,707 (1932) and \$302,139 (1931); of copper, 28,899,000 pounds (1932) and 61,503,100 pounds (1931), in value \$1,820,637 (1932) and \$5,596,782 (1931); of lead, 20,951,000 pounds (1932) and 22,537,000 pounds (1931), in value \$628,530 (1932) and \$833,869 (1931); of zinc, 51,108,000 pounds (1932) and 55,732,000 pounds (1931), in value \$1,533,240 (1932) and \$2,117,816 (1931).

The total production of these metals for 1933, was estimated at \$6,185,052. To this total, gold (still reckoned at \$20.67 an ounce, the old statutory price abandoned in the course of the year) contributed \$536,724; silver, \$409,216; lead, \$796,869; copper (27,264,000 pounds), \$1,744,876; and zinc (62,729,000 pounds), \$2,697,347.

The quantity of coal mined fell off to 1,220,000 net tons (1932) from 1,552,822 (1931). The output of petroleum decreased to 12,511,000 barrels (1932), or by 18 per cent from 1931's record total of 15,227,000 barrels.

FINANCE. State expenditures in the year ended June 30, 1932, as reported by the U. S. Department of Commerce, were: for maintaining and operating governmental departments \$6,705,906 (of which \$1,268,688 was for local education); for interest on debt, \$573,243; for permanent improvements, \$4,425,173; total, \$11,704,322 (of which \$5,871,435 was for highways, \$1,837,957 being for maintenance and \$4,033,478 for construction). Revenues were \$10,795,300. Of these, property and special taxes furnished 18.4 per cent; departmental earnings and compensation to the State for officers' services, 8.8; sale of licenses, 31.1 (in which was included a gasoline sale tax that produced \$2,533,665). Funded debt

outstanding on June 30, 1932, totaled \$10,751,500, of which \$9,599,500 was for highways. Net of sinking-fund assets, the debt was \$10,089,567. On an assessed valuation of \$334,301,418 the State levied in the year ad-valorem taxes of \$2,048,724.

LEGISLATION. A regular session of the Legislature convened on January 10. In order to save State banks involved in the Nation-wide banking collapse of February and March it granted power to the Governor and State bank examiner to declare bank holidays, thus checking runs on the part of depositors. To act for the State, on the proposed repeal of the Federal Eighteenth Amendment, a State convention was created, to be composed of three delegates-at-large, who were to be elected by popular vote on September 19. It was provided that at the same popular election a referendum vote should be taken on whether to repeal the State's own prohibition laws. There was further submitted to the voters a proposal to limit the State's direct tax on property to the rate of 20 mills on the dollar of assessed valuation. In advance of the September vote, the Legislature passed a bill for the regulation of traffic in liquor, subject to the repeal of prohibition in Nation and State. Betting at racetracks was rendered lawful under the pari-mutuel system, with provision for payment to the State of a percentage on bets laid.

POLITICAL AND OTHER EVENTS. On September 19 the voters elected delegates, who met on October 19 in State convention and voted the State's adoption of the repeal of the Federal Eighteenth Amendment, through the superseding amendment proposed by Congress. The popular vote of September 19 also repealed the State's constitutional provision for the prohibition of liquor and adopted a proposal to limit the direct State tax on property to 20 mills on the dollar of valuation. A proposal to increase the number of the State's judicial districts to 12 was defeated. Governor Seligman died on September 25 and was succeeded by Lieutenant Governor A. W. Hockenhull.

The banks of the State were closed by proclamation of a holiday on March 3. All State banks and 25 National banks were authorized to reopen on March 15.

OFFICERS. The chief officers of the State, serving in 1933, were: Governor, Arthur Seligman (died, September 25; see **NECROLOGY**); succeeded by Lieut.-Gov. A. W. Hockenhull; Secretary of State, Mrs. Marguerite P. Baca; Auditor, Arsenio Velarde; Treasurer, Warren R. Graham (died in January; succeeded by Clinton P. Anderson); Attorney General, E. K. Neumann; Superintendent of Public Instruction, Mrs. Georgia L. Lusk.

Judiciary. Supreme Court: Chief Justice, John C. Watson; Associate Justices, Howard L. Bickley, A. L. Zinn, A. H. Hudspeth, D. K. Sadler.

NEW ORLEANS. See **FOUNDATIONS**.

NEW SCHOOL FOR SOCIAL RESEARCH. See **UNIVERSITIES AND COLLEGES**.

NEW SOUTH WALES. One of the six original states of the Commonwealth of Australia. Area, exclusive of Federal Territory (q.v.), 309,432 square miles; population at the census of June 30, 1933, 2,601,104 (2,100,371 on Apr. 4, 1921). Sydney, the capital, had 1,235,367 inhabitants on June 30, 1933. The other cities, with their 1931 populations, were: Newcastle and suburbs, 103,700; Broken Hill, 22,950; Lithgow, 15,050; Holroyd, 14,990; Cessnock, 13,860. Births in 1932 numbered 22,582; deaths, 21,343; marriages, 17,-

362. The natural increase of population for the year was 23,552 and the excess of emigration over immigration was 1192.

PRODUCTION, ETC. Wheat is the chief crop, others being barley, oats, rye, oranges, citrous fruits, potatoes, tobacco, sugar cane, bananas, grapes, and apples. The 1932-33 wheat crop was estimated at 78,389,000 bushels (54,966,000 in 1931-32). Wool production for the year ended June 30, 1932, was 503,275,416 pounds (as in the grease). Livestock in 1931 included 52,986,000 sheep, 2,993,586 cattle, 424,751 horses and 385,846 swine. Production of all minerals in 1932 was valued at \$6,533,191 (£6,517,703 in 1931), of which coal was valued at \$4,376,453. Factories in operation in 1931-32 numbered 7387, with 126,368 employees; the value added in process of production during the year was \$46,653,481 (£49,523,773 in 1930-31).

The actual budget deficit for the fiscal year ended June 30, 1932, was \$14,227,844, included the revenue and expenditures of the unemployment relief and family endowment funds. Excluding these funds, total revenues were \$38,635,132 and expenditures \$51,730,689. The budget for the fiscal year ended June 30, 1933, estimated revenues at \$45,185,000 and expenditures at \$49,535,000. Preliminary actual returns were: Receipts, \$48,437,000; expenditures, \$52,565,000. The state debt at June 30, 1933, was \$314,068,000 (Australia, \$138,234,000; London, \$162,363,000; New York, \$13,471,000). Government railways open for traffic in 1932-33 extended 6164 miles (private lines, 83 miles). For the year ended June 30, 1933, the state lines reported gross earnings of \$15,406,000 and working expenses of \$12,022,000.

GOVERNMENT. Executive power is vested in a governor appointed by the British government, who delegates his authority to a responsible ministry. Legislative authority is vested in a bicameral legislature, consisting of a legislative council of not less than 21 members (123 in 1932) appointed by the crown for life, and a legislative assembly of 115 members elected by universal suffrage. Governor in 1933, Sir Philip Woolcott Game, appointed January, 1930. Premier and Colonial Treasurer, B. S. B. Stevens, who assumed office May 13, 1932. For the reform of the Legislative Council and other developments in 1933, see AUSTRALIA under *History*.

NEW YORK. POPULATION. The population of the State on Apr. 1, 1930, according to the Fifteenth Census, was 12,588,066, as against 10,385,227 in 1920. New York City had (1930) 6,930,446 inhabitants; Buffalo, 573,076; Rochester, 328,132; Syracuse, 209,326; Albany, the capital, 127,412.

AGRICULTURE. The accompanying table shows the acreage, production, and value of the principal crops for 1933 and 1932.

MINERAL PRODUCTION. The production of coke, entirely in by-product ovens, from coal brought into the State, attained for 1932 the quantity of 3,130,078 net tons and the value of \$19,246,204, running about one-seventh less than that for 1931, as to both quantity and value. All but a few of the blast furnaces were closed in 1932; the normally considerable production of pig iron was greatly reduced, shipments falling to 594,350 gross tons (1932) from 1,014,320 (1931); in value, to \$8,546,837, from \$15,568,275.

The production of petroleum was increased, mainly by further application of the water-flooding process, to 3,501,000 barrels (1932), the high-

Crop	Year	Acreage	Prod. Bu.	Value
Hay (tame) .	1933	4,030,000	4,576,000*	\$43,472,000
	1932	3,990,000	4,871,000*	35,071,000
Potatoes ...	1933	200,000	24,600,000	18,450,000
	1932	210,000	28,850,000	10,490,000
Apples	1933	.....	16,060,000	11,242,000
	1932	.....	22,197,000	10,483,000
Corn	1933	566,000	17,546,000	10,879,000
	1932	583,000	20,405,000	9,182,000
Oats	1933	820,000	16,810,000	7,060,000
	1932	863,000	26,753,000	7,228,000
Wheat	1933	233,000	4,512,000	3,702,000
	1932	201,000	4,086,000	2,013,000
Dry beans ..	1933	117,000	842,000*	2,568,000
	1932	114,000	855,000*	1,496,000
Barley	1933	165,000	3,300,000	1,815,000
	1932	151,000	3,926,000	1,581,000
Buckwheat .	1933	139,000	2,641,000	1,347,000
	1932	149,000	2,458,000	983,000

* Tons. * 100-lb. bags.

est yearly total, save that of 1930, since 1883. Second only to Michigan in the production of salt, the State produced, in 1932, 1,556,642 short tons, as against 1,788,940 for 1931; in value, \$4,490,792 (1932) and \$5,293,470 (1931). Producers of gypsum sold or used, in 1932, 347,153 short tons of this product, in value \$3,715,126.

CHARITIES AND CORRECTIONS. Central authority over a great part of the State's institutional work was held in 1933 by the Department of Social Welfare, which was essentially the former Department of Charities, as renamed by an act of 1931. Its chief directing body, a Board of Social Welfare, composed of 12 appointees, appointed as its executive a commissioner of social welfare. The department administered a number of special schools for delinquents and others—the State Training School for Girls, Hudson; State Agricultural and Training School (delinquent boys), at Industry; Thomas Indian School, at Iroquois; State Training School for Boys (delinquent), Warwick; also, the Women's Relief Corps Home (soldiers' and sailors' mothers, wives, widows, and daughters), Oxford. It supervised over 1000 charitable, correctional, and other institutions that received public support; supervised children placed in private care, local boards of child welfare, and the distribution of State relief for the aged; and it directed Indian affairs.

Correctional institutions were under the Department of Correction, headed by a Commissioner (Walter N. Thaxter, Jr.), who was chairman of a State Commission of Correction composed of eight members, which visited institutions. A State Probation Commission of seven members and a director of probation had authority over the system for probationary release from custody. State Prisons at Attica, Auburn, Clinton, Great Meadow, Sing Sing, and Walkkill contained on June 30, 1933, 8409 inmates; Reformatories at Elmira, Albion (State Training School), and Westfield (State Farm, for women), 1765; an Institute for Male Defective Delinquents and the Albion State Training School, 1132 (defective delinquents); penitentiaries in the counties of Albany, Erie, Monroe, Onondaga, and Westchester, 1652. The penal population numbered 20,911. A Department of Mental Hygiene controlled 17 State mental hospitals, containing some 55,000 inmates.

LEGISLATION. A regular session of the 156th Legislature convened on January 4 and adjourned on April 10. To act for the State on the proposed repeal of the Eighteenth Amendment to the Federal Constitution it created a State convention of 150 delegates to be elected at large by popular

vote on May 23. The manufacture and sale of beer of the alcoholic strength of 3.2 per cent were legalized and put under State regulation; to regulate the beer trade there was created a State alcoholic beverage control board of 5 members to be appointed by the Governor; provision was made for the creation of county boards to co-operate with the State authority; licenses were made to cost \$2500 a year for brewers, \$500 for wholesalers, \$25 for wine manufacturers, and for beer retailers, from \$25 to \$200 according to the size of the community. Wine of Federally permissible alcoholic content was to be taxed at 10 cents a gallon.

During the nation-wide banking panic in March, in order to avert general banking insolvencies among institutions under State charter, power was given the State banking board to suspend any provision of the banking law and to suspend or regulate banking business. Another act gave the Governor power during the emergency to make, rescind, or amend any banking regulation. Similar powers, with regard to insurance companies, were given the superintendent of insurance, and an advisory board on insurance was created. The issuance of negotiable scrip by State banks was authorized, and a corporation was created to handle issues thereof. A central State savings bank was created, with which the State savings banks were required to become affiliated, and which was to act as an aid to any savings bank that had difficulty in meeting calls from its depositors. The circulation of false reports about the financial responsibility of corporations or of individuals was rendered a misdemeanor. Savings and loan associations were enabled to join the Federal home-loan system.

Measures were passed to accommodate difficulties caused by the prevalence of defaults on mortgages. Provision was made for the creation of State-directed corporations, under the superintendent of insurance, authorized to act on behalf of holders of certificates of participation in guaranteed mortgages, by foreclosure, by taking title, or otherwise. Provisions for reorganization of mortgage-guarantee companies were rendered subject to consent of only two-thirds of holders of such companies' certificates, group by group, as sufficient number to qualify such plans for adoption, provided that the superintendent of insurance and the court of jurisdiction should approve a plan in question. Alternatively, by another measure, direct power was given the superintendent of insurance to take over the affairs of a mortgage guarantee corporation that had defaulted, with a view to reorganizing it. Banking corporations were authorized, acting as trustees, to take over mortgaged properties in default, by way of foreclosure, and operate them. The question of relief to mortgagors from pressure to foreclose was left to a later special session.

Deficiency in the State's revenue obliged Governor Lehman to include in his budget proposals to the Legislature a plan for new and for increased taxes to produce about \$140,000,000 a year; this plan included heavier income taxes, a tax on retail sales, and a higher tax on motor fuel. The budget message also proposed reductions of State employees' salaries in excess of \$2000 and authorization to the public-service commission to levy against investigated companies for the cost of investigating them. The tax on retail sales was enacted, imposing 1 per cent on the amount of retail sales, except those of

motor fuel separately taxed; certain chief articles of food; gas, steam and water delivered by pipe; and articles sold by municipalities. Merchants selling less than \$5000 a year were exempt. The State personal-income tax was increased by the imposition of an emergency rate, applying to incomes of 1933, of 1 per cent of gross income, and the level of exemption was sharply lowered for one year, by \$1500, to the Federal level, with regard to the regular rate. The emergency rate had to be paid on the entire income without the above exemption, by all whose net income exceeded \$1000 for single or \$2500 for married persons. A barrel tax of a dollar was imposed on beer. The State inheritance tax was increased by about 20 per cent, by raising the rates or decedents' estates to the same levels as those of the Federal tax. Direct State taxation of personal property was abolished. The chief measure of budgetary economy was a reduction of State salaries, from Apr. 15, 1933 to June 30, 1934, starting at \$2000; above this figure the reduction began at 6 per cent and by degrees attained 33 $\frac{1}{3}$ per cent on excess over \$15,000. The budget for the ensuing year, as passed, totaled \$212,071,341 and was reported to be the lowest in 10 years. It did not include \$16,250,650 appropriated from bond issues, for public improvements.

Changes in Governmental Organization. Apart from State bodies affected or created by provisions of the liquor and banking laws, notably the advisory insurance board and the beverage-control board, other changes of organization were made. A board of milk control was created, with power to regulate the traffic in milk and to fix prices of milk to producer and consumer; it was composed of three appointee members. Its creation was due to an intention to allay violent discontent among the dairy farmers. The election law was modified, to provide bipartisan boards of election in all counties, doing away with single-party boards in counties, however one-sided the local partisan make-up. The jury system was modified by provision, after a method already in use in Federal procedure, for swearing in one or two "alternate jurors" in selecting petit juries for criminal trials; the alternates were to sit with the regular 12 jurors and hear trial, but were not to participate in a verdict unless regular jurors should cease to attend; but on the occurrence of a vacancy, whether through illness or through disqualification of a regular juror, an alternate was to be promoted to the vacancy, that the trial might not be broken off. The arrangement resulted from dissatisfaction with the frequency of mistrials through disqualification or disability of members of juries in important criminal cases.

Sundry Acts. It was required that automobiles manufactured after Jan. 1, 1935 and sold for operation in the State must be equipped with shatter-proof glass. Provision was made for stricter regulation of the practices of dentists. Recognition, in the State's law, of common-law marriage was terminated, but not retroactively. Teachers in the public-school system of New York City were forbidden to hold more than one position at a time in that system. Provision was made for the fixing of minimum wages for women and children in industry, and a permissive act to encourage minimum wages for men was passed. There was created a body named the Saratoga Springs Authority, with power to borrow \$5,000,-

000 for the development of Saratoga Springs as a place of medical treatment and to carry on the enterprise as a spa. Shop windows or signs were required, at all places of mercantile business, to display the names of persons conducting the business. Civil imprisonment for failure to pay alimony was curtailed by prohibiting further imprisonment for having failed to pay while already in prison.

Relief for the Needy. Work done by the previous Legislative session continued to provide the main needs for State relief to the needy during the early part of the current year. The issuance of \$60,000,000 in State bonds was authorized, subject to popular approval at the polls in November, as the means to raise money for disbursement on account of the State's share in the cost of relief to the needy during the 12 months starting with Nov. 15, 1933. A measure to provide a system of unemployment insurance was introduced but did not pass.

Affairs of New York City. The Hofstadter committee, which had investigated the government of New York City for many months, rendered its report to the Legislature at the outset of the session. It presented the evidence of waste, inefficiency, and corruption that it had gathered and recommended the creation without delay of a special commission to shape a new charter for the city. It further recommended that the existing municipal board of estimate and board of aldermen be replaced with a single municipal legislative chamber to be known as a city council, the members of which should be nominated by petition and elected under a system of proportionate representation. The organization of the constituent boroughs of the city, it held, should be built up by adding to the powers of borough presidents over local matters and creating elective borough councils of six members. The minority made a separate report in consonance with its contrary attitude during the investigation. A measure to provide for the revision of the city charter was introduced with Governor Lehman's support; it was killed in the Assembly, by Democratic votes aided by two bolting Republicans.

Authorization was given for reopening the city's budget for the current year so that the expenditures might be reduced. A Triborough Bridge Authority was created, to finish the Triborough Bridge, for which the city was not in a position to make further immediate expenditure, and to operate the bridge on a toll basis after completion. Authority was given the city to lease the Bronx Terminal Market, constructed under the Hyman administration, which had been a steady drain on the city's finances. A constitutional amendment to exempt from the city's debt-limit its obligations issued for self-liquidating dock and rapid-transit improvements was resolved, subject to second passage in 1934 and subsequent approval by popular vote. The city was permitted to sell small-denomination ("baby") bonds, which might be bought by taxpayers, in lieu of their obtaining discounts for taxes paid in advance. Several bodies having to do with the inspection of buildings were merged in a new bureau of buildings. Teachers in the city were empowered to borrow up to 25 per cent of sums paid to retirement fund.

First Special Session. New York City being obliged to raise new revenue in order to obtain further credit from bankers, its board of estimate

asked that Governor Lehman call a special session of the Legislature to authorize municipal taxation. He summoned the Legislature to meet on July 26. It gave a blanket authorization to New York City to impose taxes, affecting only persons and transactions within its limits, such as the State might impose; the city was thus authorized to raise its revenue temporarily so that it might obtain \$41,000,000 to cover the needs of poor-relief until the following February.

The July session also passed important State-wide laws. It authorized the suspension of foreclosure proceedings where default was on principal but not on interest or taxes, until July 1, 1934. The right to obtain deficiency judgment against a foreclosed mortgagor was limited in accordance with the theory of actual value of the property. The crime of kidnaping was made punishable by death, unless the jury objected, where the victim had not been returned safe. The State board of liquor control was authorized to regulate the sale of liquors, until April 1, should the repeal of Federal prohibition meanwhile render them lawful. State purchases were required to be made from subscribers to the Federal codes under the National Recovery Act, and the State's anti-trust laws were made to permit conformity with that act. Municipalities were permitted to borrow from Federal agencies to finance projects tending to relieve unemployment. Possession or sale of sub-machine-guns was made a felony. A revolving fund of \$6,000,000 was created to initiate eliminations of grade crossings, to the extent to which the Federal government was to reimburse the cost.

Second Special Session. The Legislature was convened again, on October 18. In a one-day session it voted financial provisions required for New York City so that it might obtain credit to save it anew from default; these included revolving funds to replace tax-anticipating notes, limitation of taxes on realty to the level of 1933, save for meeting extra debt charges, and a provision enabling the city to borrow \$70,000,000 with which to meet expenditure for relief.

POLITICAL AND OTHER EVENTS. The State was one of the last in which the banks remained open as the banking panic culminated in March. Governor Lehman closed them on the morning of March 4 by proclaiming a 2-day banking holiday. The Federal closure of banks ensued, before the State holiday had ended. One of the New York City banking institutions, the Harriman National Bank and Trust Company, having deposits of nearly \$25,000,000, was found badly impaired, upon Federal investigation, and was placed under a Federal conservator. Its former president, Joseph W. Harriman, was criminally prosecuted for misuse of its funds. A Federal demand was made upon the New York Clearing House Association to make good the bank's obligations in accordance with a pledge alleged to have been given by the association some months before the general closing of banks, at a time when the Harriman institution's troubles first were discovered. The Association's members denied that its officers had had authority to pledge the funds of their institutions. The Federal government accordingly brought suit in a State court in December.

Marcus and Singer, officers of the closed Bank of United States, which had failed early in the depression, finally lost their appeals from con-

viction and were imprisoned in Sing Sing in March. Charles E. Mitchell, former chairman of the National City Bank, whose conduct had been investigated by a committee of the Senate, was tried in March on a Federal charge of evading income taxes and was acquitted. Great distress was caused during the spring by the collapse of large mortgage-guarantee companies, with consequent loss of income to investors, and by the suspension of the life-insurance companies' practice of lending on policies. The State savings banks availed themselves of the privilege of suspending payment for 60 days but later resumed without the occurrence of insolvencies.

Relief for the Indigent. The State contributed throughout the year to the relief of the needy part of the population, which group was estimated in March at 1,200,000 persons; it also dispensed the State's share of Federal funds for the same purpose. A State commission was formed in February to approve local projects for public works as suitable to apply to the Reconstruction Finance Corporation for loans to promote the prosecution of such works as means for increasing employment. The committee submitted in June a programme of projects calling for the expenditure of \$350,000,000.

Vote on Prohibition. At a special election on May 23 there were elected, by a vote of about 8 to 1, 150 candidates pledged to repeal, to constitute the State convention to act for the State on the repeal of the Federal Eighteenth Amendment. The official vote was: for the repeal candidates, 1,946,532; for candidates against repeal, 247,450. For New York City alone, the vote was: repeal, 1,048,128; anti-repeal, 25,608. For the rest of the State: repeal, 898,404; anti-repeal, 221,842. Seven of the up-State counties gave majorities against repeal. The State convention met on June 27 and duly voted ratification of the repeal of the Eighteenth Amendment.

The "Milk War." In February a considerable number of the dairy farmers of the State organized in opposition to the Dairymen's League Cooperative Association, with which they had become dissatisfied as their representative, and agitated for higher prices to the producers of milk and diminished spread between these prices and those paid by consumers. Delivery of milk into Rochester by the Dairymen's League was impeded late in March and was effected only by the aid of State constabulary, after consignments had been seized on the road and spilled. The Legislature having hastened to create a board of milk control empowered to fix prices for milk, the farmers' agitation died down for the time. The board set minimum prices in May about a cent a quart higher, for both consumer and farmer, than those that had prevailed. Many dairy farmers were disappointed with the concession thus received. Attacks on milk in transit and on farmers who persisted in selling milk were renewed on August 1 and spread through a dozen or more counties; clashes of State constabulary and sheriffs' forces with considerable bands of milk-destroyers occurred. Governor Lehman promoted a plan for a State investigation of milk prices, which the Legislature carried through, also empowering sheriffs to appoint deputies to any number required. Violence ended about August 12.

The Lighterage Case. Hearings on the complaint of the State of New Jersey against the long-established practice of railroads to supply

free lighterage from terminals to points throughout the waterfront of the port of New York had been held in 1932, before Earl M. Steer, examiner for the Interstate Commerce Commission. He rendered his findings to the commission on January 28, recommending that free lighterage be abolished and that a system of charges based on a general minimum of 60 cents a ton by carload lots be imposed for lighterage service. New York interests fought the findings before the commission, as prejudicial to the interests of New York City.

Public Utilities. The State public service commission ordered on August 20 that charges for electric current purveyed to users in New York City be reduced by 6 per cent, from September 1, and those in Westchester County by 3 per cent. The order was declared to be based on the theory that accumulated earnings of previous years, carried to companies' surplus, enabled companies to stand a diminution of income by this intended temporary reduction, in view of consumers' reduced paying power. The companies contested this doctrine as not consonant with the principle of fair return, as having supposedly applied to their earnings of former years; they obtained a court order against the enforcement of the reduction, and the commission granted a rehearing. The companies contended that they had been subjected to the requirements of Federal codes under the National recovery act, thereby being obligated to raise their operating costs. A proposal of Governor Lehman to levy on public utilities for the cost of the public service commission's investigating them failed of passage in the Legislature. Regular connection for interchange of current between the electric system of the Consolidated Gas Company in New York City and the Niagara-Hudson Power Company up State was established on May 3 by a high-voltage link at the city limits.

Local Occurrences. Provision was made for the building, with a loan of \$2,800,000 from the Reconstruction Finance Corporation, of bridges over the Niagara River at Grand Island by a corporation intending to repay the cost of construction from tolls. From the same source a loan of \$3,000,000 was assured to build a highway toll-bridge across the Hudson River between Hudson and Claverack. A building of the State College of Ceramics was completed and dedicated at Alfred on June 12. The 150th anniversary of Washington's proclamation of peace at Newburgh was celebrated there on April 19 and by issue of a commemorative postage stamp nationally.

New York City. John P. O'Brien, who had been elected mayor on the Tammany ticket at the November election in 1932, took office on January 1 for an unexpired term of one year. Joseph V. McKee, who had been acting mayor subsequent to the resignation of Mayor Walker in 1932, resumed his office of President of the Board of Aldermen, but resigned on May 3. The O'Brien administration reopened the city budget for 1933 under authorization from the Legislature, in order to cure financial trouble arising from a deficit.

A reduced budget for the year current was adopted on February 8. It carried a total of \$518,427,972 and was thus lower by about \$39,000,000 than the budget as it had been adopted in November. The reduction was effected chiefly by reductions in city salaries above \$2000, which the Legislature had authorized in the previous De-

ember. City employees at or near the age of voluntary retirement were pressed to retire on pension. It soon developed, however, that the economies made would not suffice to keep the city solvent till the end of the year.

The city's tax receipts from the first half-yearly payment left a heavy deficiency on May 31, which was partly due to a reduced levy for the year. An approximate \$120,000,000 that the city owed to a banking group on the security of its revenue bills maturing June 10 was extended to September 10 with notice that no extension would be granted thereafter unless the city should make provisions for assuring service of the debt.

The Emergency Unemployment Relief Committee, a private organization that had dispensed about \$42,000,000 in three years for the relief of the needy in the city, announced on June 5 that it would cease to operate at the end of September. The cost of municipal relief to the needy was thus prospectively increased, as about 30,000 families depended on the committee for their support. The city committed itself on June 28 to furnish \$3,000,000 a month for relief, in consideration of which it was to receive a State (including Federal) contribution of \$4,000,000 a month. Facing these requirements, the city also made considerable expenditures for completing extensive sections of its municipal subway system, on the theory that, though the part already completed and operating was earning much less than the interest on its cost, earnings would be expanded sufficiently by lengthening the portion under operation to justify the comparatively slight cost of completion. But the effect was further to strain municipal credit.

Obligated to improve its credit the city government sought in June to devise a system of special taxes. A levy on automobiles registered in the city and a municipal sales tax were among those proposed; but popular agitation against these proposals caused their abandonment late in June. The city was left without revenue to meet \$8,746,000 of interest due on September 10, but diverted to this use money obtained by borrowing from its own sinking fund and from the State school fund. Samuel Untermyer was called in by the city administration to devise taxes that would satisfy the city's banking creditors.

On his advice the municipal legislature passed bills to tax at 5 per cent the gross incomes of all dealers in stock-market securities; at 1½ per cent, gross incomes of public utility companies; at ¼ per cent the investments of savings banks and life insurance companies; at 4 cents a share, transfers of ownership of shares of stock; it also raised the water rates by one-half and imposed 5 cents as a tax on every taxicab ride. The measures were passed by authority granted by the State Legislature and applied only to persons or companies in New York City. The New York Stock Exchange promptly hired quarters in Newark, New Jersey, and prepared to operate there as a separate exchange. This threat compelled Mayor O'Brien to veto the taxes on security dealers and on stock transfers. The higher water rates and the taxes on utilities and taxicabs were ratified.

Municipal income was thus left lower than the figure necessary to the requirements of the group of banking creditors; default was then averted by the city's agreeing to a plan whereby receipts from overdue taxes totaling \$181,900,000 were to be segregated and applied to redeeming the debt to the bankers; receipts from new tax payments

segregated to redeem further temporary accommodation; a fund of \$70,000,000 for relief of the needy created by loans that savings banks and life-insurance companies agreed to provide in part, on condition that the measure to tax their investments be vetoed, as it then was.

Mayor O'Brien, though the butt of blame for the city's financial difficulties, for the partial failure of the retrenchment policy, and for repugnant tax proposals, was renominated on the regular Democratic (Tammany) ticket at the primaries on September 19. A Fusion ticket, supported and largely influenced by Samuel Seabury, who had conducted the Hofstadter committee's investigation of the city's affairs in 1932, was nominated; it had as its mayoral candidate Fiorello H. LaGuardia. Joseph V. McKee, former acting mayor, who had not been a candidate at the primaries, announced his candidacy for mayor on September 29; he had the support of Postmaster General Farley and was credited with having been induced by the Federal Administration to enter the campaign with a view to overthrowing the Tammany organization. He formed a full ticket, which assumed the name of the Recovery party and was nominated by petition.

The New York Central's west-side viaduct for freight transportation was put in operation on August 1, in New York City. Exchanges in that city dealing in rubber, metal, silk, and hides were consolidated on May 1 as the Commodity Exchange. Judge Manton of the U. S. Circuit Court was restrained by Justice Stone of the Federal Supreme Court on September 23 from further action as to the receivership of the Interborough Rapid Transit Company, pending the latter court's passing on petitions against him, and gave up jurisdiction over the receivership, which, it was contended, a District judge should exert.

Elections. On November 7 the popular vote ratified provision for a State bond issue of \$60,000,000 for money with which to support the destitute and defeated a proposed amendment of the State constitution to extend the preference in civil service to veterans who had not been citizens of the State, but had been residents, at time of enlistment. Republicans gained seven seats in the State Assembly, losing three up-State but winning 10 in New York City.

In New York City Fiorello H. LaGuardia, Fusion candidate for mayor, was elected, with ample support in the municipal board of estimate. LaGuardia received about two-fifths of the vote; McKee, on the Recovery ticket, led O'Brien, the regular Democratic (Tammany) candidate, by a small margin; the Socialist vote was much reduced in comparison with earlier years, being about 65,000. A proposal to permit Mayor O'Brien to name a commission to revise the city charter was defeated.

OFFICERS. The chief officers of the State, serving in 1933, were: Governor, Herbert H. Lehman; Lieutenant-Governor, M. William Bray; Secretary of State, Edward J. Flynn; Comptroller, Morris S. Tremaine; Attorney General, John J. Bennett, Jr.; Commissioner of Education, Frank P. Graves.

Judiciary. Court of Appeals: Chief Judge, Cuthbert W. Pound; Associated Judges, Frederick L. Crane, Irving Lehman, Henry T. Kellogg, John F. O'Brien, Irving G. Hubbs, Leonard C. Crouch.

NEW YORK, COLLEGE OF THE CITY OF. A co-educational institution in New York City, founded

in 1848 by the Board of Higher Education and supported by municipal taxation. The enrollment for the autumn of 1933 was 24,904. The 1933 summer session had an attendance of 5057. The faculty numbered approximately 950. The budget for the fiscal year was \$3,132,987. President, Frederick B. Robinson, LL.D.

NEW YORK CITY. See CRIME; NEW YORK under *Political and Other Events*; MUSIC; BRIDGES; TUNNELS; PORTS AND HARBORS; RAPID TRANSIT; FOUNDATIONS.

NEW YORK STATE ALCOHOLIC BEVERAGE CONTROL BOARD. See NEW YORK; PROHIBITION.

NEW YORK UNIVERSITY. A nonsectarian and privately governed institution for the higher education of men and women in New York City, chartered in 1831. It comprises the following divisions: At University Heights, a college of arts and pure science, college of engineering, Guggenheim school of aeronautics; at Washington Square, the graduate school, school of law, school of commerce, accounts, and finance, Washington Square college, school of education, school of retailing, university extension division, and the institute of education; at the Wall Street division, the graduate school of business administration and courses in the school of commerce, accounts, and finance. The medical college is on East Twenty-sixth Street, the dental college on East Twenty-third Street, and the college of fine arts on East Forty-third Street.

The enrollment for the year 1932-33 in all divisions of the university, after deducting all duplications, was 34,256, including college of arts and pure science, 1276; school of law, 1250; University and Bellevue Hospital Medical College, 530; College of Engineering, 964; Evening Engineering Division, 1012; Graduate School, 876; school of education, including both graduate and undergraduate divisions, 7943; school of commerce, accounts, and finance, including the Wall Street division, 7943; Washington Square college, 6153; graduate school of business administration, 915; school of retailing, 298; college of dentistry, 501; college of fine arts, 1053; the combined summer divisions (1933), 5941; extension and related courses, 2895. The faculty of the university totaled 1812 in number.

The productive funds for the year 1932-33 amounted to \$8,983,437, and the income was \$292,211. The total income of \$7,348,971 was derived as follows: Student fees, \$6,470,792; dormitory rents, \$17,941; gifts, \$263,559; other income, \$304,466; and income from endowments, \$292,211. The libraries contained 414,516 volumes. Chancellor, Harry Woodburn Chase, Ph.D., LL.D., LL.D., who in turn succeeded Elmer Ellsworth Brown, chancellor of the institution since 1911.

NEW ZEALAND. A British dominion in the South Pacific. Capital, Wellington.

AREA AND POPULATION. New Zealand consists of two main islands, North and South Islands, and a number of outlying and annexed islands. The total area is 104,015 square miles, including some 600 square miles of outlying islands. The estimated population, including Maoris, on Jan. 1, 1933, was 1,534,000 (1,522,000 on Jan. 1, 1932). On June 30, 1932, North Island had 984,277 inhabitants, including 66,842 Maoris; South Island, 540,644, including 3051 Maoris. In 1932, there were 24,884 living births, 11,683 deaths, and 9905 marriages. The birth rate per 1000 inhabitants was 17.1 and the death rate 8.0. The estimated

population of the chief cities Apr. 1, 1932, was: Auckland, 218,400; Wellington, 144,800; Christchurch, 128,900; Dunedin, 87,400.

EDUCATION. Primary education is compulsory between the ages of 7 and 14. At the beginning of 1932 there were 2524 public primary schools, with 223,105 pupils; 305 private primary schools, with 26,726 pupils; 152 public secondary schools of various types, with 28,341 students; 49 private secondary schools, with 4245 students; and 11 Maori secondary schools, with 503 pupils. The four constituent colleges of the University of New Zealand at Dunedin, Christchurch, Auckland, and Wellington had 4869 students in 1931.

PRODUCTION. Animal husbandry is the chief industry, the animals and animal products being produced mainly for the British market. Live-stock in the dominion on Jan. 31, 1932, included 280,994 horses, 4,072,383 cattle (1,702,070 dairy cows), 28,691,788 sheep and lambs, and 513,416 swine. The number of sheep on Apr. 30, 1933, was 27,777,322. The quantity and value of the chief exports in the year ended June 30, 1933, were: Butter, 2,430,234 cwt., £10,897,894; wool, 801,633 bales (of 350 pounds), £6,703,359; frozen lamb, 2,733,614 cwt., £6,222,561; cheese, 1,919,155 cwt., £4,808,148; frozen mutton, 1,081,611 cwt., £1,266,378; frozen beef, 674,386 cwt., £630,781.

The chief crops in the 1932-33 season were: Wheat, 10,000,000 bushels (6,583,000 in 1931-32); barley, 490,000 bushels (537,000); oats, 5,302,000 bushels (2,818,000). The 1931-32 potato crop was 4,358,000 bushels; corn, 259,000 bushels; hay, 1,071,000 long tons; grass and clover seed, 14,654,000 pounds. The coal output in 1931 was 2,158,000 long tons; gold and silver bullion, 564,871 troy ounces. Gold production for the year ended June 30, 1933, was 193,977 ounces. The value of manufactured products for the year ended Mar. 31, 1932, was £67,813,000 (\$264,619,000), of which £25,470,000 (\$99,389,000) represented the value added in process of manufacture. There were 4969 factories, employing 69,697 persons, with wages and salaries of £12,643,000 (\$49,336,000). The quantity or value of the chief manufactured articles produced in 1931-32 was: Flour, 129,602 long tons; ale, 10,775,000 gallons; leather, 4,595,000 pounds; boots and shoes, 1,349,000 pairs; sawn lumber, 154,193,000 feet; printing, publishing and bookbinding, £3,772,000; clothing and hosiery, £2,501,000; motor vehicles, £1,548,000; furniture, £727,000.

COMMERCE. For the 12 months ended June 30, 1933, New Zealand reported a marked improvement in exports, a further decline in imports, and a relatively large favorable merchandise balance of trade. Exports were valued (f.o.b. in terms of New Zealand currency) at £38,446,000, an increase of nearly £3,000,000 over the preceding year. Imports were valued at £22,336,000, or £727,000 less than for 1931-32; import values were current domestic values in the countries of export, plus 10 per cent. In the calendar year 1932 butter accounted for 30.4 per cent of the value of all exports; frozen meats, 24.1 per cent; wool, 16.4 per cent; cheese, 14.2 per cent. The percentage distribution of the chief import items in 1932 was: Drapery and other textiles, 11.5 per cent; machinery, 7.4; motor vehicles, 5.4; drugs and chemicals, 5.1; apparel and hats, 4.7. In 1932, the United Kingdom supplied 51.2 per cent of New Zealand's imports (51.1 in 1931) and took 87.8 per cent of its exports (88 in 1931). The

United States supplied 13.3 per cent of the 1932 imports (14.9 in 1931); Australia, 12.7 (10.8); Canada, 4.3 (4.9). Australia took 3.9 per cent of the 1932 exports (3.3 in 1931); the United States, 2.5 (2.6); and France, 1.4 (1.2).

For the calendar year 1933 exports were £41,302,000 and imports £21,451,000 (£36,906,000 and £23,045,000, respectively, in 1932). Exports to the United States in 1933 were \$4,793,215 (\$2,157,953 in 1932); imports from the United States, \$8,228,708 (\$9,253,522 in 1932).

FINANCE. For the fiscal year ended Mar. 31, 1933, treasury receipts were £22,568,521 and expenditures £22,528,379, leaving a surplus of £40,142. However, to achieve a balanced budget the Minister of Finance transferred £2,500,000 from the reserves to the consolidated fund and the government was relieved of the £825,000 due the British government during the year on account of the war debt. With these two items, amounting to £3,325,000, taken into consideration, there would have been an actual deficit of £3,285,000. Budget estimates for 1933-34 placed revenues at £22,306,000 and expenditures at £24,400,000, leaving an anticipated deficit of £2,094,000. The public debt on Mar. 31, 1933, totaled £282,622,958, compared with £281,942,800 on Mar. 31, 1932.

COMMUNICATIONS. The government railways in 1932 had 3315 miles of line (private lines, 117 miles). The government lines in the year ended Mar. 31, 1932, carried 19,155,600 passengers and 5,824,811 tons of freight. In the same year there was a net operating revenue of £487,312 and gross operating receipts of £5,788,965. Highways extended about 48,433 miles (30,630 miles of macadam). The net registered tonnage of vessels entering the ports in overseas trade in 1932 was 2,350,000 (2,156,000 in 1931); of vessels cleared, 2,368,000 (2,166,000 in 1931).

GOVERNMENT. Executive power is vested in the Governor-General, appointed by the Crown on recommendation of the Dominion government. Legislative power rests in the Governor-General and the parliament, consisting of the Legislative Council of 22 members appointed by the Governor-General for seven years and the House of Representatives of 80 members elected for three years by direct suffrage. Governor-General in 1933, Lord Bledisloe (Charles Bathurst), appointed in 1929. The coalition ministry of the Reform and United parties, which assumed office Sept. 22, 1931, was composed as follows during 1933: Prime Minister, Attorney-General, Minister of Railways and External Affairs, G. W. Forbes (leader of the United party); Finance and Customs, J. G. Coats (leader of the Reform party); Lands and State Forests, E. A. Ransom; Native Affairs, Sir Apirana Ngata; Health and Internal Affairs, J. A. Young; Education, Industries, and Commerce, R. Masters; Defense and Justice, Marine, J. G. Cobbe; Telegraphs, Labor, and Unemployment, A. Hamilton; Agriculture and Mines, C. E. Macmillan.

HISTORY

As in previous years, New Zealand's energies during 1933 were mainly devoted to the battle with the economic depression and the political issues to the fore were for the most part of economic origin. The country made distinct progress on the economic front. Prices for wool, butter, and other primary produce on the Dominion increased, greatly improving agricultural conditions. Business and commercial activity was stimulated by the government's building subsidy

and various public works projects and unemployment relief schemes. Moreover the budget for 1932-33 was balanced (see *Finance*) and the trade balance became increasingly favorable (see *Commerce*). Two large loan conversion operations were put through, materially reducing the debt service charges. In March the £115,000,000 domestic debt was converted to a 20 per cent lower interest rate under the government's threat to tax unconverted securities at a higher rate. This operation saved the Treasury about £570,000 annually. In October a £5,000,000 loan, bearing 5 per cent interest, due to mature in London in 1934, was converted to a 3½ per cent rate.

However, the economic picture was not altogether promising. The government was unable to undertake other conversion operations which it had hoped to complete in London during the year. A deficit was anticipated in budget estimates for 1934-35, presented to Parliament Nov. 9, 1933. The number of unemployed on June 1, 1933, was 70,502, an increase of 2117 since April 15. Of the total, 62,672 were assisted by the unemployment board and 5830 were ineligible for relief. Those eligible for relief were given subsidized employment on farms, on land improvement and development schemes, on highways, afforestation, public buildings, gold prospecting, and other subsidized projects.

THE EXCHANGE PROBLEM. The most controversial measure adopted by the government during the year was the arbitrary raising of the London rate of exchange on Jan. 19, 1933, so that £125 in New Zealand currency sold in London for £100 sterling. This measure was inflationary in purpose and effect. Throughout 1932, the government had maintained the New Zealand pound at a discount of 10 per cent, the exchange rate in London being £110 New Zealand for £100 sterling. The raising of the discount rate gave a stimulus to exports and benefited the New Zealand farmers and primary producers by raising prices. At the same time it discouraged imports and reduced the real value of wages. Accordingly the government's action won support among the rural population and was bitterly attacked by the Labor party as well as by the commercial and financial interests of the cities.

The government promised to indemnify the banks against any losses incurred on the sale of exchange purchased at the new rate. The budget accounts for 1932-33 revealed that between Jan. 20 and Mar. 31, 1933, these losses amounted to £1,910,000. The government contended that the improvement in agricultural conditions noted during the year justified these heavy expenditures. When the issue was made a question of confidence in the House of Representatives in October, the government was sustained, 43 to 30. At the same time a Labor motion of no-confidence, impugning the general policy of the administration, was defeated (46 to 27). Accordingly the coalition government retained a safe majority to the end of 1933.

OTHER LEGISLATION. Two other government proposals debated during the year were bills for the establishment of a central bank and for revision of the tariff. The proposal to make the central bank independent of political control was bitterly fought by the Labor party, which wanted to make the central bank a government institution, and by a few independents, who wished direct government control of the currency. Support of the bill by the coalition groups was assured.

AUSTRALIAN TARIFF TREATY. A new trade agreement was signed by New Zealand and Australia, Sept. 5, 1933 and submitted to the parliaments of both countries for ratification October 25. It revised the existing agreement by altering the list of commodities subject to preferential rates and providing for the reciprocal granting of the benefits of the British preferential tariff on all other commodities.

DEFENSE PREPARATIONS. Despite the government's financial difficulties, Prime Minister Forbes toward the end of October announced plans for extensive improvements in the national defense system. The proposals called for additional airdromes, the purchase of additional military airplanes, the strengthening of the coastal defenses and of the fleet. These increased expenditures were inspired chiefly by the fear of Japanese aggression.

NGAG-WANG LOBSANG THUBDEN GYA-TSHO, THE DALAI LAMA OF TIBET. A Tibetan sovereign and head of the Lama hierarchy of 500,000 priests, died in Lhasa, Dec. 17, 1933. Born at Per-Ho-De, Tak-Po, in 1876, he was chosen in infancy as the thirteenth vice-regent of Buddha, the incarnation of the Bodhisattva Avalokitesvara, the ancestor of the Tibetans, and was carefully reared and educated for his high office in a lamaserie. On acceding to power in 1893 he became spiritual leader of 10,000,000 Lamaists, found not only in Tibet but in Mongolia, Siberia, Manchuria, China, and India. His temporal power was nominally supreme in his own land during his latter years, but from 1904 to 1912 he was a wanderer in Mongolia and India, having been obliged to flee when the "Forbidden City" of Lhasa was entered by an expedition, sent out by the Indian government under Sir Francis Younghusband, which opened the region to British trade. The sovereignty of the Chinese government, however, was recognized by the Anglo-Russian convention of 1907, in accordance with which neither power was to enter into negotiations with Tibet except through the Chinese government. The Chinese retained their hold on Tibet until the revolution of 1912 when, after driving out all the Chinese troops and being upheld by Great Britain through the Anglo-Chinese treaty of 1906, the Tibetans claimed their independence.

After the Dalai Lama's return he directed the uprisings of 1917 and 1920 against the Chinese government, which had refused to accept the terms of the Simla agreement of 1914, providing for an autonomous Outer Tibet and an Inner Tibet ruled from Peiping. At the time of his death Outer Tibet was under the domination of Great Britain. The Dalai Lama had on several occasions granted permission to the Royal Geographical Society to dispatch mountaineering expedition to Mt. Everest.

NICARAGUA, nîk'â-rû'gwâ. The largest of the Central American Republics. Capital, Managua.

AREA AND POPULATION. With an area of about 49,500 square miles, Nicaragua had a population estimated at 750,000 in 1929 (638,119 at 1920 census). Western Nicaragua supports three-fourths of the population, which is chiefly of Spanish and Indian blood. The east coast has many West Indian negroes. Managua, the capital, was almost completely destroyed by an earthquake in 1931 and has been only partially rebuilt. Its estimated population in September, 1932, was 45,000. Other leading towns, with their estimated

populations, are: León, 50,000; Granada, 25,000; Masaya, 18,000; Matagalpa, 7000.

EDUCATION. About 62 per cent of the population are illiterate. The school enrollment of children between 6 and 14 years numbered 22,573 in 1932. Secondary schools are all in private hands. There are three universities at Managua, León, and Granada.

PRODUCTION. Agriculture is the main occupation, supplementary industries being lumbering, cattle raising, and mining. The chief crops are bananas, coffee, sugar, and coconuts. Cotton, corn, rice, and beans are raised for domestic consumption. The 1932-33 coffee crop was estimated at 30,000,000 pounds (exports, 1932, were 17,918,000 pounds). The 1932 banana exports totaled 3,378,000 bunches; corn, 1,998,000 bushels; refined sugar, 3,521,000 pounds; cabinet woods, 1,856,000 board feet. Gold and silver are mined in small quantities.

COMMERCE. Nicaraguan general imports in 1932 were valued at \$3,480,000 (\$6,015,000 in 1931) and general exports at \$4,542,000 (\$6,575,000 in 1931). Conversions to dollars were made at par of one cordoba to the dollar. The chief import items in 1932 were: Cotton manufactures, \$896,000; chemicals, drugs, dyes, and medicines, \$292,000; machinery, \$200,000; wheat flour, \$184,000. The main export items, by value, were: Bananas, \$2,238,000; coffee, \$1,479,000; gold, \$382,000. The United States in 1932 purchased 65.3 per cent of all Nicaragua's exports (53.3 in 1931); Germany, 9.4 per cent (12.8); France, 8.5 per cent (12.4); and United Kingdom, 6.5 per cent (7.0). In the same year the United States supplied 62.7 per cent of the total imports (61.2 in 1931); United Kingdom, 10.3 (9.0); Germany, 8.6 (9.4); and France, 3.4 (2.9). Imports from the United States (1933) were valued at \$2,095,702 (\$1,992,901 in 1932); exports to the United States were \$2,224,718 (\$1,964,174 in 1932).

FINANCE. In the fiscal year 1931-32, government receipts totaled 4,665,592 cordobas and expenditures 4,750,603 cordobas, compared with receipts of 5,479,963 cordobas and expenditures of 4,913,245 cordobas in 1930-31. The public debt on Dec. 31, 1932, totaled 3,533,380 cordobas (external, 2,375,630; internal, 1,157,750). Including claims subject to adjudication, total government obligations were estimated at 14,370,631 cordobas. The government paid \$10,000 monthly during 1932 on the external debt, which covered interest but little of the sinking fund. The exchange value of the cordoba remained at par of \$1 United States currency in 1932.

COMMUNICATIONS. Nicaragua in 1933 had approximately 166 miles of railway line (147 miles state owned), 897 miles of highway, 2824 miles of telegraph wire and 3485 miles of telephone wire. Steamers entered and cleared at Nicaraguan ports in 1932 numbered 415 and 414, respectively; net tonnage, 779,905 and 779,448, respectively. Corinto, Puerto Cabezas, San Juan del Sur, and El Bluff were the chief ports. A regular weekly airmail and passenger service was maintained between Managua, Bluefields, and Puerto Cabezas.

GOVERNMENT. The Constitution of 1913 vested executive power in a president, acting through a responsible ministry, and legislative power in a congress of two chambers—the Senate of 24 members, elected for six years, and the Chamber of Deputies of 43 members, elected for four years by universal suffrage. The President is elected for four years. President in 1933, Juan B. Sacasa,

elected Nov. 4, 1932, who assumed office Jan. 1, 1933.

HISTORY

UNITED STATES ENDS INTERVENTION. The evacuation of United States marines from Nicaragua, which began Nov. 29, 1932, was completed on Jan. 3, 1933, when the last contingent of 80 officers and 815 men embarked at Corinto. Save for a short period in 1925-26, United States troops had been in continuous occupation of the country for 20 years. The evacuation fulfilled the promise of Secretary of State Stimson, made in February, 1931. Thereafter American participation in Nicaraguan affairs was limited to the collection of customs.

SACASA ASSUMES PRESIDENCY. The American withdrawal coincided with the inauguration as President on Jan. 1, 1933, of Dr. Juan B. Sacasa, Liberal candidate elected on Nov. 6, 1932, in nation-wide balloting supervised by the United States. President Sacasa immediately opened negotiations with Gen. Augusto Sandino, the insurgent leader who had defied the United States marines and the previous Conservative governments for nearly six years. On February 2 he signed a peace agreement with General Sandino in Managua. In return for an amnesty to his followers, Sandino agreed to disarm his men and cease hostilities. The President promised to allot public lands to those insurgents who wished to settle down as farmers and to furnish others with employment by a programme of public works in the northern districts. In a public statement issued February 7 Sandino declared that his struggle against the marines was prompted solely by the patriotic desire to end foreign intervention and not by a spirit of ill-will toward the United States.

On February 22, it was reported that Sandino's men had surrendered all their arms. With 1000 of his followers, the general undertook the establishment of a colony on the Coco River near the Caribbean. The work was carried on with food-stuffs and equipment supplied by the government. Toward the end of the year it was learned that some of Sandino's men were still armed and that several of them had been killed in an accidental clash with a National Guard patrol. Manifestoes designed to end the hostility between the National Guard and Sandinistas were issued in Managua December 5 by Gen. A. Somoza, director of the National Guard, and General Sandino. Both proclaimed their mutual friendship, patriotism, and loyalty to the republic.

The government on March 23 lifted the state of siege declared throughout most of the country on January 22. However, widespread economic distress led to sporadic raids by bandit groups and on May 12 Congress placed the department of Managua under martial law. An explosion in the arsenal at Managua, which destroyed most of the government's ammunition, led President Sacasa to reimpose a state of siege throughout the country on August 2. He declared the explosion was "not the result of mere accident." No serious menace to the government developed, and on August 17 it was announced that a new supply of 2000 rifles and 2,000,000 rounds of ammunition had been received from abroad.

ECONOMIC DEVELOPMENTS. Economic conditions in Nicaragua continued bad during 1933, due to the low price of coffee and other export commodities. The government's revenues had declined to one-half those received in 1929. President Sacasa

introduced a number of economies, including a reduction in the National Guard budget from \$100,000 to \$75,000 monthly. Nevertheless he was forced to secure an emergency loan of \$1,500,000 from the National Bank of Nicaragua to balance the budget. In October, Col. Irving Lindberg, Collector General of Customs for Nicaragua, left for the United States and Great Britain to secure a temporary moratorium on Nicaragua's bonded indebtedness held in those countries. One encouraging development in the year ended Oct. 31, 1933, was an increase of 6502 tons in the volume of exports over the previous year, while imports remained stationary.

LEGISLATION. Congress during 1933 enacted a number of measures designed to alleviate economic hardships. One law prohibited the foreclosure of mortgages for a period of six months and reduced the interest rate to 9 per cent from the prevailing rates of 12 to 18 per cent. An additional tariff of 12½ per cent was placed on imports of flour and rice in July in order to stimulate the local production of these commodities. An executive decree of June 24 made it obligatory for local merchants to secure the approval of the Financial Control Board before placing orders for foreign merchandise. Another decree excluded foreigners from working on government wharfs and Nicaraguan ships during the depression. A measure effective in July required Chinese marrying Nicaraguan women to post a bond of \$500 with the government, the money to be used for the repatriation of the women should their husbands desert them. Congress convened on Dec. 15, 1933, to enact additional legislation.

NICKEL. The world's consumption of nickel increased from 57,000,000 pounds in 1932 to 96,000,000 in 1933, according to the annual report issued by The International Nickel Company of Canada, Ltd. Seventy-seven per cent of the total consumption, or 74,356,969 pounds, was sold by this company during the year, an increase of 116 per cent over the previous year. The report credits the automobile industry as the most important factor in the recovery of the nickel industry by the increased use of nickel steel. Other fields yielding a demand for nickel were the increased use of stainless steel, such as in airplane manufacture. Its use in the construction of the experimental 3-car articulated train for the Chicago, Burlington, & Quincy R. R., now building, is expected to inaugurate a large demand. Increasing demand for monel metal in chemical, engineering, and domestic applications, especially in the latter, accounted for much of the consumption. The adoption of this metal for heavy forgings of gate and valve equipment on the Boulder Dam is of great engineering value. Danzig, Iraq, and Japan have added nickel to their coinage systems, and Ethiopia, France, and Germany have added new nickel coins to existing currencies.

NIGER, COLONY OF THE. A French colony and one of the divisions of FRENCH WEST AFRICA (q.v.). Lieutenant-Governor in 1933, M. Tellier.

NIGERIA, NI-JŪ'II-À. A British West African colony and protectorate bounded by French West Africa on the west and north and by the French Cameroon on the east. Nigeria is divided politically into the Colony (1381 square miles; 325,020 people in 1931); Southern Provinces (89,515 square miles; 8,168,227 people, including 10,581 square miles and 374,872 people of the Cameroons); Northern Provinces (281,778 square miles; 11,434,924 people, including 17,500 square

miles and 422,440 people of the Cameroons). The Northern and Southern Provinces, including the mandated area of British Cameroons which has been included in Nigeria for the purposes of administration, together form the Protectorate. Total area, 372,674 square miles; total population (1931 census), 19,928,896. Lagos, the capital, had 140,000 inhabitants. There were 2884 schools with a total of 197,500 pupils. In addition, there were in the Northern Provinces 35,452 Koran schools.

In 1932, including specie of £152,182, total exports amounted to £9,528,701; total imports, including specie of £48,411, were £7,107,819. The principal exports were palm kernels, £2,096,068; groundnuts, £2,159,320; palm oil, £1,462,478; hides and skins, £482,483; tin, 3431 tons of metal (limited by quota). The chief imports were gasoline, kerosene, cotton piece goods, tobacco, salt, gin, and kola nuts. Of the total trade in 1932 the United Kingdom accounted for 52 per cent. During 1932, 756 ships aggregating 1,453,752 tons cleared the ports. The two main railway lines had a total of 1905 miles of single open track in 1932. There is an extensive network of motor highways, and the numerous rivers form the principal means of transportation.

Actual revenue for 1931-32 amounted to £6,732,454; actual expenditure, £8,063,143; expenditure on loan works, £597,147; public debt (Sept. 30, 1932), £28,305,582; sinking fund, £3,930,490. The whole of Nigeria is under a governor and commander-in-chief who is represented in the Colony by an administrator, and in each of the two groups of the Northern and Southern Provinces by a lieutenant-governor. The governor is assisted by an executive council, and by a partly elective legislative council which legislates only for the Colony and the Southern Provinces. This legislative council must sanction all expenditure from the funds of the central government which is incurred in the Northern Provinces. The governor legislates for the Northern Provinces. Sir Donald C. Cameron, Governor and Commander-in-Chief of the Northern Provinces, was succeeded in 1933 by G. S. Browne, whose title was changed to Chief Commissioner. Lieutenant-Governor of the Southern Provinces, W. Buchanan-Smith.

NITOBE, INAZO. A Japanese statesman, died in Victoria, B. C., Canada, Oct. 15, 1933. He was born at Iwateken, Japan, in 1863. On his graduation from the Sapporo Agricultural College in 1881, he came to the United States to study political economy at Johns Hopkins University, and then attended the Universities of Berlin, Bonn, and Halle. On his return to Japan he became a member of the Sapporo College faculty and then served for a time as director of the Industrial Bureau of the Formosan government. In 1904 he was called to the chair of political economy at the University of Kyoto and in 1906 was elected president of the Imperial College in Tokyo. In the latter position his influence in awakening Japanese youth to the importance of free speech, a free press, and representative government gained for him the sobriquet of the "Father of Japanese Liberalism." During 1911-12 he was the first Japanese exchange professor to American universities, lecturing at Brown University on "The Japanese Nation: Its Land, Its People, Its Life."

In 1919 Dr. Nitobe was appointed Under-Secretary-General of the League of Nations, which office he held until 1926. On the formation of the Institute of Pacific Relations in 1925, he became

active in that organization, serving as chairman of the Japanese Council. At the time of his death he was returning from the Institute's conference held at Banff. The Emperor elevated him in 1926 to the peerage in recognition of his services in the fields of education and international relations.

NITROGEN. See FERTILIZERS.

NOAILLES, nō'ü'y', ANNA ELISABETH, COMTESSE DE. A French poet and novelist, died Apr. 30, 1933, in Paris, where she was born Nov. 15, 1876. Before her marriage in 1897 to a grandson of Jules, Duc de Noailles, she was the Princess Anna Elisabeth de Brancovan, a member of an important Rumanian family. Her writings, which were emotional in the extreme and of exotique type, showed the influence of De Musset and of some years spent in the Orient. Known as the "Muse of Gardens," she sang especially the praises of nature, with freshness of sentiment and fervor of lyricism. Her volumes of poetry included *Le Cœur incommensurable* (1901), crowned by the French Academy; *L'Ombre des jours* (1902); *Les Éblouissements* (1907); *Les Vivants et les morts* (1913); *Les Forces éternelles* (1920), which received the Grand Prix de la Littérature française in 1921; *Poème de l'amour* (1924); *L'Honneur de Souffrir* (1927); and *Poèmes de l'Enfance* (1930). Among her novels were *La nouvelle espérance* (1903); *Le Visage émerveillé* (1904); and *La Domination* (1905). *Les Innocents* (1923) was a collection of short stories, showing keen analysis of a woman's mind. In 1922 Countess de Noailles was elected a member of the Royal Academy of Science of Belgium. The French government created her in 1931 the first woman commander of the Legion of Honor.

NOBEL PRIZES. On December 10, the centennial of the birth of the founder, the Nobel prizes for 1933 were presented in Stockholm by King Gustav to, or in behalf of, the following persons who, in accordance with the will of the Swedish inventor and philanthropist, Alfred B. Nobel, were deemed to have made the greatest contributions toward the progress of the world and the welfare of mankind: Professor Paul H. M. Dirac, of Cambridge, and Prof. Erwin Schrödinger, of Oxford, in physics; Thomas Hunt Morgan, of Pasadena, Calif., in medicine and physiology, and Ivan Bunin, Russian exile now living in France, in literature. The 1932 prize in physics, not previously awarded, was presented to Prof. Werner Heisenberg, of Leipzig. The awards in chemistry and world peace were reserved. The awards in medicine and physiology are determined by the Royal Caroline Medico-Surgical Institute of Stockholm; the award in literature by the Royal Swedish Academy; in chemistry and physics by the Royal (Swedish) Academy of Science; and the peace award by a committee of five which is elected by the Norwegian Storting. In addition to medals and diplomas, a financial award from funds of the \$9,000,000 left for the purpose by the founder is distributed to the prize winners. In 1933 the value of the prizes totaled about \$47,300 each.

The 1932 award to Professor Heisenberg was made on the basis of his discovery of allotropic forms of hydrogen. He is one of the youngest scientists ever honored by the award as he was not yet 32. His researches have been largely along the lines of the quantum theorem and in Germany he is an outstanding exponent of the indeterminacy principle. He had been previously awarded a medal and a stipend of \$2500 by the Research Corporation of New York. Dr. Dirac is also a

young man; his field of research in the development of the atomic theory has led to the conclusion that the electron and the proton are not independent and that in nature but one fundamental particle exists. Dr. Schrödinger, a recent incumbent at Oxford and previously professor of physics at Berlin, succeeding Max Planck, is noted for similar developments in the theory of atomic structure. Dr. Morgan was unable to be in Stockholm for the presentation of his award and it was accepted for him by Laurence A. Steinhardt, the United States Minister. Dr. Morgan, now at the California Institute of Technology, has contributed notably to biological science in researches on heredity, especially through his theory of the gene. Ivan Bunin, who received the award in literature, is a voluntary exile from Russia since the revolution, and is strongly antagonistic to the present Russian régime. His novels largely deal with the life of Russian peasantry, and his best known works are *Sacrament of Love*, *Night Village*, and *The Gentleman from San Francisco*.

NO-DRAFT VENTILATION. See AUTOMOBILES.

NOETZLI, FRED A. An American hydraulic engineer, died at Covina, Calif., May 24, 1933. Born in Zurich, Switzerland, in 1887, he attended the Swiss Federal Polytechnic Institute there and in 1911 made a topographical survey of the Swiss National Park. After teaching at the Swiss Polytechnic Institute for several years he came to the United States, being engineering instructor at Lehigh University during 1916-17. In 1918 he became chief engineer with the Beckman and Linden Engineering Corp. in San Francisco, and after 1924 was engaged in private practice as a consulting hydraulic engineer.

Dr. Noetzli's specialty was dam design. He served as adviser to the United States Indian Service on the construction of the Coolidge Multiple-Dome Dam, part of a project, on the Gila River in Arizona, authorized in 1924 to irrigate some 100,000 acres, largely Indian lands. He acted also as consultant to the Los Angeles Flood Control District upon the construction of the Big Dalton Dam, completed in 1929; to the city of Pasadena upon the construction of the Pine Canyon Dam, which will serve as part of the water supply of the Metropolitan District; and to the Mexican government on the construction of the Rodriguez Dam. He accomplished much in the improvement of the arch and multiple-arch dam, evolved from the slab and buttress form of hollow dam, and devised the roundhead buttress type of dam. After 1922 he acted as secretary of the committee appointed by the Engineering Foundation to carry out investigations of the arch dam. He was the author of several papers on dams published in the *Transactions of the American Society of Civil Engineers*.

NOISE. See ELECTRICAL INDUSTRIES.

NON-FEDERATED MALAY STATES. See UNFEDERATED MALAY STATES.

NORTH AUSTRALIA. See NORTHERN TERRITORY OF AUSTRALIA.

NORTH CAROLINA. POPULATION. The population of the State on Apr. 1, 1930, according to the Fifteenth Census, was 3,170,276, as against 2,559,123 in 1920. Charlotte, the most populous city, had (1930) 82,675 inhabitants; Raleigh, the capital, 37,379.

AGRICULTURE. The accompanying table shows the acreage, production, and value of the principal crops for 1933 and 1932.

Crop	Year	Acreage	Prod. Bu.	Value
Tobacco ...	1933	678,000	518,522,000 ^a	\$83,553,000
	1932	470,000	288,694,000 ^a	85,278,000
Cotton	1933	1,088,000	690,000 ^b	33,465,000
	1932	1,251,000	660,000 ^b	20,180,000
Corn	1933	2,392,000	44,252,000	29,206,000
	1932	2,322,000	34,830,000	15,325,000
Hay (tame)	1933	680,000	553,000 ^c	7,576,000
	1932	737,000	541,000 ^c	6,113,000
Peanuts ..	1933	215,000	204,250,000 ^a	5,106,000
	1932	294,000	299,880,000 ^a	3,898,000
Potatoes ..	1933	77,000	7,315,000	6,145,000
	1932	68,000	6,596,000	4,155,000
Sweet potatoes .	1933	85,000	7,905,000	4,348,000
	1932	94,000	7,990,000	3,196,000
Wheat ...	1933	391,000	3,714,000	3,788,000
	1932	376,000	3,572,000	2,429,000
Oats	1933	205,000	3,977,000	2,267,000
	1932	205,000	4,366,000	1,615,000

^a Pounds. ^b Bales. ^c Tons.

FINANCE. State expenditures in the year ended June 30, 1932, as reported by the U. S. Department of Commerce, were: for maintaining and operating governmental departments \$31,992,723 (of which \$17,230,765 was for local education); for interest on debt, \$8,064,993; for permanent improvements, \$6,922,730; total, \$47,008,072 (of which \$9,940,450 was for highways, \$3,697,069 being for maintenance and \$6,243,381 for construction). Revenues were \$44,061,761. Of these, property and special taxes furnished 28.4 per cent; departmental earnings and compensation to the State for officers' services, 8.3; sale of licenses, 52.3 (in which was included a gasoline sale tax that produced \$9,042,552). Funded debt outstanding on June 30, 1932, totaled \$175,878,800, of which \$108,037,000 was for highways. Net of sinking-fund assets, the debt was \$164,472,664. On an assessed valuation of \$2,830,758,190 the State levied in the year ad-valorem taxes of \$4,461,697.

EDUCATION. The State met the situation caused by the collapse of the local revenues of the public-school districts in a manner different from that of most other States, by assuming the entire cost of providing eight months of instruction a year in all the public schools (see *Legislation*, below). As an accompaniment of this provision it abolished the local taxes for the schools' support that had been levied by the authorities of the respective school districts. An exception was made for the cases of counties and cities that should vote to impose local taxes in order to supplement their shares of the State's appropriations. In such cases a popular vote was made a prerequisite to the levy's becoming effective. Some 15 of these local units, according to information given by the Superintendent of Public Instruction at the end of 1933, had held elections as to such supplementary local taxation, but only about six of these elections had approved the tax proposed.

For the academic year 1932-33 the number of persons of school age in the State was reported as 1,088,249. There were enrolled in the public schools 892,086 pupils. Of these, 747,355 were in common schools or elementary grades, and 144,731 were in high schools. The year's expenditures for public-school education were: current, \$24,887,196; total (including capital outlay), \$26,267,916. Both totals ran sharply below those for the year before. The salaries of teachers (principals included) for the year averaged \$776.38.

CHARITIES AND CORRECTIONS. Central supervisory authority for the State, over State and county institutions for the care and custody of

persons, was exercised by a Board of Charities and Public Welfare under the system in force in 1933. This board had seven unpaid members and as executive head a Commissioner of Public Welfare (Mrs. W. T. Bost). It was charged with organization and oversight of the counties' welfare units, promotion of a Statewide programme of children's welfare, and interpretation of the State's colored-welfare programme to the Negro citizens.

The employment of prisoners at road work continued with some modification in 1933; the State Prison Department being consolidated with the Highway Commission and all 30-day and longer-term convicts being committed to the prison division of the commission, which consequently controlled some 7700 prisoners. Special relief on account of the destitution incidental to industrial depression was dispensed by a State Emergency Relief Commission and was largely routed through the county-welfare division of the Board of Charities and Public Welfare.

An institutional population of some 22,000 was distributed among the following institutions: mental patients, in State hospitals at Goldsboro, Morganton, and Raleigh; the mentally deficient, at Caswell Training School, Kinston; physical defectives, at the Orthopedic Hospital, Gastonia, and the State Sanatorium, at Sanatorium; the deaf and blind, in a School for the Deaf and Blind, Raleigh, and a School for the Deaf, Morganton; juvenile delinquents, in Eastern Carolina Training School at Rocky Mount, Stonewall Jackson Manual Training School at Concord, State Home and Industrial School for Girls at Samarcand, Morrison Training School at Hoffman, and Industrial School for Negro Girls at Efland; the criminals, in the State Industrial Farm Colony for Women at Kinston, 100 county jails, 30 county prison farms and workhouses, and (men criminals) under the Highway Commission; the aged, in the Confederate Soldiers' Home at Raleigh, Confederate Women's Home at Fayetteville, and 87 county homes; some mental patients and many dependent children were in private institutions.

LEGISLATION. A regular session of the Legislature convened on January 4. It voted the State's ratification to the proposed Federal constitutional amendment to change the dates of Presidential inauguration and of the convening of Congress (the later adopted Twentieth Amendment). With regard to the proposed repeal of the Federal Eighteenth Amendment, provision was made for a popular vote on November 7, to elect members of a State convention which should declare the will of the State. The sale of beverages containing not more than 3.2 per cent of alcohol was made lawful by statute. To relieve State banks involved in the nation-wide banking collapse of February and March the power was given the State department of banking to permit restriction of depositors' right of withdrawal from an institution under State regulation without closure of such institution, liquidation, or removal of the management. It was made lawful for a depositor in a bank actually closed to sell his claim to a debtor of the bank, who might present it for satisfaction of debt.

The State corporation commission was abolished, to terminate Jan. 1, 1934, and to transmit its duties to a newly created commissioner of utilities. Authorization was given for the issuance of \$12,230,000 of State bonds to be used to

take up the deficit incurred in 1930 and 1931. Penalties imposed for nonpayment of direct property taxes from 1927 through 1931 were abolished and it was allowed that the delinquent taxes be paid in five annual installments, with interest at 6 per cent, from Apr. 1, 1933. Redemption, for future delinquents was allowed for 27 months after judgment. A tax of 3 per cent on sales was imposed, with exemption for certain foods. The State assumed the burden of the entire support of the public-school system for a yearly term of eight months. An appropriation of \$16,000,000 a year for public schools was made. Horse-racing with betting under the pari-mutuel system was permitted in six counties. The prison and highway departments were consolidated into a department of highways and public works, with a view to reducing the cost of the prisons by making more effectual use of convict labor.

The marriage law was modified, to make the requirements less stringent, by repealing the provisions for health certificates and for bans five days in advance, requiring instead that the male sign an affidavit to his not having suffered from tuberculosis nor social diseases within two years. The period of marital separation giving occasion for divorce was reduced to two years, from five. The right was given to lawyers to incorporate as a State bar with power to admit and eject members. A State board was created to license cosmetologists (operators of "beauty parlors"). The Legislature named the tomtit as the State bird, but later reconsidered and repealed the resolution.

POLITICAL AND OTHER EVENTS. The banks of the State, though not closed before the President's bank-closing proclamation of March 5, were put on a basis of restricted operation by the State banking department on March 3. Reopenings were general on March 15. Governor Ehringhaus declared in July that State expenditure had been reduced, since the end of 1932, by some 32 per cent. On August 31 Governor Ehringhaus, with the support of growers of tobacco, issued a proclamation demanding the cessation of all warehouse dealings in tobacco, to persist until prices should reach the average level of 20 cents a pound. South Carolina joined shortly after in this "tobacco holiday." At an election on November 7 the popular vote opposed the repeal of the Federal Eighteenth Amendment by 2½ to 1 and chose convention delegates committed to reject repeal as proposed by Congress.

OFFICERS. The chief officers of the State, serving in 1933, were: Governor, J. C. B. Ehringhaus; Secretary of State, Stacey W. Wade; Treasurer, C. M. Johnson; Auditor, Baxter Durham; Attorney General, Dennis G. Brummitt; Superintendent of Public Instruction, A. T. Allen.

Judiciary. Supreme Court: Chief Justice, Walter P. Stacy; Associate Justices, W. J. Adams, Heriot Clarkson, George W. Connon, W. J. Brogden.

NORTH CAROLINA, THE UNIVERSITY OF. A State institution for the higher education of men and, with restrictions as to admission, of women in Chapel Hill, N. C., founded in 1795. The enrollment in the autumn of 1933 was 2414 regular students, with 2250 in extension courses. In the regular group 2183 were men and 231 were women. There were 999 registered for the 1933 summer session. The faculty had 215 members. The endowment amounted to \$2,000,000, and the total budget for the year was \$1,316,458. The library

contained 265,000 volumes. President, Frank Porter Graham, M.A., LL.D., D.C.L., Litt.D.

NORTH CENTRAL, formerly NORTHWESTERN, COLLEGE. A coeducational institution of higher learning at Naperville, Ill., founded in 1861. In the autumn of 1933 there was an enrollment of 411 students, of whom 258 were men and 153 women. There were 36 members on the faculty. The productive funds of the college amounted to \$1,093,000, and the current income for the year was \$155,529. Gifts included a total of \$29,700 for endowment and permanent equipment. A new curriculum in pre-engineering subjects, covering the first two years of a general engineering course, was organized in September, 1933. The library contained 20,000 volumes. President, Edward Everett Rall, Ph.D.

NORTH DAKOTA. POPULATION. The population of the State on Apr. 1, 1930, according to the Fifteenth Census, was 680,845, as against 646,872 in 1920. Bismarck, the capital, had (1930) 11,090 inhabitants.

AGRICULTURE. The following table shows the acreage, production, and value of the principal crops for 1933 and 1932:

Crop	Year	Acreage	Prod. Bu.	Value
Wheat ...	1933	9,554,000	65,386,000	\$40,686,000
	1932	10,639,000	110,396,000	30,925,000
Hay (tame)	1933	1,281,000	919,000*	4,503,000
	1932	1,366,000	1,615,000*	6,480,000
Corn	1933	1,334,000	20,010,000	7,404,000
	1932	1,404,000	26,676,000	4,001,000
Barley ...	1933	1,830,000	18,300,000	5,673,000
	1932	2,376,000	40,392,000	4,847,000
Flaxseed ..	1933	430,000	1,677,000	2,465,000
	1932	826,000	3,221,000	2,609,000
Oats	1933	1,703,000	22,189,000	5,813,000
	1932	2,004,000	42,084,000	3,156,000
Potatoes ..	1933	140,000	8,400,000	3,612,000
	1932	161,000	9,338,000	1,681,000
Rye	1933	571,000	3,712,000	1,559,000
	1932	1,099,000	12,089,000	1,692,000

* Tons.

FINANCE. State expenditures in the year ended June 30, 1932, as reported by the U. S. Department of Commerce, were: for maintaining and operating governmental departments \$8,400,947 (of which \$1,122,976 was for local education); for operating and maintaining public-service enterprises, \$1,909,310; for interest on debt, \$2,142,396; for permanent improvements, \$3,849,153; total, \$16,301,806 (of which \$4,525,935 was for highways, \$1,239,411 being for maintenance and \$3,286,524 for construction). Revenues were \$15,381,260. Of these, property and special taxes furnished 18.6 per cent; departmental earnings and compensation to the State for officers' services, 11.1; sale of licenses, 20.8 (in which was included a gasoline sale tax that produced \$1,345,000). Funded debt outstanding on June 30, 1932, totaled \$41,347,700. Net of sinking-fund assets, the debt was \$903,573. On an assessed valuation of \$880,432,053 the State levied in the year ad valorem taxes of \$3,328,033.

LEGISLATION. The Legislature met in regular session on January 3. Mrs. Minnie D. Craig was made speaker of the House and was said to be the first woman to hold this position in the Legislature of any State in the Union.

No action was taken with regard to the proposed repeal of the Eighteenth Amendment to the Federal Constitution. A bill was passed to permit the sale, but not the manufacture, of beer containing 3.2 per cent of alcohol; sale was to be made through municipally conducted stores. The Legislature voted the State's ratification of the

Federal amendment for the restriction of child labor. It created a system of old-age pensions, providing \$150 a year to every needy person more than 65 years old who had inhabited the State for 20 years. A graduated sales tax was created, to become effective on July 1.

POLITICAL AND OTHER EVENTS. During the banking panic a proclamation was issued on March 4 closing banks and declaring a moratorium on the payment of debts. The beer law enacted by the Legislature was put into effect but gave dissatisfaction. A measure was accordingly initiated by petition, to substitute for the municipally run beer shops a system of licensing and taxing private vendors. This measure was carried at a special election on September 22; a proposed State sales tax was defeated. Governor Langer took strenuous measures on behalf of the State's debtors and farmers. On March 23, by proclamation, he forbade forced sales of premises occupied by the owners and of personal property used for agriculture. On October 16 he proclaimed an embargo on all shipments of wheat from the State, to continue until wheat should reach a satisfactory price. Railroads, opposing this order, sought to move wheat under consignment.

An area of grasshopper infestation, extending among some 13,000,000 acres of wheat land in seven States, included much of the agricultural land of North Dakota, according to an account published in December.

OFFICERS. The chief officers of the State, serving in 1933, were: Governor, William Langer; Lieutenant-Governor, O. H. Olson; Secretary of State, Robert Byrne; Treasurer, Alfred S. Dale; Auditor, Berta E. Baker; Attorney General, A. J. Gronna; Superintendent of Public Instruction, Arthur E. Thompson.

Judiciary. Supreme Court: Chief Justice, W. L. Nuesse; Associate Justices, Luther E. Birdzell, A. G. Burr, John Burke, A. M. Christianson.

NORTH DAKOTA, UNIVERSITY OF. A State institution of higher education at University Station, Grand Forks, N. D., founded in 1933. The enrollment for the autumn of 1933 was 1435, classified as follows: College of Liberal Arts, 446 men, 183 women; School of Commerce, 73 men, 12 women; School of Education, 82 men, 190 women; College of Engineering, 186 men; School of Law, 68 men, 9 women; School of Medicine, 67 men, 1 woman. Summer session 1933 enrollment, 288. The faculty numbered 120 (full-time teaching staff). The income for 1933 was derived as follows: State Appropriation, Maintenance, \$250,723; Land grant funds, \$32,000; Student fees, \$47,500; Income from dormitories, athletics, etc., \$35,600; Extension and Correspondence fees, \$4000; Miscellaneous local income, \$8000. Grounds, buildings, and equipment were valued at \$2,400,000. Value of gifts, 1933, \$11,000. The library contained 80,000 catalogued volumes. President, John C. West, Ed.D.

NORTH-EAST NEW GUINEA. See NEW GUINEA, TERRITORY OF.

NORTHERN RHODESIA. See RHODESIA.

NORTHERN TERRITORIES. See under GOLD COAST.

NORTHERN TERRITORY OF AUSTRALIA. A territory of the Commonwealth of Australia, occupying the north central part of the continent. Area, 523,620 square miles; population (Apr. 1, 1933 estimate), 4392 exclusive of aborigines. Darwin, the capital and principal port, had approximately 1000 inhabitants. The two ad-

ministrative divisions (North Australia and Central Australia) of the Northern Territory of Australia were abolished on June 12, 1931, when the *Northern Australia Act 1926* was repealed by the *Northern Territory Administration Act 1931*, and the whole placed under the control of an administrator, residing in Darwin, assisted by a deputy administrator, residing in Stuart (Alice Springs). The territory elects one member (who does not vote but may take part in the debates) to the House of Representatives at Canberra. Administrator in 1933, Lieut.-Col. R. H. Weddell; Deputy Administrator, V. G. Carrington.

NORTH RIVER PIERS, New York. See FOUNDATIONS; PORTS AND HARBORS.

NORTH-WESTERN ISLANDS. See NEW GUINEA.

NORTHWESTERN UNIVERSITY. A co-educational institution of higher learning in Evanston and Chicago, Ill., founded in 1851. It is composed of a college of liberal arts, a graduate school, and schools of engineering, commerce, journalism, music, education, and speech in Evanston; and schools of law, medicine, dentistry, commerce, and journalism in Chicago. For the autumn term of 1933 there was an enrollment of 5709 full-time and 4576 part-time students. In the 1933 summer session 2015 students were enrolled. The faculty included 710 persons of the rank of instructor or above. The endowment as of June 30, 1933, was \$23,000,000, yielding \$1,161,000 in income; the total income for the fiscal year was \$3,950,000. There was completed during 1932-33 construction of Deering Memorial Library, erected at a cost of \$1,250,000, and the George R. Thomas Auditorium, erected at a cost of \$300,000. In the various libraries of the university there were approximately 418,000 bound volumes and 200,000 pamphlets. President, Walter Dill Scott, Ph.D., LL.D.

NORTHWEST TERRITORY. A vast area in northern Canada, largely uninhabited and only partially explored, lying north and west of Hudson Bay and Strait, north of the Prairie Provinces and east of the Yukon Territory. Total area, 1,309,682 square miles (land, 1,258,217 square miles; water, 51,465 square miles). The total population at the census of 1931 was 9723. Most of the inhabitants were Eskimos and Indians. Furs were valued at \$999,203 in 1931-32 and numbered 341,922. The division of the territory into three provisional districts of Mackenzie, Keewatin, and Franklin, became effective on Jan. 1, 1920. They are administered from Ottawa, the capital of the Dominion, by a commissioner, deputy commissioner, and five councillors appointed by the Governor-General. Commissioner in 1933, H. H. Rowatt.

NORWAY. A constitutional monarchy of northern Europe. Capital, Oslo. Reigning king in 1933, Haakon VII, who was elected by the Storting Nov. 18, 1905.

AREA AND POPULATION. With a total area of 124,587 square miles (land area, 119,148 square miles), Norway had a population estimated in 1933 at 2,845,000 (2,814,194 at census of 1930). Of the total population, 28.4 per cent resided in urban communities in 1930. During 1931 there were 47,236 living births, 30,308 deaths, and 17,756 marriages; birth and death rates per 1000 inhabitants were 16.7 and 10.7, respectively. The chief cities, with their 1930 populations, are: Oslo, 253,125; Bergen, 98,303; Trondheim (Nidaros), 54,458; and Stavanger, 46,780. The school enroll-

ment in 1930-31 was: Elementary, 404,362; secondary, 32,435; university and academies, 5164.

PRODUCTION. Only 1,971,000 acres, or 2.6 per cent of the total area, was cultivable in 1932. Forests covered 24.2 per cent of the area and 72.2 per cent was unproductive. Crop yields in 1932 (thousands of units, bushels except as specified), with 1931 figures in parentheses, were: Wheat, 785 (592); rye, 527 (378); barley, 5578 (4207); oats, 13,282 (9494); potatoes, 38,029 (28,451); hay (metric tons), 2041 (2113); fodder roots (metric tons), 808 (625). Livestock in 1932 included 1,342,000 cattle, 1,736,000 sheep, 304,000 swine, and 179,000 horses. The agricultural indebtedness of Norway for the tax year 1932-33 was 1,192,262,000 crowns (crown equals \$0.2680 at par). The value of the fish catch in 1932 was 53,000,000 crowns (\$13,279,000), against 60,000,000 crowns (\$15,030,000) in 1933. The Norwegian whaling fleet produced about 1,280,000 barrels of oil in the 1932-33 season, or about 52 per cent of the total output.

The value of mineral production (1932) was estimated at 20,647,000 crowns; that of smelted metals, 87,385,000 crowns (\$18,648,386). Output of the chief minerals in 1931 was (in metric tons): Pyrites, 359,951; iron ore, 574,887; feldspar, 12,465; titanium ores, 5000; ferro alloys, 105,975; aluminum, 21,420 (19,500 in 1932); zinc, 39,472 (39,300 in 1932); fine silver (troy ounces), 308,647. The value of industrial production in 1932 increased by 15 per cent to 1,259,000,000 crowns, as compared with 1931, but was 15.4 per cent lower than in 1930. Production value of the paper industry was 211,000,000 crowns; foodstuffs, 301,000,000 crowns; textiles, 98,000,000 crowns; lumber, 72,000,000 crowns; chemical and electrochemical industries, 85,000,000 crowns. Leading manufactured products in 1931 were pig iron, 12,862 metric tons; mechanical wood pulp, 523,018 metric tons; chemical wood pulp, 142,237 metric tons; paper, 454,300,000 pounds; margarine, 104,432,000 pounds; beer, 13,829,000 gallons.

COMMERCE. Norway's imports in 1932 were valued at 690,376,000 crowns (\$124,268,000 at the average exchange rate), compared with 861,363,000 crowns (\$215,858,000) in 1931. Exports amounted to 560,924,000 crowns (\$100,966,000), against 459,759,000 crowns (\$113,974,000) in 1931. Iron and steel, coal, chemicals, and chemical products, mineral oils, and textile fabrics were the chief imports. The leading 1932 exports were: Wood pulp, \$13,854,000; fish in bulk, \$13,814,000; paper, \$6,777,000 (excluding newsprint, \$4,880,000); Norway salt-peter, \$6,458,000. The United Kingdom purchased 25.3 per cent of all Norway's exports in 1932; Germany, 12.1; Denmark and Sweden, 10, and the United States, 9 per cent. Imports came principally from the United Kingdom (21.5 per cent), Germany (21.3), Denmark and Sweden (13.4). Imports from United States (1933), \$7,112,014; exports, \$13,159,754.

FINANCE. The budget for the fiscal year ended June 30, 1932, closed with a deficit of 35,473,000 crowns (receipts, 361,631,000 crowns; expenditures, 397,104,000 crowns). In 1932-33 there was a deficit of 35,667,000 crowns (receipts, 350,376,000 crowns; expenditures, 386,043,000). Budget estimates for 1933-34 balanced at 374,400,000 crowns. The public debt on June 30, 1932, totaled 1,526,050,000 crowns (provisional), compared with 1,518,054,000 crowns on June 30, 1931.

COMMUNICATIONS. On June 30, 1932, there were 2406 miles of railway line (2177 miles of state

and 229 miles of private line). During 1931-32 they carried 18,297,000 passengers and 6,019,000 metric tons of freight, gross receipts totaling 67,566,000 crowns (\$14,223,000). Highways extended 23,343 miles. The Norwegian merchant marine on June 30, 1932, comprised 2001 steam and motor ships of 4,164,000 gross tons. The net tonnage of vessels entering Norwegian ports in 1932 was 4,205,000; cleared, 4,203,000.

GOVERNMENT. Executive power is vested in the King, who acts through a cabinet or council of state, and legislative power in the Parliament or Storting of 150 members, elected for three years by universal suffrage without distinction as to sex. When assembled, the Storting divides itself into the Lagting and Odelsting, comprising one-fourth and three-fourths of the membership of the Storting, respectively. The two sections function much as the upper and lower houses of bicameral parliaments. The Cabinet at the beginning of 1933 was headed by J. T. Hundseid (Agrarian).

HISTORY

HUNDSEID CABINET OVERTHROWN. The Cabinet formed by J. F. Hundseid (Agrarian) on Mar. 14, 1932, was forced to resign on Feb. 25, 1933, by a no-confidence vote in the Storting. The Liberals and Labor party united to defeat the government on the issue of a sales tax. A new ministry was formed on Mar. 2, 1933, by J. L. Mowinckel, a leader of the Radical party. Its programme called for the curtailment of military service, reduction in interest and sinking fund on the national debt, and a 10 per cent increase in the income tax.

THE LABOR VICTORY The Mowinckel Ministry, composed entirely of Radicals, remained in office for the remainder of the year although it controlled only a small group in the Storting and suffered a crushing defeat in the elections of Oct. 16, 1933. The elections resulted in a sweeping victory for the Norwegian Labor party, one of the most radical in Europe. By gaining 22 seats in the new Storting, it controlled 69 out of 150 representatives in that body. The standing of the parties in the new Storting, with their previous standing in parentheses, was: Labor, 69 (47); Conservative, 30 (41); Liberal, 24 (33); Agrarian, 23 (25); minor groups, 4 (4).

On the strength of their victory, the Labor leaders on October 26 demanded the immediate resignation of the government. The Premier replied that the government would not resign until it had been defeated by majority vote in the Storting. The Storting was not in session and would not convene until early in 1934. Lacking a majority in the new Storting, the Labor party was obliged to choose between forming a government with the toleration of the Liberals, and refusing power until they had won complete control of the government. Their campaign pledges, which they were expected to push when the Storting opened, called for the reduction of hours of labor to six hours a day, of bank interest to a 3 per cent maximum, and of farm indebtedness. They demanded the development of Norway's natural resources by a large public works programme, disarmament, the crushing of fascism, and restoration of labor's right to boycott employers.

The Labor leaders discerned a menace in the fast-growing National Union, a Fascist party founded by Major Quisling only five months previous to the election. Despite its late start, the

National Union polled nearly 28,000 votes, as contrasted with the 22,000 received by the Communist candidates. The total ballots cast numbered 1,241,000.

OTHER DEVELOPMENTS. Norway's claim to parts of the east coast of Greenland was rejected in favor of Denmark in a decision of the World Court issued at The Hague, Apr. 5, 1933. The Norwegian government immediately abolished the skeleton administrative system it had established in Greenland and assured Denmark that the relations of the two countries would continue to be friendly. See DENMARK under *History*; WORLD COURT. For background of the dispute see GREENLAND in 1931 and 1932 YEAR BOOKS. An important commercial treaty with Great Britain was concluded by the Norwegian government on May 15, 1933 (see GREAT BRITAIN under *History* for treaty provisions).

NORWEGIAN LITERATURE. See SCANDINAVIAN LITERATURE.

NOTRE DAME, UNIVERSITY OF. A Roman Catholic institution at Notre Dame, Ind., founded in 1842 for the higher education of men. The university consists of the colleges of arts and letters, science, engineering, law, and commerce. The enrollment in the summer session of 1933 was 663, of which number 515 were religious, sisters of religious communities also being permitted to attend the summer session. The enrollment for the first semester of 1933-34 was 2547. The faculty numbered 196. The endowment amounted to \$1,000,000, while the income for 1933-34, including student fees and departmental income, was \$1,218,413. The library contains 181,565 volumes. President, the Rev. Charles L. O'Donnell, C.S.C., Ph.D.

NOVA SCOTIA, nō'vā skō'shyā. The easternmost of the Maritime Provinces of Canada. Area, 21,068 square miles; population (1931 census), 512,846 (523,837 in 1921). Chief cities, with (1931 census) populations: Halifax, the capital, 59,275; Sydney, 23,089; Glace Bay, 20,706; Dartmouth, 9100; New Glasgow, 8858. In 1931, births numbered 11,615; deaths, 5968; marriages, 3394. There were 3231 departments operated in 1872 school buildings, with a total of 115,511 students enrolled for the year 1931. The Province has nine universities and colleges.

Agriculture is the chief occupation with fruit growing (chiefly apples) one of the important branches. The estimated total value of agricultural production for 1932 amounted to \$21,238,000 including: field crops harvested from 536,000 acres valued at \$10,206,000; dairy products, \$5,608,000; fruits and vegetables, \$2,222,000; poultry and eggs, \$1,007,000; fur farming, \$175,000; farm animals, \$1,909,000. Livestock (1932): horses, 42,640; cattle, 287,740; sheep, 155,650; swine, 53,370. Mineral production for 1932, including the small production from Prince Edward Island, was valued at \$16,234,882 (\$21,080,740 in 1931). The value of lumber and other sawmill products in 1931 was \$2,460,753.

In 1931 there were 1449 manufacturing establishments, with an invested capital of \$129,824,727, a total of 16,175 employees, and an output of \$70,679,503 of which \$37,391,253 represented the value added in process of production. The 1932 fish catch was valued at \$6,557,943 of which lobsters represented \$2,711,371; codfish, \$1,282,082; haddock, \$1,086,343. There are 14,682 miles of highways and 1420 miles of railway.

Revenue for 1931 amounted to \$8,104,601; ex-

penditure, \$8,509,436; public debt, \$60,325,613. Executive power is vested in a lieutenant-governor appointed by the Dominion government, and a legislative assembly of 38 members elected for five years by popular vote. The province sends 10 members to the Senate and 14 members to the House of Commons, of the Dominion Parliament at Ottawa. Lieutenant-Governor in 1933, W. H. Covert. As a result of the provincial election of Aug. 21, 1933 Angus L. MacDonald (Liberal) succeeded Gordon S. Harrington (Conservative) as Premier. See CANADA.

NOVELS. See FRENCH LITERATURE; GERMAN LITERATURE; LITERATURE, ENGLISH AND AMERICAN; SPANISH LITERATURE, ETC.

NYASALAND, nyá'sá-lánd, **PROTECTORATE.** A British protectorate in East Africa between Mozambique and Northern Rhodesia. Land area 37,596 square miles; population (1932), 1,502,283 of whom 1910 were Europeans and 1537 were Asiatics. The chief settlements are Zomba, the capital, with 3000 inhabitants; Blantyre, 6000; Limbe, Fort Johnston, Karonga, and Livingstonia. In 1931 there were 2965 native schools with an average attendance of 84,638 students. Coffee, tobacco, cotton, and tea are the main crops. Livestock (1931): goats, 225,129; cattle, 175,136; sheep, 94,396; pigs, 70,263; asses and mules, 220. For 1932, excluding specie and goods in transit, imports totaled £690,479; exports, £678,734; government revenue totaled, £530,931; expenditure, £505,800; public debt on Jan. 1, 1933, was £3,228,150. Governor and Commander-in-Chief in 1933, Sir H. W. Young.

OATS. The 1933 oats production in 33 countries reporting to the International Institute of Agriculture was estimated at 2,914,964,000 bu. as compared with 3,476,012,000 bu. produced in 1932. The acreage in these countries was approximately 5,000,000 acres or about 5 per cent below the acreage of the preceding year and of the five-year average for 1927-31. The production of the leading countries outside of the United States was estimated as follows: Germany 478,890,000 bu., Canada 330,769,000 bu., Poland 168,791,000 bu., and Czechoslovakia 108,655,000 bu. The Canadian yield was 20.5 per cent below the yield in 1932. For the Soviet Republics which have reported an average annual production of over a billion bu. no estimates for 1933 were available. Argentina estimated its 1933-34 production at 58,147,000 bu., a decrease of 16.4 per cent from the production of the preceding years.

As reported by the Department of Agriculture the oats crop of the United States in 1933 was 722,485,000 bu. or 42 per cent below the crop of 1,246,658,000 bu. in 1932 and the smallest since 1897. Since 1911 up to this year every crop exceeded a billion bushels. The acreage harvested in 1933, 36,541,000 acres, was 11.8 per cent below the acreage in 1932 and the smallest since 1910. The 1933 production data indicated an average yield of 19.8 bu. per acre as compared with 30.1 bu. in 1932 and the smallest on record but equaled in 1890. Both yield and acreage were reduced by a late and wet spring and by dry weather in parts of the northern Mississippi Valley. On the basis of the average farm price of 30.4 cents per bushel on Dec. 1, 1933, the value of the crop was \$219,520,000 while the much larger crop in 1932 at the corresponding price of 13.4 cents per bushel was valued only at \$167,333,000.

Production of oats was reported by all States and the yield estimates of the leading States were

as follows: Iowa, 134,618,000 bu., Minnesota 96,406,000 bu., Illinois 78,760,000 bu., Wisconsin 63,882,000 bu., and Missouri 32,634,000 bu. The acreages devoted to oats for grain production in these States were 6,119,000; 4,484,000; 4,039,000; 2,457,000; and 1,764,000 acres respectively. These States produced over 50 per cent of the country's crop and harvested nearly 50 per cent of the acreage.

For the fiscal year ended June 30, 1933, the United States exported 4,085,000 bu. of oats as grain and 22,963,000 pounds of oatmeal, including flaked and rolled oats, of which 13,478,000 pounds was put up in packages and the remainder put up in bags for shipment in bulk. Only 15,000 bu. of grain were imported during this fiscal period. Trading in oats futures on the grain-futures markets during this fiscal year amounted to 570,839,000 bu., or 49 per cent above the record low of 382,149,000 bu. during the preceding year. Several varieties of oats showing resistance to crown rust, recently introduced by the Department of Agriculture from Australia and South America, are used for the development of strains of winter oats for sections of the South where this disease limits the successful production of this crop.

OBERTHOFFER, ó'bér-hóf'ér, EMIL. An American orchestral conductor, died in San Diego, Calif., May 22, 1933. He was born near Munich, Germany, Aug. 10, 1867. He received his first instruction from his father, who was an excellent organist. His progress was so rapid that at 10 he was quite remarkable both as a violinist and as an organist. While studying at the Gymnasium he continued his musical education with Cyril Kistler (piano and composition). Later he went to Paris to study piano under Isidore Philipp. When he came to the United States in 1897 he settled in St. Paul as conductor of the Apollo Club. In 1901 he directed the Philharmonic Club, a choral organization, in Minneapolis, and immediately began to work for the organization and endowment of a permanent orchestra. His efforts resulted in the establishment in 1903 of the Minneapolis Symphony Orchestra, which under his direction came to be one of the foremost instrumental bodies in the United States, giving more than 200 concerts annually. On his resignation in 1923 he was succeeded as conductor by Henri Vergruggen. In addition, Oberthoffer held for many years the chair of music at the University of Minnesota, and served as guest conductor of the Los Angeles Philharmonic, San Francisco Symphony, St. Louis Symphony, and Detroit Symphony orchestras.

OBERLIN COLLEGE. A nonsectarian institution for the higher education of men and women in Oberlin, Ohio, founded in 1833. The registration for the first semester of 1933-34 was 1615, while that for the summer session of 1933 was 138. The faculty had 196 members in 1932-33. The productive funds of the institution as of Aug. 31, 1933 amounted to \$18,216,031, and the income for the year was \$1,287,434. The library contained 353,413 bound and 215,338 unbound volumes. President, Ernest Hatch Wilkins, Ph.D., Litt.D., LL.D.

OBITUARY RECORD OF THE YEAR. See NECROLOGY.

O'BRIEN, THOMAS JAMES. An American lawyer and diplomat, died in Grand Rapids, Mich., May 19, 1933. He was born in Jackson, Mich., July 30, 1842, and after his graduation in law

from the University of Michigan in 1865 began his practice at Marshall, Mich. In 1871 he removed to Grand Rapids where for almost 35 years he served as general counsel to the Grand Rapids and Indiana Railway. He was delegate-at-large to the Republican National Conventions of 1896 and 1904.

Mr. O'Brien's diplomatic career began in 1905 on his appointment as Minister to Denmark. The action which he took at this time resulted in the United States' purchasing the Virgin Islands in 1917 as a naval base. On his transfer in 1907 to the embassy in Tokyo he successfully arranged the "gentlemen's agreement" by which the Japanese government gave an oral assurance that if of itself would restrict the emigration of Japanese laborers to the United States, and negotiated a treaty which protected American commercial interests in Japan and Korea. As ambassador to Italy from 1911 to 1913, he effectively paved the way for peace between Italy and Turkey at the close of the war over Italy's annexation of Tripoli. Turkey pledged herself to withdraw her troops from Tripoli, while Italy agreed to restore to Turkey the Aegean islands occupied by Italian troops and to pay that part of the Ottoman public debt guaranteed by the revenue of Tripoli and Cyrenaica.

OCEANIA, ō'shē-ān'ī-ā, FRENCH ESTABLISHMENTS IN. A French colonial possession consisting of groups of small islands scattered throughout a wide area of the southern Pacific. The total area of the Establishments is estimated at 1520 square miles; total population (1931 census), 39,920 of whom 29,308 were natives Papeete, the capital on the island of Tahiti, had 7061 inhabitants. The principal island is Tahiti which forms a part of the Society Islands. The other groups are the Marquesas Islands, Tuamotu Islands, Leeward Islands (Iles sous le Vent), the Gambier, Tubuai, and Rapa groups, and a number of outlying islands. The principal exports were copra, mother-of-pearl, vanilla, coconuts, and phosphates. Governor in 1933, Leonce Jore.

OCEANOGRAPHY. See EXPLORATION.

ODENBACH, FREDERICK LOUIS. An American educator and meteorologist, died in Cleveland, O., Mar. 15, 1933. He was born in Rochester, N. Y., Oct. 21, 1857. On his graduation from Canisius College, Buffalo, N. Y., in 1881, he joined the Society of Jesus and twelve years later accepted the chair of physics and chemistry at the College of St. Ignatius (later the John Carroll University) in Cleveland. After 1903 he taught astronomy and meteorology at that institution and served as director of the meteorological observatory which he had founded in 1895. He invented the ceraunograph, an instrument for indicating or recording lightning discharges by means of the Hertzian waves they produce, and devised an electrical seismograph. In the astronomical field Father Odenbach had the distinction of being the sixth observer of the Helvetian halo, Dec. 6, 1901. He made several predictions as to the changing topography of the Great Lakes basin in years to come.

OGLETHORPE UNIVERSITY. An institution for higher education, founded in 1913. A university of the same name was in existence in Atlanta, Ga., from 1835 to 1872, being recognized as one of the famous educational institutions of the South. The enrollment for the autumn term of 1933 was 525; 165 persons attended the 1933 summer session.

The faculty numbered 31. The income for the year amounted to \$120,000. The library contained 50,000 volumes. President, Thornwell Jacobs, LL.D., Litt.D.

OHIO. POPULATION. The population of the State on Apr. 1, 1930, according to the Fifteenth Census, was 6,646,697, as against 5,759,394 in 1920. Cleveland, the most populous city, had (1930) 900,429 inhabitants; Cincinnati, 451,160; Toledo, 290,718; Akron, 255,040; Columbus, the capital, 290,564.

AGRICULTURE. The following table shows the acreage, production, and value of the principal crops for 1933 and 1932:

Crop	Year	Acreage	Prod. Bu.	Value
Corn	1933	3,364,000	112,694,000	\$39,443,000
	1932	3,433,000	121,872,000	23,156,000
	1933	2,468,000	2,378,000 ^a	15,933,000
Hay (tame)	1932	2,383,000	2,496,000 ^a	11,731,000
	1933	1,833,000	34,812,000	26,455,000
Wheat	1932	1,585,000	32,456,000	13,305,000
	1933	1,273,000	26,096,000	8,090,000
Oats	1932	1,591,000	45,344,000	6,802,000
	1933	112,000	8,064,000	7,258,000
Potatoes	1932	117,000	11,583,000	4,981,000
	1933	31,300	24,945,000 ^b	2,017,000
Tobacco	1932	45,100	32,981,000 ^b	2,264,000
	1933	...	4,380,000	3,723,000
Apples	1932	...	5,145,000	3,344,000

^a Tons. ^b Pounds

MINERAL PRODUCTION. Labor troubles in the coal mines supervened in 1932 upon industrial depression, and for some months, beginning with April 1, many of the coal mines were idle. The production of coal declined by 34.6 per cent, in consequence, to 13,350,000 net tons for 1932, from 20,410,995 for 1931. Coke production, also severely diminished, attained 2,346,686 net tons (1932), in value \$10,388,072. Of 58 blast furnaces, the number in blast during 1932 was 13 at mid-year and 12 on December 31. There were produced 2,387,028 gross tons of pig iron (1932), as against 5,036,305 for 1931. The yield of petroleum, 4,597,000 barrels for 1932, was 14 per cent below that for 1931. Ohio continued to lead in the production of lime, but the total sales fell to 477,000 short tons (1932), from 656,441 (1931), as to quantity, and to an average value of \$5.20 a ton, from \$6.10 a ton. Producers of salt sold or used 1,196,993 short tons (1932), as against 1,398,000 (1931); in value, \$2,249,613 (1932), and \$2,526,952 (1931).

EDUCATION. The system of public schools was affected during 1933 by a general tendency among the districts to shorten the academic year, and was further impaired by deficiencies in the amount of equipment and by reductions in teachers' salaries, prejudicial to maintaining the normal teaching force. The failure of the ordinary main source of revenue for the schools, by reason of the impoverishment of taxpayers, was accountable for these developments. Legislation was enacted which, according to a report in the *Journal of the National Education Association*, guaranteed State support for the schools. On the other hand, the vote at the popular election of November 7 adopted a proposal that lowered the top limit of the rate of taxation in the school districts to 10 mills on the dollar, from 15.

The number of persons of school age in the State, for the academic year 1932-33, was reckoned as 1,560,284. There were enrolled in the public schools 1,306,565 pupils. Of these, 845,441 were in common schools or elementary grades; in high schools, 333,747. The year's current expenditure

for public school education was estimated at \$84,000,000, which was some \$17,000,000 less than the corresponding total for the year before.

CHARITIES AND CORRECTIONS. The Department of Public Welfare, which had become operative in 1921, continued in 1933 to exercise the strongly centralized State direction of activities for the care and custody of persons. It had at its head a director (John McSweeney); its functions included the direction of 22 State institutions with an aggregate population of 35,639 (Dec. 1, 1933), administration of a pay-patient law; examination and classification of prisoners; criminal identification and investigation; the operation of prison industries supplying public departments and institutions; duties in the prevention of blindness and the occupation of the adult blind; through a board of parole and a division of probation and parole, the granting of paroles from penal and reformatory institutions, the supervision of the paroled, and the encouragement of adult probation among the counties; through a division of charities, extensive duties as to safeguarding unprotected children, inspecting county jails and workhouses, licensing the agencies for the care of children, and hospitalizing child cripples.

State institutions controlled by the department were: for the mentally afflicted, State hospitals at Athens, Cleveland, Columbus, Dayton, Lima, Cincinnati, Toledo, and Massillon; Ohio Hospital for Epileptics, Gallipolis; institutions for the feeble-minded at Columbus, Orient, and Apple Creek; Ohio State Sanatorium, Mount Vernon; Ohio Soldiers' and Sailors' Home, Sandusky; Madison Home, Madison; Boys' Industrial School, Lancaster; Girls' Industrial School, Delaware; Ohio Penitentiary, Columbus; Prison Farm, London; Ohio State Reformatory, Mansfield; Ohio Reformatory for Women, Marysville; Bureau of Juvenile Research, Columbus.

LEGISLATION. A regular session of the Legislature convened on January 2. It voted the State's ratification of the proposed amendment to the Federal Constitution, for doing away with child labor. It created a State convention, to be composed of 52 delegates at large elected by popular vote on November 7, to act for the State on the proposed repeal of the Federal Eighteenth Amendment. The "lame-duck" amendment to the Federal Constitution (the Twentieth Amendment) received Ohio's legislative ratification.

In the banking panic of February and March authority was given the State superintendent of banks to restrict withdrawals of deposits from members of the State banking system and to authorize 60-day suspensions without receivership for affected banks. Provision was made for banks in the State system, after the nation-wide closure, to reopen either under license or under conservators, in a manner similar to the reopening of National banks under Federal law.

With regard to assisting the needy part of the population the Legislature failed to carry out proposals of Governor White for taxation to raise the necessary means. It rejected two successive bills for a general tax on commercial sales, which formed the main part of the Governor's plan for revenue. Taxing subdivisions of the State were empowered to issue, with approval of the State tax commission, non-interest-bearing negotiable 5-year notes in anticipation of receipts through payment of delinquent taxes; it was expected that these notes would be tendered

in part payment of public salaries. Horse-race betting under the pari-mutuel system was legalized.

A special session dealt in December with the situation created by the repeal of Federal prohibition. By an act of December 23 a State board of liquor control was created and was authorized to run 250 shops for the retailing of intoxicating liquors, in packages; restaurants, hotels, and clubs were to be licensed to serve alcoholic drinks; prices, sales, and manufacture were to be regulated by the board.

POLITICAL AND OTHER EVENTS. As the banking panic spread at the end of February great numbers of the State banks, without warrant of law, declared of their own motion restrictions on withdrawals, in advance of the passage of the State law authorizing the superintendent of banks to impose such restrictions. Upon the general reopening of banks after the Federal proclamation of closure, it was found needful to liquidate some large Ohio institutions, including the Union Trust Company and the Guardian Trust Company of Cleveland. Accordingly the First National Bank was created in Cleveland, with the aid of a subscription of \$5,000,000 from the Reconstruction Finance Corporation to its preferred stock; it made available in April 20 per cent of the \$66,000,000 of deposits tied up in the Guardian Trust Company.

Vote on Repeal. The supporters of Federal prohibition fought in the State courts the Legislature's provision for election of a State convention on the repeal of the Eighteenth Amendment, demanding the right to hold a popular referendum on whether the convention should be held. They lost their case in the State supreme court. The election of delegates was held on November 7, and delegates favorable to the repeal of the Federal amendment were chosen, by a 3-to-1 popular vote. Repeal of State constitutional prohibition was also voted November 7. A popular vote also approved a proposed old-age pension, despite alleged lack of funds to meet the cost of the payments. The State's repealing convention met on December 5 and declared the State's adoption of the proposed superseding amendment (the later Twenty-First Amendment) doing away with the Eighteenth.

The failure of the Legislature to make adequate provision for the unusual financial needs in the State compelled Governor White to appeal in July to Federal Emergency Relief Administrator Hopkins for \$4,000,000 to make good the lack of means to relieve the destitute. Hopkins declared on July 20 that he would not do this, as the Legislature had adjourned without making adequate provision for the State's share of relief. It was stated in September that many of the State's poorer school districts, lacking sufficient State aid, would have to close school long before the end of the school year, some of them before Christmas.

The law taxing intangibles was held invalid, in some of its features, by the State supreme court in February.

OFFICERS. The chief officers of the State, serving in 1933, were: Governor, George White; Lieutenant-Governor, Charles Sawyer; Secretary of State, George S. Myers; Treasurer, Harry S. Day; Auditor, Joseph Tracy; Attorney General, John W. Brickner; Director of Education, B. O. Skinner.

Judiciary. Supreme Court: Chief Justice, Carl

V. Weygandt; Associate Judges, Edward S. Matthias, Thomas A. Jones, Howard L. Bevis, Will P. Stephenson, Florence E. Allen, Charles Zimmerman.

OHIO NORTHERN UNIVERSITY. An institution for the higher education of men and women at Ada, Ohio, founded in 1871, and under the direction of the Methodist Episcopal Church. The enrollment for the fall quarter of 1933 was 472. The 1933 summer quarter had an attendance of 242. The faculty consisted of 34 members. The productive endowment of the institution, as of June 30, 1933, amounted to \$471,453, and the income for 1932-33 was \$151,605. The main library contained 16,900 volumes. During the year engineering shops and Turner Hall, a dormitory for women, were added to the campus buildings. President, Robert Williams, A.M., D.D., LL.D.

OHIO STATE UNIVERSITY. A State institution for the higher education of men and women in Columbus, Ohio, founded in 1870. The enrollment for the autumn term of 1933 totaled 9448, distributed as follows: Graduate school, 932; agriculture, 779; applied optics, 78; arts and sciences, 1865; arts-education, 78; commerce and administration, 1006; dentistry, 196; education, 1606; engineering, 1197; law, 243; medicine, 356; nursing, 48; pharmacy, 147; veterinary medicine, 220. There were in addition 3382 students registered in the summer quarter of 1933. The faculty numbered 900. The endowment amounted to \$1,168,568. The total income for the year was \$6,423,212, while the total expenditures were \$6,391,698. The buildings and equipment were valued at \$22,254,798. The library contained 407,000 volumes. President George W. Rightmire, LL.D.

OHIO UNIVERSITY. A State university for the higher education of men and women, founded at Athens, Ohio, in 1804. The student enrollment for the first semester of 1933 was 2265, of whom 1198 were in the college of arts and sciences, 975 in the college of education, and 92 in the campus evening and Saturday classes. The enrollment for the 1933 summer session was 1077, of whom 257 were in the college of arts and sciences and 820 in the college of education. The enrollment in the 1933 post-summer session of three weeks was 185. The income for 1932 was \$1,258,337. The faculty numbered 220. The library contained more than 88,000 bound volumes. President, Elmer Burritt Bryan, LL.D., L.H.D.

OHIO WESLEYAN UNIVERSITY. An institution for the higher education of men and women in Delaware, O., under the control of the Methodist Episcopal Church, founded in 1844. For the autumn semester of 1933 the total enrollment was 1321. The faculty numbered 116. The productive endowment of the university amounted to \$3,545,000 and the income for the year 1932-33 for educational enterprises was \$459,486 and for auxiliary enterprises \$275,554. The library contained 141,248 volumes. President, Edmund D. Soper, D.D., LL.D.

OIL. See PETROLEUM.

OIL CIRCUIT BREAKERS. See ELECTRIC TRANSMISSION AND DISTRIBUTION.

OKLAHOMA. POPULATION. The population of the State on Apr. 1, 1930, according to the Fifteenth Census, was 2,396,040, as against 2,028,283 in 1920. Oklahoma City, the capital, had (1930) 185,389 inhabitants.

AGRICULTURE. The following table shows the

acreage, production, and value of the principal crops for 1933 and 1932:

Crop	Year	Acreage	Prod. Bu.	Value
Cotton	1933	2,932,000	1,285,000*	\$56,540,000
	1932	3,108,000	1,084,000*	28,726,000
Wheat	1933	3,093,000	33,095,000	22,505,000
	1932	3,966,000	43,626,000	12,215,000
Corn	1933	2,598,000	19,485,000	9,158,000
	1932	3,288,000	65,780,000	11,837,000
Hay (tame)	1933	449,000	591,000*	4,137,000
	1932	510,000	746,000*	8,730,000
Oats	1933	1,161,000	21,478,000	7,303,000
	1932	1,334,000	24,012,000	3,122,000
Grain sorghum	1933	1,400,000	11,900,000	4,998,000
	1932	1,602,000	15,219,000	2,739,000
Potatoes	1933	36,000	2,520,000	2,268,000
	1932	42,000	3,108,000	1,647,000
Sweet potatoes	1933	18,000	1,404,000	842,000
	1932	22,000	1,584,000	634,000

* Bales. † Tons.

MINERAL PRODUCTION. There were produced, in 1932, 152,621,000 barrels of petroleum. This total fell short of that for 1931 by about 15 per cent. The producers, however, sold from storage in 1932 some 20,000,000 barrels that had previously been set aside out of excessive production at lower prices. The prices obtained for petroleum in the State in 1932 were some 30 cents a barrel higher than those for the greater part of 1931. The reduced quantity of the output was attributable to the more consistent working of the system of proration enforced by the State corporation commission. A new field of apparent importance was opened near Perry, in Noble County. Mines in the State shipped, in 1932, material having a zinc content of 60,053 short tons, in value \$3,603,180; also a lead content of 10,554 short tons, in value \$633,240.

EDUCATION. The ability of the State's public schools to carry on in the face of a partial collapse of receipts from the ordinary taxation for this purpose was reinforced by the Legislature's enactment of a State tax of 1 per cent on sales and of alterations in the State's income tax providing that three-fourths of its proceeds go to the schools' account. It was designed that the receipts thus secured should take the place of ad-valorem taxes, of which the payment had become difficult.

The number of persons of school age in the State in January, 1933, was reckoned as 765,546, from 6 to 21 years old. There were enrolled in the public schools, in 1932, 673,297 pupils. Of these, 552,226 were in common schools or elementary grades; in high schools, 113,421. The year's expenditures for education approximated \$22,000,000. Salaries of teachers were estimated to average about 24 per cent less than for the year before.

CHARITIES. AND CORRECTIONS. The central authority of the State over institutions for the care and custody of persons, under the system that obtained in 1933, rested in a Commissioner of Charities and Corrections. His functions were mainly those of inspection and of investigation, on complaint, of the institutions; he also appeared in court in proceedings to name guardians for dependent children in the event of their falling heirs to property or legacies. His office was established by the State constitution, which provided that it be elective. Of the 553 institutions within his jurisdiction, the greater part were local or private; these included 254 city and town jails, 77 county jails, and 135 hospitals.

The 20 State institutions were conducted by superintendents or by wardens; they were: for the insane, Central State Hospital at Norman

(2498 inmates in 1932), Eastern Oklahoma Hospital at Vinita (2041), and Western Oklahoma Hospital at Supply (1387); State Institution for the Feeble-Minded, Enid (764); State schools for the deaf, at Sulphur (394), for the blind, at Muskogee (152), and the Deaf, Blind, and Orphans' Institute, at Taft (colored, 347); for the sufferers from tuberculosis, three sanitariums, at Talihina (241), Clinton (360), and Sulphur (soldiers, 726); Oklahoma Confederate Home, Ardmore (93); for juvenile delinquents State Industrial School for Girls, at Tecumseh (274); State Training School for Negro Girls, at Taft (62), State Training School for Boys, at Pauls Valley (235), and State Training School for Negro Boys, at Boley (120); for prisoners, the Oklahoma State Reformatory, at Granite (246), and Oklahoma State Penitentiary, at McAlester (3402); for white orphans, West Oklahoma Home, Helena (246), and Whitaker State Home, Pryor (307); State University Hospital, Oklahoma City (6787).

LEGISLATION. A regular legislative session convened on January 3. Dealing with the State banks affected by the nation-wide banking panic it authorized the State bank commissioner to close imperiled State banking institutions in emergency and to reopen them on application of 85 per cent of their depositors. The insurance commissioner was empowered to act as receiver for insolvent insurance companies. A further banking measure gave the bank commissioner power to limit the proportion of deposits that might be drawn from a State bank.

With regard to prohibition, there was created a State convention of 16 delegates (two from each Federal Representative district), to be chosen at large by popular vote on a date after December 5, who were to pronounce for the State on the proposed repeal of the Federal Eighteenth Amendment. The sale of beer of alcoholic strength of 3.2 per cent was made lawful under a system providing revenue for the State from taxes on the resulting traffic.

Troubled by an accumulated deficit of \$13,000,000 in State revenues, the Legislature enacted a tax of 2 per cent on merchants' sales, with exception of some articles. A "mortgage moratorium" measure was passed, to put off foreclosures for two years. A form of cooperative saving and loan associations under the name of credit unions was authorized and such bodies were put under supervision of the bank commissioner. A system of State compensation-insurance was created, to be handled by the State industrial commission. The issue of \$15,000,000 of State warrants, bearing $4\frac{1}{2}$ per cent interest and repayable within six years, to finance a deficit of the general revenue, was authorized. The cost of automobile licenses was reduced, by act, for those who had not yet paid.

The sterilization of habitual criminals in the State prison and reformatory was authorized, subject to approval of the Board of Affairs. The release of natural gas from oil wells in excess of 20 M cu. ft. to the barrel of petroleum was prohibited.

POLITICAL AND OTHER EVENTS. During the banking panic, until all banks had been closed by Federal authority, the banks of the State were saved from depletion through the withdrawal of deposits by the proclamation of a series of legal holidays. Some communities issued local scrip in order to supplement scarce money while all

banks were closed, after March 5. At an election on July 11, held as the Legislature had required, at the expense of the sponsors of plans to legalize beer, a measure to permit the sale of 3.2-per cent beer, subject to State taxation, submitted by the Legislature to the popular vote, was adopted. The resulting taxes, later in the year, brought substantial improvement of the State's revenue. Governor Murray issued an order to sheriffs late in February directing them not to dispossess owners of real estate nor to make sales of property under foreclosure before March 15; thus was provided time in which the Legislature passed its measure declaring a moratorium on foreclosures. The moratorium law, contested in the courts, was invalidated in some of its chief features by decisions of the State supreme court, rendered on October 17; however, the court upheld the provision that judges might, at their discretion, extend foreclosure proceedings for two years before awarding final judgment. An act of the Legislature, requiring reduction of the salaries of constitutional officers of the State, was declared invalid on this point, in a decision of the State supreme court, rendered in September.

The State's authority in fixing the allowed rate of production of petroleum was subordinated to the Federal system of regulation applied by Secretary of the Interior Ickes; the State corporation commission ordered on September 7 a reduction of the State's allowable daily total of production by 61,500 barrels, to conform with the Federal allowance for Oklahoma's production.

OFFICERS. The chief officers of the State, serving in 1933, were: Governor, William H. Murray; Lieutenant-Governor, Robert Burns; Auditor, Frank C. Carter; Attorney General, J. Berry King; Treasurer, Ray O. Weems; Superintendent of Public Instruction, John Vaughan.

Judiciary. Supreme Court: Chief Justice, Fletcher Riley; Associate Justices, Wayne W. Bayless, Earl Welch, James B. Cullison, Charles Swindall, Monroe Osborn, Edwin R. McNeill, Thomas G. Andrews, and Orel Busby.

OKLAHOMA, UNIVERSITY OF. A State institution for the higher education of men and women in Norman, Okla., founded in 1890. The enrollment for the autumn of 1933 totaled 5233, of whom 3394 were men and 1839 women. For the summer session of 1933, 1518 students were registered. There were 294 faculty members. The productive funds of the university amounted to \$3,200,000 and the income for 1933-34 was \$1,389,000 (including two hospitals operated by school of medicine). The library contained 148,000 volumes. President, William Bennett Bizzell, Ph.D., LL.D.

OLD AGE PENSIONS. In 1933, 13 new jurisdictions were added to the roll of those carrying old age security laws on their statute books, making the total jurisdictions in the country, 29. The 13 jurisdictions which enacted such legislation during the year were Arizona, Arkansas, Colorado, Indiana, Maine, Michigan, Nebraska, North Dakota, Ohio, Oregon, Pennsylvania, Washington, and the Territory of Hawaii. All the laws were mandatory, in accordance with best recent practice. The laws of the seven States of Arizona, Arkansas, Colorado, Indiana, Maine, Michigan, and North Dakota provided for State aid in the financing of pension systems. In the jurisdictions of Nebraska, Oregon, Washington, and Hawaii, the whole cost was placed upon the county; how-

ever, the Washington legislature later in the session provided for State assistance by passing a law creating an old age pension fund out of the proceeds of a tax on horse racing. In Colorado, Hawaii, Maine, Nebraska, and Washington the minimum age for eligibility was 65; in North Dakota, it was 68; and in Arizona, Arkansas, Indiana, Michigan, and Oregon, it was 70. The required period of State residence varied from 35 years in Arizona to 10 years in Michigan, the most general requirement being 15 years State residence and 15 years citizenship. In all of the States except Maine and Michigan the county commissioners were made the administrators of the old age security laws. In Maine, town and city boards, under the supervision of the department of health and welfare, were placed in charge while in Michigan, administration was turned over to the county boards operating in conjunction with the State welfare department.

The Colorado old age pension law, which had given judicial power to the county commissioners and executive power to the county judges, had been declared unconstitutional by the Colorado supreme court in 1932 as being an improper delegation of power. In view of the popular demand in the State for the existence of such a law, however, the Colorado legislature in 1933 reenacted an old age pension law after first having remedied the constitutional defects of the earlier law. In Minnesota an amendment was passed which made the old age pension law mandatory; with the proviso, however, that a county might discontinue the system after a year's trial by referendum vote of the electorate. It should be noted that the Arkansas law, which was passed in 1933, was declared unconstitutional by the State supreme court because of the inclusion of a provision for a 1 per cent tax in the State and county expenditures in order to finance the pension fund.

On election day the voters of Ohio, in a State wide referendum and by a vote of nearly 3 to 1, approved a pension law for the protection of citizens indigent in their old age. This law was endorsed by a vote of 1,388,860 as against 520,221 in the negative and provided for mandatory State aid to needy persons 65 years and over who had resided in Ohio and had been citizens of the United States for 15 years. County residence for one year was also required. The applicants for pensions were not to possess property valued at more than \$3000. The pensions were not to exceed \$25 a month. A division of aid for the aged in the State department of welfare was set up to administer the law through county boards of commissioners who were to receive no compensation. The law requires that "the General Assembly shall provide necessary and adequate funds for the carrying out of the provisions of this act."

Another triumph for the scientific care of aged persons was the elimination of the poor house in the State of Delaware. This State, in 1931, adopted an old age pension system and two years later, that is, in 1933, closed its three county poor houses and opened its new State welfare home for those who needed institutional care.

At the end of March reports from the New York State Department of Social Welfare indicated that 53,185 persons were receiving assistance. The total number of applications filed up to that date in New York State was 107,030. The average allowance for March throughout the

State amounted to \$22.74 per month while New York City paid an average of \$27.33 to its 24,248 pensioners. New York State expended \$1,209,489 for the support of the aged during March, of which \$662,837 was spent in New York City. The California Department of Social Welfare reported that at the end of March the number of persons assisted under the State's old age security law was 13,024. The average allowance for the month was \$21.92 and the State's share of the pension expenses amounted to \$142,732.

The American Association for Old Age Security, which almost single handed had led the fight in the United States for the writing of old age security laws on the statute books of the States, in May, having passed the half way milestone, decided to amplify its activities, and to fight for the enactment of legislation providing security not only against old age but against all other forms of social disabilities. When the organization had been formed in 1927 there were only four States with feeble pension laws granting aid to less than 1000 persons. In 1933, six years later, 28 jurisdictions had adopted old age security legislation and over 100,000 persons were already in receipt of benefits under these laws. In May, changing its name to American Association for Social Security, this organization announced its intention to "strike out for a comprehensive system of social insurance covering all the important risks which make life a nightmare of uncertainty to the American worker—the risks of unemployment, sickness, and old age dependency." The organization was to continue to function under the leadership of Bishop Francis J. McConnell, Executive Secretary Abraham Epstein, Treasurer Nicholas Kelley, and the other prominent leaders who have helped to awaken America to the crisis of indigent old age. In the same month there was published Mr. Epstein's comprehensive survey of the problem of social insurance under the title *Insecurity—A Challenge to America*. Mr. Epstein's book is a result of three years of investigation in the United States and abroad and is the most complete study available of the problem of social insurance in all its various phases. Among the chapters are the following: The Specter of Insecurity, The Need for Social Insurance, Unemployment and Its Causes, Nostrums and Antidotes for Unemployment, Insurance Against Sickness and Invalidism, Insecurity in Old Age, Insurance Against Accidents, and Subsidies for Mothers and Children. The book carries a foreword by Miss Frances Perkins, Secretary of Labor.

According to Mr. Warren J. Vinton, writing in *Social Security* for July-August, 1933, 115,000 aged Americans were aided during 1932 under the provisions of old age security laws in 13 States. The year 1932 opened with 74,141 pensioners and during the succeeding 12 months 40,437 new applications for pensions were approved, making a total of 114,578 aged persons who received aid at one time or another during the year. A total of 13,619 names were dropped from the lists mostly on account of death with the result that the end of the year found 100,959 pensioners on the rolls. The number of pensioners per 1000 population in the pension States and counties amounted to 3.33 at the end of 1932. This number varied from 6.56 in Delaware to 4.31 in New York, 4.01 in Massachusetts, 3.45 in Idaho, and 3.30 in Utah; the rest of the States

had rates below 3.00 per thousand. The nation wide average of pensions per month decreased from \$24.68 in 1931 to \$22.35 at the end of 1932. The total amount spent on old age security in all the pension States during 1932 was \$25,094,986, an increase of \$9,203,023 over 1931. New York paid out \$15,454,308, Massachusetts, \$4,469,520, and California, \$3,057,327. According to Mr. Vinton, had it been necessary to care for all the old age pensioners in the old fashioned poor houses the total costs based on the various State figures would have amounted to \$47,300,000 instead of only \$25,094,986. Mr. Vinton made a startling comparison by pointing out that a single modern battleship costs more than the \$25,094,986 expended in 1932, which brought security to nearly 115,000 destitute old people. Old age pensions were responsible for only a negligible portion of the taxation levied on property. In California, Massachusetts, and New York, for example, only the county share was raised by a general property tax. The year's cost of old age pensions per \$1000 of assessed property amounted to only 17.3 cents in California, 41.2 cents in Massachusetts, and 26.5 cents in New York.

CANADA. Old age pension legislation was adopted in the provinces of Prince Edward Island and Nova Scotia during the year. Enabling acts had been passed in both provinces in 1931. New Brunswick has already enacted the necessary legislation but has not yet put it into effect; while Quebec is the only province in the Dominion not yet to cope with the problem of indigent old age. In the five provinces in which such laws were in operation in 1932, a total of 70,516 aged persons were receiving protection. The largest proportion, 42,315, was from Ontario where \$25,729,215 had been expended since the inception of the system on Nov. 1, 1929. In Canada the federal government assumed 75 per cent of the cost, the rest being shared by the provinces and municipalities. Pensions in the dominion averaged in the neighborhood of \$20 a month.

GREAT BRITAIN. During the year 1932-33 the English Ministry of Health, covering England and Wales, and the Scottish Department of Health, covering Scotland, in their annual reports indicated that 687,017 persons between the ages of 65 and 70 were receiving old age pensions at the end of the year. In addition, 728,318 persons over 70 were receiving old age pensions in right of insurance at the end of the year. Also 1,028,623 widows, dependent children, and orphans were receiving pensions. The widows, dependent children, and orphans and the aged persons between 65 and 70 were receiving pensions as a result of contributions made to the various social service funds. During the year 1932-33 the following sums were paid in widows', orphans', and old age contributory pensions in England, Wales, and Scotland (figures are converted into United States currency on the basis of pound equals \$3.43): England, \$113,032,220, of which \$51,271,640 were for old age pensions at age of 65 to 70; Wales, \$8,039,920, of which \$3,375,120 were for old age pensions at age of 65 to 70; Scotland, \$11,046,959, of which \$4,737,866 were for old age pensions at age of 65 to 70.

OLYMPICS. There was an unusual amount of discussion in 1933 about the Olympic games, scheduled for Berlin in 1936. Berlin was selected as the 1936 city after the 1932 games, the second time that the German capital had been chosen.

The 1916 games, cancelled by the Great War, were originally slated for Berlin.

In 1933 the governing bodies of the other nations of the world took cognizance of Adolf Hitler's programme of discrimination against the Jews, which programme entered into the athletic field. In the fall the Amateur Athletic Union of the United States, meeting in Pittsburgh, went on record as in favor of holding the event in some other city of the world if the German authorities continued to discriminate against Jewish athletes and not to allow the German Jewish athletes equal chance to practice. One week later the American Olympic Committee, meeting in Washington, upheld a resolution of the same type. This latter resolution, supplementing the A.A.U. recommendation, carried the weight of approval of all the amateur athletic bodies in the United States, and caused Hitler to issue an edict in which he declared that plans were going ahead for the 1936 games in Berlin and that no discrimination would be practiced.

OMAN. See under ARABIA.

ONTARIO, ōn-tā'rī-ō. A Canadian province reaching from Quebec on the east to Manitoba on the west. Total area, 412,582 square miles; population (1931 census), 3,431,683 (2,933,662 in 1921). Toronto, the capital and chief city, had 631,207 inhabitants in 1931; Hamilton, 155,547; Ottawa, 126,872; London, 71,148; Windsor, 63,108. For 1931, births totaled 69,209; deaths, 35,705; marriages, 23,771.

Ontario is rich in agricultural, mineral, and forest resources, and is the chief manufacturing province of the Dominion. With 10,140 manufacturing establishments, representing a capital investment of \$2,285,361,451, and 269,739 employees, the factories of the Province in 1931 manufactured goods valued at \$1,312,400,828 of which \$714,521,036 represented the value added in the process of production. During 1931, the publicly owned Ontario Hydro-Electric Power Commission delivered 1,050,903 electric horse power to 721 municipalities through which a total of 600,297 customers were supplied.

There are some 14,000,000 acres of cultivated land, of which 9,224,300 acres yielded field crops valued at \$113,904,000 in 1932. Livestock (1931): 577,322 horses, 2,514,344 cattle, 1,044,624 sheep, 1,359,176 swine, 23,746,395 poultry. Mineral production for 1932 was provisionally reported at \$79,239,578, the chief minerals being gold, silver, nickel, platinum, crude petroleum, and natural gas. The production of gold in 1933 was 2,149,921 ounces, valued at \$44,442,810; silver, \$1,728,164; nickel, 84,586,310 pounds, valued at \$20,736,000.

From the forested area of about 240,000 square miles, lumber and other sawmill products valued at \$12,789,684, wood pulp valued at \$22,944,933, and paper and newsprint valued at \$45,535,894 were extracted in 1931. In the same year, fisheries yielded \$2,477,131 and the value of furs taken in 1931-32 amounted to \$1,857,397. Steam railways had a mileage of 10,905 miles of single track in 1931, and highways totaled 66,411 miles. For the fiscal year ending Oct. 31, 1933 there was a surplus of revenue over expenditure amounting to \$150,000; revenue for the year amounted to \$2,450,000 more than was estimated and the government reduced the estimated expenditure by \$660,000. The bonded indebtedness on Oct. 1, 1933 amounted to \$499,986,000.

The Province is administered by a lieutenant-governor appointed by the Dominion, a respon-

sible executive council, and a single legislative assembly of 112 members elected, for five years, by popular vote. The 18th Legislature constituted in 1929 comprised 90 Conservatives, 15 Liberals, 5 Progressives, 1 United Farmer, and 1 Labor. Ontario is represented in the Dominion Parliament at Ottawa by 24 members in the Senate and 82 members in the House of Commons. Lieutenant-Governor in 1933, Col. H. A. Bruce; President of the Council, C. S. Henry.

OPERA. See MUSIC.

ORANGE FREE STATE. See SOUTH AFRICA, UNION OF.

ORCHESTRAS. See MUSIC.

ORE DRESSING. See METALLURGY.

OREGON. POPULATION. The population of the State on Apr. 1, 1930, according to the Fifteenth Census, was 953,786, as against 783,389 in 1920. Portland had 301,815 inhabitants. Salem, the capital, 26,266.

AGRICULTURE. The following table shows the acreage, production, and value of the principal crops for 1933 and 1932:

Crop	Year	Acreage	Prod. Bu.	Value
Hay (tame)	1933	967,000	1,603,000 ^a	\$15,068,000
	1932	992,000	1,705,000 ^a	10,230,000
Wheat	1933	897,000	17,492,000	10,320,000
	1932	991,000	20,060,000	7,223,000
Hops	1933	17,000	19,556,000 ^b	5,867,000
	1932	15,500	13,020,000 ^b	2,844,000
Potatoes	1933	39,000	6,435,000	3,861,000
	1932	42,000	5,040,000	2,016,000
Apples	1933	.. ..	4,095,000	2,252,000
	1932	.. ..	4,950,000	2,030,000
Oats	1933	259,000	9,842,000	3,346,000
	1932	223,000	6,802,000	1,837,000
Corn	1933	71,000	2,414,000	1,207,000
	1932	65,000	2,015,000	987,000
Barley	1933	113,000	3,334,000	1,334,000
	1932	96,000	2,688,000	914,000

^a Tons. ^b Pounds.

EDUCATION. Widespread deficiency of revenues needful to cover the expenses of the public schools prevailed during the year. It was reported, however, in the *Journal* of the National Education Association that up to December no public schools had been forced to close; they had been kept going in numerous cases by the issue of warrants in lieu of cash payment for salaries and some other liabilities; so common and prolonged had this practice become that nearly one-fifth of the school districts were reported to be a year behind in redeeming such warrants. Delinquencies in the payment of taxes imposed for the support of the schools, rather than failures to impose sufficient taxes, were the cause of the inability to redeem warrants.

For the academic year 1932-33 the number of persons of school age in the State was reckoned as 259,574. There were enrolled in the public schools 205,623 pupils. Of these, 149,478 were in common schools or elementary grades; in high schools, 56,145. The year's expenditures for public-school education totaled \$12,410,323.

LEGISLATION. The Legislature held a regular session, convening on January 9. It created a State convention to act for the State with regard to the proposed repeal of the Eighteenth Amendment to the Federal Constitution; the convention was to be composed of 116 delegates, of whom each county was to elect at least one and, in addition, one for every 10,000 of population. The Legislature by its own action gave the State's ratification to the proposed Federal Amendment to restrict child labor. To provide for the future of State banks involved in the banking collapse

of February and March, there were given the State bank examiner powers similar to those held with regard to National banks by the Comptroller of the Currency.

A tax of 2 per cent on gross sales was enacted, subject to approval by popular vote at a special election in July. A system of old age pensions was created, which was designed to provide payments of \$30 a month to each needy inhabitant who had reached the age of 70. The State legalized betting at horse races under the pari-mutuel system. To provide a receiver for insolvent municipalities the Legislature created the position of fiscal administrator; affairs of a defaulting municipality might be put in the hands of such an official at the petition of 25 per cent of its bondholders, and the liberty of dissenting bondholders, in case of such appointment, was restricted.

A special session that convened in November enacted a system of State control over traffic in alcoholic drinks and authorized expenditure for the needs of the destitute unemployed.

POLITICAL AND OTHER EVENTS. The banks of the State, in the course of the nation-wide banking panic, ceased payment on March 2, their retention of deposits sought for withdrawal being rendered lawful, as in most other States, by the proclamation of legal holidays. After the period during which banks had been kept closed by Federal authority the banks in Oregon reopened about March 15, generally with full liberty to depositors to withdraw.

At a popular election on July 21 there were chosen, by counties, 116 delegates who were instructed by the vote and pledged to the State to act in accordance with the popular majority in each county as to the repeal of the Federal Eighteenth Amendment. Two counties, naming five delegates between them, voted for retaining the amendment; all the others, for repeal; the State's popular vote was cast for repeal in somewhat less than the proportion of 2 to 1. The delegates met in State convention on August 7 and voted the State's adoption of the repeal of the Eighteenth Amendment through the superseding amendment proposed by Congress. At the election of July 21 the voters also adopted the repeal of the State constitution's provision for the prohibition of liquor.

The State lacked cash in March and was obliged on March 20 to resort to payments in the form of warrants bearing interest at 5 per cent. The Federal Public-Works Administration allotted on September 29 \$20,000,000 for expenditure on the proposed construction of a dam and a hydroelectric generating station at Bonneville on the Columbia River. A severe forest fire in the northern coastal part of the State late in August destroyed timber reported to be worth millions of dollars.

OFFICERS. The chief officers of the State, serving in 1933, were: Governor, Julius L. Meier; Secretary of State and State Auditor, Hal E. Hoss; Treasurer, Rufus C. Holman; Attorney General, I. H. Van Winkle; Superintendent of Public Instruction, Charles A. Howard.

Judiciary. Supreme Court: Chief Justice, John L. Rand; Associate Justices, Henry J. Bean, Harry H. Belt, J. O. Bailey, George Rossman, Percy R. Kelly, J. U. Campbell.

OREGON, UNIVERSITY OF. A coeducational institution under State control and support at Eugene, founded in 1876. It consists of a college

of arts and letters, a college of social science, schools of business administration, education, fine arts, journalism, law, physical education, and service departments of home economics, military science, religion, science. The total enrollment for the autumn term of 1933 was 2122, of whom 1229 were men and 893 women. The attendance at the 1933 summer sessions was 1048, of whom 338 were men and 710 women. The faculty for the autumn term numbered 194. The total income for the year ending June 30, 1933, was \$881,444. The library contained 244,812 volumes. In accordance with the reorganization and co-ordination of curricula, effected by the Oregon State System of Higher Education in 1932, the University of Oregon is one of six units in the State's higher educational plan, offering a comprehensive programme of technical, liberal, and professional education. The other institutions participating in the plan are the Oregon State Agricultural College, Oregon Normal School, Eastern Oregon Normal School, University of Oregon Medical School, and Southern Oregon Normal School. Chancellor of the Oregon State System of Higher Education, William Jasper Kerr, Sc.D., LL.D.

OREGON STATE AGRICULTURAL COLLEGE. The Federal land-grant college of Oregon, established under Federal and State support at Corvallis in 1868. In accordance with the reorganization and co-ordination of curricula, effected by the Oregon State System of Higher Education in 1932, there are located at the State college lower division in liberal arts and sciences, lower division and service work in business administration, fine arts, journalism, and physical education, upper division and graduate biological and physical science (school of science), and professional and technical schools of agriculture, education, engineering and industrial arts, forestry, home economics, pharmacy, and secretarial science. Graduate work is organized in the graduate division. The enrollment for the autumn term of 1933 was 1961, of whom 1259 were men and 702 women. The 1933 summer session enrollment was 306. There were 268 members on the resident teaching faculty. The library contained 113,819 catalogued volumes. Chancellor of the Oregon State System of Higher Education, William Jasper Kerr, Sc.D., LL.D.

ORT, WOMEN'S AMERICAN. A society organized in 1927 for the support of trade and agricultural activities among the Jews in Central and Eastern Europe. It is derived from the organization ORT (the initials of three Russian words meaning Organization for the Promotion of Trade and Agriculture), founded in 1880 by prominent Russian Jews, such as Baron H. Ginzburg, S. Poliakov, and Prof. N. Bakst. Among its activities in 1933 were the support of technical and vocational schools for youths and adults of both sexes; the purchase of agricultural implements and live stock for Ort colonies; and the supplying of tools and machinery to artisans. The Ort Tool Supply Service enabled relatives in the United States to send machinery free of duty to Jews in the U.S.S.R. The society established also a guardian bureau to finance orphans through a three-year course in vocational schools. World headquarters of the Ort are in Paris, France, with branches in England, Rumania, Latvia, Lithuania, Germany, Poland, South Africa, the United States, Canada, and Russia. The offices of the

Women's American Ort are at 220 Fifth Avenue New York City.

OUTBOARD RACING. See **MOTORBOATING.**

OUTDOOR ART MARKETS. See **PAINTING.**

OUTER MONGOLIA. See **MONGOLIA.**

PACIFIC RELATIONS, INSTITUTE OF. The American Council of the Institute of Pacific Relations during 1933 has directed a great deal of its activity toward preparation for and participation in the Fifth Biennial Conference of the Institute of Pacific Relations, which was held at Banff, Alberta, August 14 to 28. The subject of the Conference was Economic Conflict and Control in the Pacific, and the American studies published in connection with the meeting were for the most part in this field.

The research department has continued issuing its fortnightly memoranda, dealing briefly with such subjects as the Chinese Boycott, Basic English as an Aid to Language Communication, Railway Construction in Manchuria, International Co-operation in China's Public Health, and United States Investments in Japan. The pamphlet, "Behind the Far Eastern Conflict," was published early in the year for use of clubs and classes throughout the country.

For the first time, the American office has made the experiment of having on its staff visiting secretaries from other national Councils. Chinese, Japanese, and Canadians have coöperated in the research and educational work of the American Council over periods of several weeks or several months. With the help of a number of individuals and organizations interested, under the direction of one of the Japanese secretaries, Prof. Yasaka Takaki, the American Council is planning to make a survey of facilities in this country for the study and interpretation of Japan.

The Honorable Newton D. Baker continues as Chairman of the American Council, and was newly elected Chairman of the Pacific Council at Banff. Mr. Edward C. Carter, who has been Secretary of the American Council since 1926, was chosen at Banff to be Secretary-General of the Institute of Pacific Relations.

PADEREWSKI, IGNACE JAN. See **MUSIC.**

PAHANG. See **FEDERATED MALAY STATES.**

PAINLEVÉ, pā'n'le-vā', PAUL. A French mathematician and statesman, died Oct. 29, 1933, in Paris where he was born Dec. 5, 1863. He attended the Lycées St. Louis and Louis le Grand and the École Normale Supérieure. His studies were interrupted during 1886-87 when he served on a mission to Germany. On his return to the École Normale Supérieure he received his doctor's degree in mathematical science. He then became a member of the science faculty at the University of Lille and in 1891 was called to lecture at the Sorbonne. He taught mathematics at the École Normale Supérieure between 1895 and 1903 and after 1895 was professor of general mathematics at the University of Paris. He later held the chair of mechanics at the École Polytechnique. A laureate of the Institute of France in 1890, 1894, and 1896, he was elected to membership in its Academy of Sciences in 1900.

Painlevé's political career began in 1910 when he was elected to the Chamber of Deputies for the Seine. He continued to represent that department until 1928 when he was returned for Ain. In the Chamber he rose to leadership of the Republican-Socialist party and of the Left Wing. His first cabinet appointment was that of Minister of Public Instruction and Inventions concerning the

National Defense in the Briand cabinet of 1915-16. On General Gallieni's resignation he succeeded to the portfolio of War. He held this portfolio also in the Ribot cabinet, formed in March, 1917, and was responsible for naming General Pétain as commander-in-chief of the French Army. On the fall of the Ribot ministry in September, 1917, he was invited by President Poincaré to form a new ministry, retaining for himself the portfolio of War. He served also on the Committee of War formed at this time, and it was hoped that he would carry into vigorous effect the policy undertaken by Ribot of punishing the "defeatists" or perpetrators of crimes against the national defense, such as disloyalty and treason. With Lloyd George, the British premier, and Orlando, the Italian premier, Painlevé attended at Rapallo, Italy, on November 9, the conference which resulted in the creation of a Supreme War Council, whose mission was to watch over the general conduct of the War. On the inter-Allied general staff he named General Foch as France's representative. His ministry was forced to resign, however, after a duration of only two months as a result of an adverse vote on its proposal that consideration of the "defeatist" question should be deferred. Furthermore, as Minister of War he was accused by the supporters of General Nivelle of having interfered through his appointment of General Pétain with the French offensive of April, 1917.

For the next seven years, aside from his service in the Chamber, Painlevé was politically eclipsed. He spent the year 1920 in the Far East as advisory director-general of Chinese government railways. In the spring of 1924, as a result of the victory of the Left *cartel* which he had formed with Herriot, he was chosen president of the Chamber. The following April, after the fall of Herriot's ministry, he was requested by President Doumergue to form a cabinet of his own, in which he once again held the War portfolio. Shortly after taking office he announced that the embassy at the Vatican was to be continued and thus settled for the time being a problem which had disrupted the country for months. He succeeded also in gaining the Opposition's support of the war with Moroccan tribesmen. After Caillaux's unsuccessful attempt to negotiate a settlement of France's debt to the United States in October, 1925, Painlevé formed a new cabinet, this time assuming the portfolio of Finance. His ministry fell a month later when the Senate rejected his drastic taxation measure and proposal to further inflate the currency.

In the cabinet which Briand was requested to form Nov. 27, 1925, Painlevé accepted the portfolio of War so as to continue supervision of operations against the Druse revolt in Syria and that of Abd-el-Krim in Morocco. He held this portfolio also in Herriot's one-day cabinet of July, 1926, and Poincaré's succeeding ministries which lasted until July, 1929. In the Steeg ministry formed in December, 1930, Painlevé accepted a post for which he was eminently fitted by reason of his interest in the early experiments of the Wright brothers and his calculations regarding air resistance, namely that of Minister of Air. He continued to hold this portfolio in the succeeding Herriot and Paul-Boncour cabinets of 1932, accomplishing much toward the reorganization of the Air Service. He served also as French delegate to the League of Nations and as presi-

dent of the Committee of International Coöperation.

A founder of the League of the Republic, Painlevé had been president of that organization after 1922. He was also a past president of the Conservatory of Arts and Trades and of the Paris Observatory. The decoration of chevalier of the Legion of Honor was conferred on him, and he was elected to membership in the Academies of Science of Bologna, Stockholm, Upsala, and the Reale Accademia dei Lincei of Rome. Among his works were: *Leçons sur l'intégration des équations de la mécanique* (1895); *Leçons sur le frottement* (1895); *Leçons sur le frottement* (1895); *Leçons sur la théorie analytique des équations différentielles* (1897); *La Méthode dans les sciences* (1909); *L'Aviation* (1910); and *Comment j'ai nommé Foch et Pétain* (1926).

PAINTING. Great impetus was given to painting late in 1933 by the action of the government by which the employment of artists was made possible under the Civil Works Administration. Early in December announcement was made by the Assistant Secretary of the Treasury, L. W. Robert, Jr., of the creation of a Fine Arts Advisory Committee for the Treasury to assist in the formulation and execution of a policy in connection with the construction of Federal buildings. This committee, consisting of Frederic A. Delano, Charles Moore, Harry L. Hopkins, Dr. Rexford G. Tugwell, and Henry T. Hunt with Edward Bruce as secretary, held a first meeting promptly thereafter, to which directors of various museums of art and other experts were invited as conferees. On December 11th followed the announcement of a plan to give 2500 artists temporary employment through the Civil Works Administration. Headquarters were opened in the Treasury Department with Forbes Watson as technical adviser, and arrangements were made to have the work conducted and the artists chosen by 14 regional committees as follows: New England States—Francis H. Taylor, c/o Isabella Stuart Gardner Museum, Boston, Mass.; New York City and State, Metropolitan New Jersey and Connecticut—Mrs. Juliana Force, Director, Whitney Museum of Art, New York City; Eastern Pennsylvania, Delaware, and New Jersey—Fiske Kimball, Pennsylvania Museum of Art, Philadelphia; District of Columbia, Maryland and Virginia—Duncan Phillips, 1600, 21st St., Washington, D. C.; Georgia, North and South Carolina, Tennessee, and Florida—J. J. Haverty, High Museum of Art, Atlanta, Ga.; Louisiana, Arkansas, Mississippi, and Alabama—Ellsworth Woodward, Isaac Delgado Museum, New Orleans, La.; Missouri, Kansas, Nebraska, and Iowa—Louis LaBeaume, City Art Museum, St. Louis, Mo.; Western Pennsylvania, and West Virginia—Homer Saint-Gaudens, Carnegie Institute, Pittsburgh, Pa.; Ohio, Indiana, Kentucky, and Michigan—William Milliken, Cleveland Museum of Art, Cleveland, Ohio; Illinois, Wisconsin, and Minnesota—Walter S. Brewster, 135 South LaSalle St., Chicago, Ill.; Colorado, Wyoming, North and South Dakota—George H. Williamson, Majestic Bldg., Denver, Colo.; Texas, and Oklahoma—John S. Ankeney, Dallas Power and Light Bldg., Dallas, Texas; New Mexico, and Arizona—Jesse L. Nussbaum, Santa Fe, N. M.; Southern California—Merle Armitage, Los Angeles, Calif.; North California, Nevada, and Utah—Water Heil, California Palace of the Legion of Honor, San Francisco, Calif.; Oregon, Washington, Idaho, and Montana

—Burt Brown Barker, 814 Oregon Bldg., Portland, Oregon.

At the same time arrangements were made for the employment of a thousand or more unemployed architects to help record interesting specimens of American architecture of historical significance. The plan embraced every type of antique structure in America from the Colonial architecture of the Atlantic Seaboard and the traces of Spanish culture in the South and Southwest to the prehistoric remains in New Mexico and the Russian remains in Alaska. Excavations of aboriginal ruins and the making of complete records of the disappearing cities of the old mining settlement were contemplated. Residential buildings ranging from the birthplaces of Presidents to the hewn log cabins of the early pioneers were included. The direction of this work was under a committee headed by Arno B. Cammerer, director of the Office of National Parks, Buildings and Reservations, Interior Department, and consisted of seven members, three chosen by Mr. Cammerer and four by the American Institute of Architects. The former were as follows: Miss Harlean James, Dr. Herbert Bolton, and Dr. Waldo Leland. The latter, all of whom are architects, were as follows: Dr. Leicester B. Holland, Chief of the Division of Fine Arts of the Library of Congress; William Graves Perry of Williamsburg, Va.; Albert Simons of Charleston, S. C.; and John Gaw Meem of Santa Fe, New Mexico.

Painting during 1933 showed no new tendency or trend unless it was in the direction of conservatism, some of the more extreme painters striving for abstract expression declaring themselves in favor of subjective themes, indicative of a rebound in popular sentiment.

Regarding the monumental mural paintings by Diego Rivera in the Detroit Institute of Art, Detroit, Michigan, and in Radio City, New York City, controversy arose, which embraced not only the painter and those who had commissioned him but also a large portion of the public. The objections in Detroit on the part of the public were as follows: (1) that the paintings were communistic propaganda; (2) that one panel was a travesty of the Holy Family, and (3) that the paintings were unsuitable for the background of the Court, which is in Roman Baroque style. These paintings begun in June, 1932 and finished in March, 1933, were considered by the painter as his masterpiece. In Detroit, the difficulty seemed to have blown over, but not so in New York. There, when Rivera was completing his painting, 63 feet long by 17 feet high, in the lobby of the R. C. A. building, objection was raised to a figure of Lenin joining the hands of a soldier and a negro. That this was objectionable to the Rockefeller family was brought to his attention with the request that he paint out the face of Lenin and substitute that of an unknown person. This Rivera refused to do, and the matter ended by his being paid for the work in full and the painting obliterated.

A kinder fate attended the mural painting by Thomas Benton, illustrating the History of Indiana, which was executed for and placed in the Indiana State Building at the Century of Progress Exposition, Chicago. This painting, panoramic in character, 12 feet high by 230 feet long, was primarily illustrative, including a great many life-sized figures as well as familiar buildings and scenes in the State of Indiana, and from first to

last seemed to give great satisfaction to those who commissioned it.

A large mural was executed for the New School of Social Research, New York City, by Camilo Egas of Quito, Ecuador.

A series of murals, "Fruits of Iowa" by Grant Wood was executed for the Montrose Hotel, Cedar Rapids, Iowa.

A series of paintings on the side walls and ceiling of what is known as the Huntington Bridge, Pasadena, Calif., was executed by Frank M. Moore and ceremoniously dedicated on March 7th. These paintings were exclusively of California scenes—unique and engaging.

Outdoor art markets were not as popular in 1933 as in 1932 but on September 22nd and 23rd a most successful one was held at Fort Worth, Texas, in the parks surrounding the Public Library and Museum—the centre of this city's art activity. More than 100 artists were represented by nearly a thousand exhibits and receipts from sales were sufficiently gratifying to lead to the announcement of a repetition.

The Grand Central Galleries, New York, took over in the fall of 1933 and opened as an annex the former home of the Union Club at the corner of Fifth Avenue and 51st Street, New York, and thus reaffirmed confidence in both the quality and commercial value of works by contemporary American artists.

Cecilia Beaux, the distinguished American portrait painter, was the recipient of the annual award made by the National Sorority, Chi Omega, to an American woman for outstanding contribution to international culture. The medal was designed by Frances Grimes and the award was made in the Galleries of the Fine Arts Bldg., 215 W. 57th St., New York, on the evening of April 16th. William Sloane Coffin, then President of the Metropolitan Museum of Art, Cass Gilbert, President of the National Academy of Design and others made addresses. The presentation was made by Mrs. Franklin D. Roosevelt, wife of the President of the United States. At the annual meeting of the National Academy of Arts and Letters in November, Cecilia Beaux was elected to membership—an honor accorded to but few women.

The Library of Congress during 1933 was enriched by comprehensive groups of original illustrations by the late William T. Smedley and the late Arthur I. Keller, given by Mrs. Smedley and Mrs. Keller as memorials to their husbands. These gifts were especially timely in view of the recent establishment by the Library of Congress of a Cabinet of American Illustration. The National Print Collection at the Library of Congress was enhanced during 1933 by a complete collection of etchings by Donald Shaw MacLaughlan, given by the artist in memory of his wife.

In April, 1933, a National Commission to Advance American Art, with a governing board consisting of fourteen American artists residing in New York was organized, primarily as a protest against the patronage of foreign art by American Art Museums, dealers and the public. In the early winter of 1933-34, steps were taken by this same group to establish a National Art Foundation with approximately the same object in view. F. Ballard Williams, President of the Professional Artists League, served as chairman of the organizing committees.

During 1933, much larger use than heretofore was made of the radio to increase knowledge and appreciation of art. The latter part of the year,

the Carnegie Corporation of New York made a generous grant to the American Federation of Arts for a series of 20 weekly talks on American Art to be broadcast on a national circuit.

FOREIGN. Announcement was made in June that the American Academy of Rome had declined a gift of one hundred and fifty thousand dollars from the estate of Mrs. E. A. Abbey, for scholarships in mural paintings, under the conviction that it duplicated, at least in purpose, a gift made by her during her lifetime in the form of a fund for the acquisition of mural paintings by American artists. A similar bequest to the Royal Academy, London, was, however, accepted.

NECROLOGY. The following eminent American painters passed away in 1933: John Quincy Adams, Joseph Birren, R. Sloan Bredin, Charles H. Davis, Cecile de Wentworth, John I. Downes, Frank French (wood engraver), George O. ("Pop") Hart, William H. Holmes, E. W. Kemble, Daniel Kotz, George Luks, Dora L. Murdock, Henry W. Parton, Lilla Cabot Perry, Charles Adams Platt, Francis Paulus, Louis C. Tiffany, Clark Voorhees, W. S. Robinson, Lionel Walden, Frederick C. Yohn.

NOTABLE BOOKS ON ART. During the year the following were published: *The Stage Is Set* (Designing for the Theatre) by Lee Simonson; *An Account of French Painting*, by Clive Bell; *Sir William Orpen, Artist and Man*, by Sidney Dark and P. G. Konody; *Thomas Eakins—His Life and Work*, by Lloyd Goodrich; *Mary Cassatt*, by Forbes Watson; *Glenn O. Coleman*, by C. Adolph Glasgold; *Ernest Lawson*, Guy Pene du Bois; *Allen Tucker*, by Forbes Watson; *Making a Water Color*, by George Pearce Ennis; *The Meaning of Modern Sculpture*, by R. W. Wilenski; *Tapestry—the Mirror of Civilization*, by Phyllis Ackerman; *Rockcullkentana*—"Few words; many pictures," by Rockwell Kent; *Old Charleston*—Woodcuts by Charles W. Smith; *A Farmer's Year*—Woodcuts by Clare Leighton; *The Arts and Crafts in Philadelphia, Maryland, and South Carolina, 1786-1800*—Collected by Alfred C. Priam; *Great Georgian Houses of America*—Illustrated with drawings and photographs—Published by Architects Emergency Committee; *Vincent Van Gogh*, by Julius Meier-Graefe; *Poor Splendid Wings*—The Pre-Raphaelite Brotherhood, by Frances Winwar.

PAKENHAM, ADMIRAL SIR WILLIAM CHRISTOPHER. A British naval officer, died at San Sebastián, Spain, July 28, 1933. Born July 10, 1861, he entered the British Navy in 1874 as a cadet and was commissioned a lieutenant in 1883. The following year he became flag-lieutenant on the *Nelson* to Rear-Admiral Tryon, commander-in-chief in Australia, where he served for three years. He was second in command of the cruiser *Garnet* during 1890-94 and in 1896 was promoted to the rank of commander. After being detailed to the Naval Intelligence Department of the Admiralty for two years, he returned to the Pacific in 1901 as commander of the sloop *Daphne* and two years later was promoted to captain. During the Russo-Japanese War he served as British naval attaché with Admiral Togo's fleet, receiving from the Japanese Emperor the decoration of the Order of the Rising Sun (second class). On his return to England he became commander of the cruiser *Antrim* in the Atlantic Fleet. He later commanded the battleships *Triumph* in the Mediterranean (1909) and *Collingwood* in the Home Fleet (1910-11).

In 1911 Pakenham was made Lord Commissioner of the Admiralty with the title of Fourth Sea Lord and two years later was promoted to the rank of rear-admiral in command of the Third Cruiser Squadron of the Grand Fleet. He became commander of the Second Cruiser Squadron in 1915, and it was this command which he held at the Battle of Jutland May 31, 1916. In 1917 he succeeded Beatty as commander of the Battle Cruiser Force and on his flagship *Lion* was present at the surrender of the German High Sea Fleet Nov. 22, 1918. Commissioned vice-admiral in 1918, Pakenham held the office of president of the Royal Naval College at Greenwich in 1919-20. His last important command was that of the North American and West Indies Station. On his return in 1922 he was made admiral. He retired four years later. Among the honors conferred on him were Companion of the Bath (1905), Member of the Royal Victorian Order (1907), Knight Commander of the Bath (1916), Knight Commander of the Royal Victorian Order (1917), Knight Commander of St. Michael and St. George (1919), and Knight of the Grand Cross of the Bath (1925).

PALACE OF THE SOVIETS. See ARCHITECTURE.

PALAU. See CAROLINE ISLANDS.

PALESTINE. A territory comprising part of historic Palestine, administered by Great Britain under a mandate of the League of Nations since Sept. 29, 1923. Capital, Jerusalem.

AREA AND POPULATION. Palestine has an area of about 10,000 square miles. The population rose from 757,182 in 1922 to 1,035,821 at the census of Nov. 18, 1931. This represented an annual increase of 354 per 10,000 inhabitants, the highest on record. During this period the Moslem population, with a birth rate of 53 per 1000, increased by 28 per cent to 759,712. The Jewish population was 174,610, or more than double the 1922 number. The Christians, who numbered 90,607 in 1931, increased by 25 per cent to 91,398. About 29 per cent of the population was engaged in industry, trade, and transport, the remainder engaging in agriculture. Of the Jews, 15 per cent were engaged in agriculture; three-fourths of the Jews lived in towns. The nomadic population numbered 66,553. The population of the chief towns (1931) was: Jerusalem, 90,407; Jaffa, 51,366; Tel-Aviv, 46,116; Haifa, 50,533; Gaza, 17,069; Nablus, 17,171; Hebron, 17,532; Lydda, 11,249. Immigrants in 1932 numbered 6730 (5823 Jews); emigrants, 1555. Net Jewish immigration (1922-30) was 63,066.

EDUCATION. In 1931 there were 308 government schools, with 24,288 pupils (mostly Moslem). Jewish schools (1932) numbered 369, with 34,456 pupils; Christian schools, 156, with 16,099 pupils; private Moslem schools, 137, with 7319 pupils. The Hebrew University on Mount Scopus, Jerusalem, had 171 students.

PRODUCTION. Agriculture is the main support of the population. The yield of the chief crops (1931) was (in metric tons): Wheat, 79,650; barley, 41,200; durra, 16,862; olives, 33,906; lentils, 3758; tobacco, 504; grapes, 3250. Oranges, grapefruit, and other citrus fruits are extensively grown. Livestock in 1932 included 159,600 cattle, 247,700 sheep, 380,600 goats, 7400 buffaloes, 14,100 horses, 5600 mules, 74,200 donkeys, and 32,300 camels. Gypsum, rock salt, cooking salt, carnallite and bromide are the chief minerals found. Wine and soap making and the manufac-

ture of food products, cement, and textiles are the main industries.

COMMERCE. Imports in 1932 were valued at £P7,768,920 (\$37,803,765), compared with £P5,940,000 (\$26,937,900) in 1931; exports of domestic produce amounted to £P2,381,491 (\$11,588,335) in 1932, compared with £P1,572,061 (\$7,129,300) in 1931. The Palestine pound, equivalent to the pound sterling, is here converted into dollars at par. Imports from the United Kingdom in 1932 were valued at £P1,342,031; exports to United Kingdom, £P1,522,073. Imports from the United States (1933) were \$2,730,481 (\$1,672,662 in 1932); exports to the United States, \$193,966 (\$90,697 in 1932). Oranges, laundry soap, watermelons, durra, and wine are the leading export items; leading imports were cotton piece goods, cattle, silk tissues, wheat, timber, and benzine.

FINANCE. Revenues of the government in 1932 amounted to £P3,015,917 and expenditures to £P2,516,394, compared with receipts of £P2,327,096 and expenditures of £P2,378,902 in the previous year. The public debt at the beginning of 1933 totaled £P4,600,000. The revenues include a grant-in-aid from the British government (£P222,909 in 1931).

COMMUNICATIONS. The government railway administration in 1933 operated 607 miles of line (excluding 70 miles on the Ma'an-Mudawara section), which carried 1,235,494 passengers and 989,565 metric tons of freight. Gross earnings were £P554,711 and working expenses £P425,064. There were 1275 miles of highways (540 miles suitable for motor traffic), and air lines providing communication with India, Egypt, and Europe. Vessels entering the ports in foreign trade (1932) numbered 2943, of 2,058,305 gross tons; vessels clearing, 2914, of 2,033,814 gross tons. The new port of Haifa in northern Palestine was completed and formally opened in October, 1933, the work having cost the Palestine government £1,250,000. The British branch of the oil pipeline from Kirkuk, Iraq, to Haifa, also was practically completed at the end of 1933, and the port was beginning to rival Beirut, Syria, as the trading centre for the Arabian and Syrian hinterland. Telephone service between Palestine and Great Britain was inaugurated early in 1933.

GOVERNMENT. The Constitution of Sept. 1, 1922, vested executive authority in a High Commissioner and Commander-in-Chief and an executive council. It provided also for a legislative council including representatives of the various religious communities, but due to lack of coöperation among religious groups this council had not been established. In the meantime its functions were performed by an advisory council appointed by the High Commissioner. The Jewish community enjoyed complete autonomy in their religious, cultural, and communal affairs, which were controlled by a Chief Rabbinate, an elected assembly, and a general council elected by the assembly, which represented the community in its dealings with the government. A Moslem Supreme Council controlled Moslem religious affairs. English, Arabic, and Hebrew are official languages. High Commissioner and Commander-in-Chief in 1933, Lieut.-Gen. Sir Arthur Grenfell Wauchope (appointed Nov. 1, 1931).

HISTORY

The conflict between Jews and Arabs for the control of Palestine flared forth in new riots and bloodshed during 1933. The outbreaks differed

from those of 1929, in which the Arabs launched armed attacks directly upon Jewish communities and individuals. In 1933 the actual fighting was between the British police and the Arabs, but the issue was the Arab demand for the cessation of Jewish immigration into Palestine. The immigration issue had become the crux of the Arab-Jewish struggle, with the British mandatory authorities bearing the brunt of the attacks by Arabs and Jews for failing to grant the mutually irreconcilable demands of each racial group.

A deputation from the Arab Executive petitioned the High Commissioner on February 26 to prohibit the sale of Arab lands to Jews and to further restrict Jewish immigration. Upon his refusal, the Arab Executive on the following day announced that it would extend its policy of non-coöperation with the British authorities to include a boycott on British goods and the refusal to pay taxes. Later the Arab leaders decided to postpone their final decision on non-coöperation. In the meantime the Jews were pressing the High Commissioner to raise the immigration bars to permit an influx of Jews from Germany and other lands where they were being persecuted. The Jews pointed to the economic boom which Palestine was enjoying as justifying the admittance of 25,000 Jewish laborers and capitalists during a six-months period, as compared with the 6730 admitted in 1932 and the 5500 admitted in the period between April and September, 1933. The High Commissioner proved as impervious to the Jewish as he had to the Arab demands.

New light on the immigration issue was shed by the publication in July of two reports submitted to the British government by Lewis French, former Director of Developments in Palestine. The reports dealt with agricultural and land development in Palestine and with the problem of settling landless Arabs on the land. They denied the Jewish claim that large areas of unoccupied land were capable of settlement and development and that the country's agricultural resources were sufficient to support a much larger population. "If land is required for colonists, Arab or Jew, it must be bought with cash or its equivalent from existing occupiers," he reported. Simultaneously with the publication of his reports, the British government announced that it would lend £2,000,000 to the Palestine government for public works and the resettlement of dispossessed Arabs.

The French reports and final returns of the Palestine census spurred the Arab agitation for the restriction of Jewish immigration. Defying a government order against demonstrations of all kinds, the Arab Executive called for anti-immigration demonstrations on October 13 at Jerusalem, Jaffa, Nablus, and other points. They were prevented or broken up by the police. Thereupon the Arab Executive announced a general strike and mass protest at Jaffa October 27. In the resulting clash with the police, 22 persons were killed and 130 wounded. The Arabs, inflamed by the police action at Jaffa, clashed with the police in Haifa, Nablus, Safed, Nazareth, Jerusalem, and other cities. Including the Jaffa casualties, the toll of the rioting was some 30 killed and 200 injured. The British stamped out the agitation by troop and airplane concentrations, the arrest of Arab leaders, censorship of the Arab press, and the declaration of a state of emergency. The general strike, which had paralyzed business throughout most of the country, was called off by the Arab

Executive on November 4 and the demonstrations ended.

The immigration issue remained unsolved, however. On November 13 a delegation of Arab mayors presented their grievances to the High Commissioner. They charged that Jewish immigrants in excess of the quota were entering the country in large numbers and urged the early establishment of representative self-government, which would give the Arab majority control of the government. The High Commissioner met the Arab demands in part by taking stringent measures to prevent the illegal entry and settlement of Jews (for the actual measures, see JEWS). The application of these measures led to anti-government demonstrations on December 9 by Jews in Tel-Aviv, in which 16 British and Jewish policemen and three civilians were injured. Armed police from Jaffa were required to disperse the mobs. Meanwhile several members of the Arab Executive were given short jail terms for their part in the October 13 riots in Jerusalem. Trial of the ringleaders in the Jaffa demonstration of October 27 was postponed to 1934.

On November 23 the British Colonial Secretary announced in the House of Commons that the government would establish in the near future the long-projected legislative council in Palestine. Dr. Chaim Orlosorov, prominent Labor member of the Jewish Agency Executive, was murdered in Tel-Aviv on June 16, 1933. His death, attributed by many Laborites to the Zionist Revisionist party, revived the bitter feud between these two factions and was the cause of dispute at the World Zionist Congress at Prague, Czechoslovakia, in August. See JEWS.

PALMER, GEORGE HERBERT. An American scholar and author, died in Cambridge, Mass., May 7, 1933. He was born in Boston, Mass., Mar. 19, 1842, attended the Phillips Academy at Andover, and in 1864 was graduated from Harvard University. After study at the University of Tübingen and at the Andover Theological Seminary he returned to Harvard in 1870 as tutor in Greek, becoming two years later curator of the Gray collection of engravings and also instructor in philosophy. Promoted to assistant professor of philosophy in 1873, he was made full professor ten years later and from 1889 to 1913 held the Alford chair of natural religion, moral philosophy, and civil polity. On his retirement as professor emeritus in the latter year, he served as overseer until 1919.

In the Harvard philosophy department during Professor Palmer's régime were some of the ablest philosophical thinkers in the United States—William James, Josiah Royce, and George Santayana. He himself, however, was better known for his ability in awakening his students to an appreciation of philosophy as an interpretation of the intellectual and spiritual forces of life. In 1887 he married, as his second wife, Alice Freeman, president of Wellesley College. Her biography, *The Life of Alice Freeman Palmer*, which he published in 1908, six years after her death, is one of the most beautiful tributes paid a woman by her husband.

Among Professor Palmer's other publications are: *The New Education* (1887); *The Glory of the Imperfect* (1898); *The Field of Ethics* (1901); *The Nature of Goodness* (1904); *The Life and Works of George Herbert* (3 vols., 1905); *The Teacher* (1909); *The Problem of Freedom* (1911); *Intimations of Immortality in the Son-*

nets of Shakespeare (1912); *Altruism: Its Nature and Varieties* (1919); and *The Autobiography of a Philosopher* (1930). To *Contemporary Idealism in America* (1932), he contributed the chapter on "Josiah Royce." His prose translation of Homer's *Odyssey* (1884) is notable for the beauty of its diction and for its faithfulness to the original.

PANAMA. A republic of Central America, bisected by the Panama Canal Zone (q.v.). Capital, Panamá.

AREA AND POPULATION. Excluding the Canal Zone, Panama has an area of 28,575 square miles. The population at the 1930 census was 467,459 (446,098 in 1920). The natives are for the most part a mixture of Spanish, Indian, and Negro blood. The 1930 population residing in towns of more than 1000 was 153,248. The chief cities, were: Panamá, 74,409; Colón, 29,765.

EDUCATION. The school enrollment in 1929 was 65,459 (65 per cent of children of school age). Elementary public schools in 1932 numbered 559, with 55,424 pupils; there was 1 secondary school with 898 pupils. The university (Instituto Nacional) had 626 students in 1930. Private educational institutions numbered 71.

PRODUCTION. Agriculture, the main industry, is supplemented by cattle raising, pearl fishing, and lumbering. The chief crops are bananas, cacao, coconuts, coffee, sugar, rubber, tobacco, and sarsaparilla. Bananas, the chief export item, are produced mainly on United Fruit plantations. Banana exports in 1932 totaled more than 4,000,000 stems, valued at \$1,728,000 (\$2,941,000 in the peak year of 1929). The forests contain mahogany and other hardwoods, but exports are negligible. There is some manufacturing for the local markets, principally beer and liquors, shoes and tropical clothing, tobacco and furniture. Some gold is mined.

COMMERCE. Panama customarily has a large excess of imports over exports. Imports declined in value from \$19,278,000 in 1929 to \$13,492,000 in 1931 and \$8,853,000 in 1932; exports fell from \$4,144,000 in 1929 to \$2,608,000 in 1931 and \$2,006,000 in 1932. The figures include bullion and specie. The chief exports, by value, in 1932, were: Bananas, \$1,728,000; coconuts, \$103,000; cacao beans, \$85,000. Textile fabrics, iron and steel, chemicals, machinery, wheat flour, milk, and petroleum products were leading imports. About half the imports are reexported to the Canal Zone for consumption or sale to tourists. The United States in 1932 purchased 95.8 per cent of all exports and supplied 61.1 per cent of the general imports (90.7 and 60.5 per cent, respectively, in 1931).

FINANCE. The financial status of Panama was difficult to ascertain, due to incomplete financial reports and a confusing budget system. Government revenues, exclusive of loans, were reported as follows: July 1, 1930 to Feb. 28, 1931, \$5,064,000; Mar. 1, 1931, to Feb. 28, 1932, \$6,012,000; Mar. 1, 1932, to June 30, 1932, \$1,955,000. A corresponding statement of expenditures was understood not to be available. Estimates for the two-year period beginning Jan. 1, 1933, balanced ordinary revenues and expenditures at \$11,849,000. The expenditures included \$3,271,000 (27.6 per cent) budgeted for service of the public debt. The total public debt on Sept. 1, 1933, amounted to \$18,929,159 (external, \$15,544,508; internal, \$3,384,651). In addition, bonds of the National Bank of Panama, outstanding abroad in the amount of \$3,097,500, were guaranteed by the gov-

ernment. The unit of currency is the balboa, par value \$1 United States currency.

COMMUNICATIONS. Including the Canal Zone, Panama had 295 miles of railway lines. The Panama Railroad, connecting Colón on the Atlantic with Panamá on the Pacific, is the chief line (47.61 miles). Highways extended about 680 miles. A section of the Pan American Highway, from Panamá to the Costa Rican border, was under construction. Panamá, Cristobal, and David (Chiriqui Province) are on the Pan American airways system.

GOVERNMENT. The Constitution of Feb. 13, 1904, as amended in 1918 and 1928, vested executive power in a President elected by direct vote for four years and ineligible for reelection. Legislative power rests in a national assembly of 32 members, elected for four years. President in 1933, Dr. Harmodio Arias (assumed office Oct. 1, 1932).

HISTORY

AGREEMENT WITH UNITED STATES. A long step toward the solution of difficulties between Panama and the United States, involving the Panama Canal, was taken as a result of conferences between Presidents Arias and Roosevelt in Washington, Oct. 9-17, 1933. These difficulties had clouded the friendly relations of the two countries ever since the Panamanian Assembly rejected the treaty of 1926, which aimed to eliminate the main sources of controversy. The basic issue was the Panamanian charge that the United States in the Panama Canal Zone was infringing the terms of its lease, obtained in the treaty of 1903. Other points of controversy were (1) the control of radio stations in Panama by the United States; (2) the competition of army commissaries in the Canal Zone with private Panamanian business enterprises; (3) the administration by Panama of the municipality of New Cristobal, populated almost exclusively by Americans, and (4) the care or disposition of large numbers of foreign workmen discharged by the Canal Zone authorities and who then became public charges in Panama.

The suggestion made by President Arias that these problems could best be disposed of by a personal discussion with President Roosevelt was quickly accepted and the Panamanian President was a guest at the White House for the first three days of his stay in Washington. On October 17 the result of the conversations was published in a joint statement, the important parts of which follow:

We are in accord on certain general principles as forming the bases of the relations between Panama and the United States in so far as the Canal Zone is concerned, as follows:

1. Now that the Panama Canal has been constructed, the provisions of the treaty of 1903, between the United States and Panama contemplate the use, occupation and control by the United States of the Canal Zone for the purpose of the maintenance, operation, sanitation, and protection of the Canal.

2. In view of that purpose the Republic of Panama is recognized as entitled, as a sovereign nation, to take advantage of the commercial opportunities inherent in its geographical situation so far as that may be done without prejudice to the maintenance, operation, sanitation, and protection of the Panama Canal by the United States of America, which is earnestly desirous of the prosperity of the Republic of Panama.

3. The United States government would view sympathetically any request which the government of Panama might make for the solution by arbitration of any important question which might arise between the two governments and may appear impracticable of decision by direct negotiations, provided that such question is purely economic in its nature and does not affect the maintenance, operation, sanitation, and protection of the Canal.

With regard to the activities of the United States in the Canal Zone, Panama feels that some of them constitute a competition prejudicial to Panamanian commerce. The

United States has agreed to restrict and regulate certain activities; for example, special vigilance will be exercised to prevent contraband trade in articles purchased from the commissaries; sales of "tourist" goods from the Zone commissaries for resale on ships transiting the canal will be prohibited, sales of other goods to ships from the Canal Zone commissaries will be regulated with the interests of Panamanian merchants in view.

The services of the United States hospitals and dispensaries in the Canal Zone will be limited to officers and employees of the United States government and of the Panama Railroad Company and their families, excepting only in emergency cases; admission to the restaurants, clubhouses, and moving picture houses in the Zone will be similarly restricted.

The United States also intends to request of Congress an appropriation to assist in repatriating some of the aliens who went to the isthmus attracted by the construction work of the canal and have now come to constitute a serious unemployment problem for Panama.

The clause binding lessees or contractors of restaurants to purchase their provisions from or through the commissaries will be abrogated. The United States government furthermore is prepared to make the necessary arrangements in order that Panama may establish at the terminal ports of the canal, houses and guards to collect duties on importations destined to other portions of Panama and to prevent contraband trade.

President Arias' trip to Washington proved to be a popular move, in line with the increasingly nationalistic sentiment evidenced in Panama. On July 8 there had been a demonstration by 5000 Panamanians before the Presidential palace demanding the deportation of unemployed foreign workmen (mostly West Indians) as a relief measure for native workmen. In August, President Arias and members of his Cabinet had joined in signing a consumers' agreement designed to increase the use of local goods; the signers pledged themselves not to purchase foreign foods or manufactures if similar goods made or produced in Panama were obtainable. On the President's return from Washington by airplane he received one of the greatest ovations in Panama's history. En route he made stopovers at Mexico City, San Salvador, and Managua and was everywhere accorded the highest honors. Before he reached Panama the restrictions upon Panama Canal facilities and commissaries agreed to by President Roosevelt were placed in effect by the American Governor of the Canal Zone.

DEFAULT ON LOAN SERVICE. Despite the economies effected by President Arias, his government was unable to meet the interest payment due May 15, 1933, on a \$11,000,000 loan secured from the National City Bank of New York in 1928. The bonds were secured by liens on specified internal revenues and funds and on the \$250,000 annuity from the U. S. government. Income from these sources was said to be more than sufficient to meet the loan service charges. Readjustment of the terms of the loan was announced by the Panamanian government Nov. 23, 1933. The plan called for suspension of sinking-fund payments during 1933, 1934, and 1935 and for payment of about one-third of the stipulated interest during the same years to bondholders who accepted the plan.

A moratorium law reducing the rate of interest on certain private debts, extending the maturity thereof, or guaranteeing the obligation was promulgated by decree on May 25, 1933, and extended to Aug. 31, 1934, by the decree of Dec. 22, 1933.

PANAMA CANAL. Traffic through the Panama Canal during 1933 showed some improvement over that recorded in the previous year and in tonnage and total number of ships was not far below that recorded for the year 1931. Toll-paying commercial traffic for the year—which includes all ocean-going vessels, except those in direct

service of the United States, Panamanian, and Colombian governments, including vessels chartered by those governments, and vessels transiting solely for repairs—numbered 4939 vessels, comprising a net tonnage of 25,251,759 tons, as against 4367 vessels of 22,636,141 net tons in 1932, and 4972 vessels of 25,560,252 net tons in 1931. The tolls paid by this traffic were \$21,422,273 in 1933, \$19,685,671 in 1932, and \$22,530,820 in 1931. The accompanying table shows the 1933 transits and toll collections by months.

PANAMA CANAL TRANSITS AND TOLLS, 1933

Month	Transits	Tolls
January	415	\$1,762,808.56
February	368	1,575,708.35
March	399	1,718,908.41
April	370	1,554,250.14
May	372	1,617,943.65
June	364	1,629,411.28
July	401	1,732,164.93
August	416	1,829,754.49
September	408	1,758,587.41
October	467	2,036,909.16
November	463	2,001,692.77
December	496	2,204,134.64
Total	4,939	\$21,422,273.79

Of the total number of vessels using the canal the largest number was of United States registry with 1993 transits and 9,886,567 tons of cargo; Great Britain was second in number and in cargo, with 1058 transits carrying 4,402,714 tons. Dropping down in number and tonnage followed the order: Norway, 399 vessels carrying 1,789,501 tons; Japan, 226 vessels with 1,342,198 tons; Germany, 314 vessels with 911,153 tons; Sweden, 108 vessels with 591,827 tons; Danzig, 59 vessels with 494,209 tons; Denmark, 124 vessels with 469,239 tons. Other nations contributing to the traffic through the canal were, Belgium, Chile, Colombia, Holland, Finland, France, Greece, Honduras, Italy, Mexico, Panama, Peru, Venezuela, Yugoslavia.

PANAMA CANAL ZONE. A strip of land extending for five miles on each side of the Panama Canal ceded to the United States by Panama in the treaty of Nov. 18, 1903. Area, 552.8 square miles, of which 361.7 square miles are land and 191.1 square miles water. The population in June, 1933, included 31,839 civilians (2879 Americans) and 11,012 members of the United States Army (9706) and Navy (1306), or a total of 42,851, compared with 42,070 on June 30, 1932. Of the civil population in June, 1933, 7346 were employed by the Panama Canal and the Panama Railroad Co.; about 5250 employees lived outside of the Canal Zone. The birth rate per 1000 of population in 1932 was 11.69 in the Canal Zone (32.32 in Panama City and 30.77 in Colon); death rate, 7.30 (15.90 in Panama City and 14.43 in Colon). A Canal Zone Junior College was opened at Balboa on Sept. 26, 1933.

For the fiscal year ended June 30, 1933, net revenues from Canal operations proper were \$10,775,500, compared with \$11,194,800 in 1931-32; they were \$7,449,344 below revenues collected in the peak year of 1928. The combined net revenues accruing from the Canal and its business units totaled \$11,911,209 on a capital investment of \$533,106,009, or a return of 2.23 per cent on the investment. These figures were exclusive of the operations carried on with funds of the Panama Railroad Co., which resulted in a net profit of \$784,432 (\$782,464 in 1931-32). Including canal tolls of \$19,621,159, postal and

civil revenues of \$310,014, and business profits of \$1,135,709, total revenues of the Canal Zone government were \$21,066,861 (\$21,591,108 in 1931-32) and net appropriation expenses (after deduction of Canal earnings repaid to appropriations) were \$9,155,672 (\$9,839,212 in 1931-32).

The status of the Canal Zone is that of a military reservation, under a Governor appointed by the President of the United States. The Canal Administration controls sanitation and quarantine in the cities and harbors of Panamá and Colón, although they remain within the political jurisdiction of Panama. Governor in 1933, Col. Julian L. Schley. See PANAMA CANAL.

PAN AMERICAN CONFERENCE. The Seventh International Conference of American States, which met at Montevideo, Uruguay, from December 3 to 26, 1933, gave new vigor and impetus to the Pan American movement. The conference convened under discouraging circumstances. It had been postponed from December, 1932, due to the unfavorable economic and political situation. These adverse conditions had improved but little by December, 1933. The failure of the World Economic Conference in London during the summer set an unfortunate precedent and the press of the American countries was uniformly pessimistic concerning the prospects of the Montevideo gathering. This pessimism was deepened by President Roosevelt's announcement on the day before the American delegation sailed that unsettled conditions made it inadvisable for the conference to discuss economic problems.

Due largely to the able diplomacy and sincerity of Secretary of State Cordell Hull, head of the United States delegation, the national rivalries, mutual suspicions, and discouragement which pervaded the opening days of the conference were quickly relegated to the background. Manifesting an unexpected spirit of unity and coöperation, the conference set an unusual record of tangible accomplishment in both the political and economic fields. This transformation in the atmosphere of the conference was made possible by Mr. Hull's success in winning the friendship and coöperation of the Argentine Foreign Minister, Señor Saavedra Lamas. The Argentine Foreign Minister, through the instrumentality of the Argentine Anti-War Pact, had been vigorously building a bloc of South American nations opposed to the predominant position of the United States in the western hemisphere (see ARGENTINA under *History*). Secretary Hull not only offered the signature of the United States to the Argentine Anti-War Pact but also urged Señor Saavedra Lamas to take the lead in extending the application of Pan American peace machinery and attempting a settlement of the warfare between Bolivia and Paraguay in the Chaco. The Argentine Foreign Minister accepted this friendly gesture in like spirit, signing on behalf of his country the Kellogg-Briand Pact, which Argentina had previously declined to accept. The conference was attended by ten foreign ministers, one ex-president, and three ministers of finance.

THE CHACO TRUCE. The problem of immediate importance confronting the delegates at Montevideo was the reestablishment of peace in the Chaco. The matter was not on the agenda, but President Terra of Uruguay voiced the sentiment of the delegates when he stated in his opening address that the conference must of necessity face this issue before it could hope to accomplish anything in other fields. The combined influence of the nations represented at Montevideo was brought

to bear upon the belligerents and after two weeks of negotiation both Bolivia and Paraguay agreed to a truce from midnight, December 19, to December 31. The conference delegated to the League of Nations Chaco Commission, which had arrived in Asunción, Paraguay, November 18, the task of formulating a permanent peace settlement during the period of the truce. No agreement was in sight when the conference adjourned and accordingly the belligerents were induced to extend the truce to January 6 to give time for additional negotiations. Before the conference adjourned it adopted several resolutions seeking to promote a settlement of the Chaco dispute. One resolution pledged the Pan American countries to support "whatever formula of settlement might be reached" by the League Chaco Commission. Another approved an Argentine proposal for a conference of the belligerents and the ABCP powers (Argentina, Brazil, Chile, Peru) in Buenos Aires to consider the economic and geographic problems at issue between Bolivia and Paraguay. A final resolution, adopted on motion of Secretary Hull December 26, urged the two nations to "accept juridical processes for the solution of their differences." For the warfare in the Chaco and the peace efforts of other agencies, see *BOLIVIA* under *History*.

PEACE MACHINERY STRENGTHENED. The conference supplemented its efforts to mediate the Chaco dispute by adopting a resolution urging those American governments which had not already done so to ratify or adhere to the various treaties and agreements designed to promote the peaceful development of Pan American relations. These instruments included the Gondra treaty signed at the Santiago conference in 1923, the inter-American conciliation and arbitration conventions signed at Washington in 1929, the Kellogg-Briand Pact of 1928, and the Argentine Anti-War Treaty of 1933. Many delegations complied with the spirit of the resolution by signing immediately those instruments not previously accepted by their respective governments.

INTERVENTION RENOUNCED. Even more important was the action of the conference in adopting a convention which expressly declared that "No State has the right to intervene in the internal or external affairs of another." The intervention resolution, which was aimed chiefly at the United States, had caused dissension at the Sixth Pan American Conference at Havana in 1928, where it had been side-tracked at the insistence of Secretary of State Hughes. The issue was brought up early in the seventh conference by the Cuban and Haitian delegates and with the consent of the United States delegation was debated at length previous to the vote on the resolution. In the course of the debate Secretary Hull made a historic pronouncement pledging his government to a non-intervention policy. He said in part:

Every observing person must by this time thoroughly understand that under the Roosevelt administration the United States government is as much opposed as any other government to interference with the freedom, the sovereignty or other internal affairs or processes of the governments of other nations. . . . I feel safe in undertaking to say that under our support of the general principle of non-intervention as has been suggested, no government need fear any intervention on the part of the United States under the Roosevelt administration. . . .

In voting to accept the non-intervention clause, Secretary Hull stated that the United States would follow its existing policies until the 10 separate articles of the resolution had been authoritatively interpreted and codified. To become

binding on the United States, the resolution required ratification by the Senate.

RESOLUTION ON ECONOMIC POLICY. President Roosevelt's injunction against discussion of economic problems was withdrawn soon after the conference convened, thus paving the way for the adoption of a suggested programme of economic, commercial, and tariff policy, to be pursued by the American governments in their relations with one another and with the world. The resolution, formulated by Secretary Hull and introduced by him on December 12, contained the following points: (1) reduction of high trade barriers through the negotiation of comprehensive, bilateral reciprocity treaties based upon mutual concessions; (2) the elimination of trade restrictions which almost completely exclude international competition; (3) inclusion of the unconditional most-favored-nation clause in all tariff agreements; and (4) creation of an international agency to report on the progress of governments in reducing tariff barriers. The resolution, which was adopted by the conference on December 15, exempted from its scope such temporary economic measures as those placed in effect in the United States to promote economic recovery. Moreover the resolution committed no government to immediate action.

Further steps toward economic and financial coöperation were taken by the conference through the adoption of a resolution providing for the convening of the Third Pan American Financial Conference at Santiago, Chile, and of a Pan American Commercial Conference at Buenos Aires immediately following the Santiago conference.

OTHER ACHIEVEMENTS. In addition to the above measures, the conference at Montevideo adopted a series of other resolutions setting up the goals of Pan American progress in the fields of intellectual coöperation, social endeavor, communications, and transportation. The codification of international law was advanced through the adoption of conventions on the rights and duties of states, on nationality, on political asylum, and on extradition. The conference approved a convention on the nationality of women, embodying the principle that there should be no distinction based on sex as regards nationality in the legislation or practice of the signatory states. This convention recommended that the respective states extend equal civil and political rights to women as soon as possible.

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PAN AMERICANISM. As a result of the visit of the Argentine President, General Justo, to Brazil on October 10 a non-aggression pact and nine additional treaties of lesser importance were signed. Argentina and Brazil were joined in these accords by four other Latin-American nations—Chile, Mexico, Paraguay, and Uruguay. This anti-war pact condemns wars of aggression and pledges the signatories (three of whom—Argentina, Brazil, and Uruguay—had never signed the Briand-Kellogg Pact) to settle controversies "only through the pacific means established by international law." Formal approval is given to the Stimson doctrine of non-recognition of territorial

changes effected by armed force. In case of violation of the pact by any one of the parties, both consultation and a mild type of sanctions are envisaged. The treaty establishes closer understanding between Argentina and Brazil, the two leading powers of the southern continent, whose naval rivalry was a prominent issue before the Santiago Conference of 1923. Its signature represents another advance for the vigorous policy of the Argentine's Foreign Minister, Dr. Saavedra Lamas, that had previously resulted not only in the consummation of trade treaties with Great Britain, Italy, and Chile, but also in the return of Argentina to the League of Nations on September 25, with its subsequent election to the Council.

This new pact may have no immediate effect on the Chaco "war," but its acceptance by Paraguay, one of the parties to the conflict, places that country on record against wars of aggression and the acquisition of territory by force. Despite Paraguay's declaration of a state of war on May 10, its legal claim to be acting in self-defense is strengthened. The union of the other states with Paraguay in the treaty is believed correspondingly to weaken the diplomatic position of Bolivia.

The Seventh Pan American Conference, originally scheduled to meet at Montevideo in December, 1932, was postponed to convene in December, 1933. The programme and details for this conference were arranged by the Union. See PAN AMERICAN CONFERENCE.

Among the outstanding exhibits at the Century of Progress International Exposition at Chicago was a model of the Columbus Memorial Lighthouse of the Dominican Republic. Pursuant to a resolution of the Fifth Pan American Conference, a Memorial to the Discoverer, in the form of a lighthouse, is to be erected on the coast of the Dominican Republic, near Santo Domingo, the first permanent European settlement in the New World. The last report of the Director General of the Union recorded the selection of the design for the lighthouse submitted by J. L. Gleave, of England, following a world-wide architectural competition. Because of prevailing economic conditions, the Permanent Committee entrusted with this project proposed and the Governing Board concurred in the suggestion that no efforts toward the collection of funds for the actual erection of the Memorial be made until the economic situation has improved. It is believed that the action of the Dominican Republic in erecting a model of the Memorial at the Chicago Exposition will stimulate interest in the project.

Pan American Day, April 14, instituted by the Governing Board of the Union as a commemorative symbol of the sovereignty of the American nations and the voluntary union of all for the common good, was duly observed throughout the Continent. With each succeeding year, Pan American Day is being celebrated on an ever wider and increasing scale, until it is gradually becoming one of the outstanding events in all the countries, members of the Union. Gratifying reports have been received of the exercises held during the past year, particularly in schools, clubs, and in associations interested in Pan American relations. The President of the United States delivered an address at a special session of the Governing Board which was broadcast throughout the Continent and was an outstanding feature in the celebration of the day. As a part of the programme of the celebration the Minister of Venezuela on behalf of his government presented to the Union

a marble bust of Francisco de Miranda. This was made the occasion of a significant ceremony participated in by the Governing Board as well as by representatives of the universities and public schools of Washington and vicinity.

In December, 1932, the First Congress of the Pan American Institute of Geography and History was held at Rio de Janeiro. This Institute created by resolution of the Sixth International Conference of American States has established a seat at Mexico City, where the government of Mexico has provided an attractive and commodious building for it.

In common with the other nations of the world, the prevailing economic situation has engaged the attention of all the nations of the American Continent. As a consequence, and with a view to bringing about a revival of international trade and a resumption of more normal international commercial intercourse, the past year witnessed a series of important conferences and conversations between representatives of the several countries, and the conclusion of a number of important agreements. These discussions culminated in the conversations which took place at Washington during May and June, as a preliminary to the Monetary and Economic Conference which met at London on June 12, 1933.

During the fiscal year the Pan American Union devoted special attention to the development of closer cultural ties between the Republics of America. There were two notable events, the exhibit of oil paintings by Cesareo Bernaldo de Quiros, the eminent Argentine artist, at the National Gallery of Art, Washington, D. C., in January and an exhibit of woodcuts, etchings, aquatints, lithographs, and dry-points by Argentine artists, at the Corcoran Gallery of Art, Washington, D. C. in April, 1933.

During the year the various Divisions of the Union devoted considerable time to giving effect to the resolutions and recommendations adopted by the various technical conferences of a Pan American nature held during the preceding year, as well as to the resolutions of the Fourth Pan American Commercial Conference which assembled under the auspices of the Union in October, 1931. After the Governing Board had approved the final programme of the Montevideo Conference, work was begun on a series of memoranda on the questions included in the programme. These memoranda were included in a manual for the use of delegates.

In its capacity as the permanent organ of the International Conference of American States, the Pan American Union has spared no effort to secure the ratification by the signatory states of the conventions signed at the Sixth International Conference of American States held at Havana in January, 1928, as well as of those signed at the technical conferences held subsequent thereto.

The principal efforts of the Inter-American Commission of Women, during 1933, were devoted to preparations for the Seventh International Conference of American States, which opened in Montevideo on December 3. The Nationality Committee of the Commission, under the chairmanship of Miss Alice Paul, U. S. A., drew up its report showing existing nationality discriminations and recommending a Pan American treaty guaranteeing equal nationality rights for men and women. This report was adopted by the full Commission prior to the Pan American Conference. The Con-

ference adopted the Commission's report unanimously.

A research committee, headed by Miss Doris Stevens, chairman of the Inter-American Commission, analyzed the legal codes of the twenty-one republics forming the Pan American Union, listing in separate volumes the discriminations, based on sex, discovered in the different current laws. This is the first time an analysis had been made from the point of view of comparing the civil and political rights of men and women in detail. Based on these discriminations, the Inter-American Commission drew up a report recommending the adoption by the Pan American Conference of a treaty guaranteeing equal civil and political rights for men and women. The Conference committee declined to recommend to the full Conference the signature of a treaty, but substituted a resolution of recommendation, which the Conference adopted. Four countries, however, Uruguay, Paraguay, Cuba, and Ecuador, signed such a treaty, and the document was duly deposited with the Foreign Minister of Uruguay, open to the adherence of all nations in the world. The signature of both these treaties was generally regarded as an important contribution to the advancement of women's legal status in the field of international law.

PAN AMERICAN UNION, THE. An official international organization, founded in 1890 as the International Bureau of American Republics and maintained by the 21 republics of the Western Hemisphere for the development among them of good understanding, friendly intercourse, commerce, and peace. It is controlled by a governing board, composed of the Secretary of State of the United States and the diplomatic representatives at Washington of the other republics, and is administered by a director general and an assistant director chosen by the board.

The most important activities of the Union during 1933 were the convening in Montevideo, Uruguay, on Dec. 3, 1933, of the Seventh International Conference of American States (see **PAN AMERICAN CONFERENCE**) and the rendering of the award on Jan. 23, 1933, by the international tribunal in the boundary controversy between Guatemala and Honduras (see **GUATEMALA**). The tribunal, which was created by a treaty signed in Washington July 16, 1930, held its sessions at the Union Building, with the Hon. Charles E. Hughes, Chief Justice of the United States, presiding. The other arbitrators were two distinguished Latin American jurists, Dr. Luis Castro Orefia of Costa Rica and Dr. Emilio Bello Codesido of Chile. The final settlement of this century-old dispute brought to a close another chapter in the impressive history of arbitration and conciliation in the settlement of international differences.

The General Claims Commission, to which was entrusted the task of passing upon unsettled claims of citizens of the United States and Panama arising since the independence of Panama (Nov. 3, 1903), completed its work and adjourned at a session held at the Union on June 30, 1933. The members were Elihu Root, Jr., American commissioner; Dr. Horacio F. Alfaro, Panamanian commissioner; and Baron Daniel van Heeckeren of the Netherlands, presiding commissioner. The Permanent Committee of Washington, created by the terms of the Treaty to Avoid or Prevent Conflicts between the American States, signed at the Fifth Pan American Conference at

Santiago, Chile, in 1923, held a number of meetings during the year with a view to offering its good offices and making available its facilities in bringing about a settlement of the controversy that developed between Colombia and Peru over the Leticia incident. See **PERU** under *History*.

During the week of Oct. 30, 1933, the famous archaeological treasures unearthed at Monte Albán, Mexico, were exhibited to 10,000 visitors at the Pan American Union building in Washington, D. C., through the courtesy of the Mexican government. Concerts of Latin American music sponsored by the Pan American Union were given on the esplanade of the building on June 7 and July 5, by the United States Marine and Army Bands, respectively. Secretary of State Cordell Hull was elected Chairman of the Governing Board of the Union on Apr. 5, 1933, to fill the vacancy left by the retirement of Henry L. Stimson. On Nov. 1, 1933, the Board elected Dr. Pedro M. Arcaya, Minister of Venezuela, as Vice Chairman for 1933-34. The Third Pan American Highway Congress, scheduled to meet in 1933 in Chile, was postponed.

The office of the foreign trade adviser of the Union continued to provide a general commercial information service on all phases of Latin American trade. The division of finance supplied current information on developments in public and private inter-American finance and prepared an annual study on Latin American revenues, expenditures, and public debts. The statistical division prepared reports on the trade of the Pan American nations, as well as a general survey of the commerce of all Latin America. The division of agricultural cooperation was active in promoting the exchange of information on subjects embracing almost the entire range of agriculture, forestry, and animal industry throughout the American continent.

During 1933 the Union issued bi-monthly, in Spanish and Portuguese, four special series of bulletins on agriculture, on education, on social welfare, and on finance, industry, and commerce. The library, known as the Columbus Memorial Library, contains the largest special collection of books and periodicals on Latin America in the world. The director general is Leo S. Rowe, Ph.D., LL.D.; the assistant director, Esteban Gil Borges, LL.D. Headquarters are at the Pan American Union Building, Washington, D. C.

PAN-PACIFIC UNION, THE. An organization founded in 1907 for the purpose of bettering relations among Pacific peoples, chiefly through the calling of frequent conferences in all lines of thought and action in the Pacific area. During the last two decades there have been called international and interracial conferences of scientists, educators, journalists, merchants, agriculturists, food conservationists, and fishery men. Practically each one of these groups, once brought together, has formed its own permanent autonomous Pan-Pacific organization and has called and managed its own Pan-Pacific conferences.

The organization has been supported in part by appropriations from the governments of the Pacific—the United States, Canada, Australia, New Zealand, Japan, China, Siam, the Netherlands East Indies, French Indo-China, and Mexico. It is now urged that these governments take over the machinery of the Pan-Pacific Union, financing it as their official mouthpiece, and that the Union's honorary heads, the presidents, premiers, and governors of Pacific lands, gather periodically in

Honolulu for a friendly conference on Pacific affairs.

During 1933 the director of the Union, Alexander Hume Ford, continued his travels in China, Japan, and the Philippines, organizing student and adult Pan-Pacific clubs which would continue to function as open forums for the peoples themselves. On the death of Wallace R. Farrington in October Walter F. Frear, a former governor of Hawaii, was named acting president. The central executive office is in Honolulu, T. H.

PAPER AND PULP. As stated in the *YEAR BOOK* for 1932, the paper trade suffered greatly in that year under the ruinous practice of cut-throat competition. The effect of those conditions carried over into the early months of 1933; hence, though to some extent previously rectified by the industry, the basic provisions of the National Recovery Act were hailed with relief. By the beginning of 1933, according to *Paper Trade Journal*, from whose annual review number the following article is based, prices had advanced somewhat from the ruinous prices of the previous summer. Kraft paper, for example, had risen to about fifty dollars from the losing price of \$40 a ton of a few months earlier. With the establishment of the code of fair competition, coupled with an improved fall demand, the price advanced in October to \$77.50 a ton, closing the year at that price.

The paper machines of the United States produced during the year 8,893,000 tons of paper, an improvement by 11 per cent over the 7,998,000 tons produced in 1932, although only about 63 per cent of the machine capacity, and about 2,250,000 tons below the peak production of 1929.

Newsprint, the first of the products to feel the effects of increased demand, began a market recovery in April. According to the News Print Service Bureau the total North American output for the year was 3,250,579 tons, the greater portion of which, 2,017,000 tons, was produced in Canada, a gain of 5.3 per cent. The United States production was 946,374 tons, a gain of 6.2 per cent; Newfoundland, 270,830 tons, a decline of 0.4 per cent, and Mexican, 16,370 tons, a gain of 29 per cent. The total continental increase over 1932 was 43,188 tons. The adoption of the code of fair competition by manufacturers in the United States was followed by the formation of the Newsprint Export Manufacturers Association of Canada which cooperated with the Association of Newsprint Manufacturers in the United States in effecting a working of the code. But to prevent dumping by Canadian manufacturers, the United States government required the posting of a bond for each carload imported pending the working out of the application of the code.

The total production of book paper in the United States in 1933 was about 1,200,000 tons, or about 70 per cent below capacity and with little improvement in quantity over the previous year. The code ultimately adopted did not receive Presidential approval until November, and though future prospects looked brighter, the general situation remained but slightly improved over the previous year. The coated-paper division shared the general condition, reflecting a great improvement at the end of the year over the practically stagnant conditions in the first few months.

Estimates of wood pulp production during the year placed the United States in leading position with about 16,000,000 long tons dry weight, or about one-fourth of the world's production, with

Canada second, and Sweden third. Canadian exports of pulp amounted to 12,170,186 cwt. as compared with 9,045,857 cwt. in 1932, and of pulpwood to 651,958 cords as compared with 529,019 cords in 1932.

The total value of imports of paper and manufactures into the United States in 1933 amounted to \$77,446,538, of which newsprint represented 88 per cent. Imports in 1932 amounted to \$94,089,418, a similar percentage being represented by newsprint. Imports of paper base stocks totaled \$85,329,100 (\$54,446,020 in 1932). Exports of paper and manufactures from the United States totaled \$14,599,007 as compared with \$15,407,559 in 1932. Exports of paper base stocks totaled \$3,861,967 (\$2,707,277 in 1932).

PAPUA, pā'pō-ā or pā'pū-ā. A territory of the Australian Commonwealth, comprising the southeastern area of the island of New Guinea and all the groups of small islands between 8° to 12° S. and 141° to 155° E. Total area, 90,540 square miles of which 87,786 square miles are on the island of New Guinea. The population (June 30, 1932) consisted of some 275,000 natives and 1128 whites. Port Moresby, the capital, had 2075 inhabitants. For the fiscal year ended June 30, 1933, revenue amounted to £127,043; expenditure, £128,421; imports, £218,301; exports, £248,712; shipping entered and cleared (1931-32) aggregated 335,858 tons. Lieutenant-Governor in 1933, Sir J. H. P. Murray.

PARAGUAY, pār'ā-gwā. An inland republic of South America. Capital, Asunción.

AREA AND POPULATION. The area of Paraguay, including that part of the Chaco Boreal under dispute with Bolivia, was estimated at 176,000 square miles. The population in 1930 was estimated at 852,000, the people being mainly of Spanish or mixed Spanish and Indian blood. There were about 67,500 residents in the Chaco, including some 15,000 Indians in a savage state. The populations of the chief cities in 1926 was: Asunción, 113,684 (228,600 in 1930); Villarrica, 26,000; Concepción, 11,000; Luque, 13,000; Carapeguá, 12,000; Paraguari, 10,000.

EDUCATION. Primary education is free and nominally compulsory. In 1931, there were 1572 public and private elementary schools, with 108,741 pupils; 48 private secondary schools, with 4372 pupils; a high school at Asunción, with 1121 students; and the National University at Asunción, with 349 students.

PRODUCTION. The principal occupations are agriculture, stock raising, and lumbering. The chief crops are yerba maté (native tea), tobacco, cotton, sugar, corn, rice, and beans. Production figures for the 1931-32 season were: Tobacco, 31,177,000 pounds; cotton lint, 7,546,000 pounds; sugar, 15,400,000 pounds. The 1926 census showed 2,973,000 cattle, 45,483 swine, 195,192 sheep, and 209,901 horses. Quebracho extract (exports, 109,357,000 pounds in 1932) and construction lumber are the chief forest products. Mineral deposits remain largely unexploited. The chief manufactured products are packed meat, animal by-products, quebracho extract, beverages, and shoes.

COMMERCE. Paraguayan imports in 1932 were valued at 6,418,000 pesos (\$3,750,000), compared with 10,081,000 pesos (\$6,729,000) in 1931. Exports amounted to 12,873,000 pesos (\$7,523,000), as against 12,857,000 pesos (\$8,563,000) in 1931. Conversions to dollars were made at the average exchange rate of the gold peso. The value of the main export items in 1932 (in United States dol-

lars) was: Quebracho extract, \$1,943,000; meat extract, \$1,810,000; cattle hides, \$686,000; yerba maté, \$660,000; canned meats, \$517,000. The chief imports were cotton cloth, wheat flour, iron and steel, machinery, and mineral oils. Imports in 1932 came mainly from the following countries: Argentina, \$1,454,000; United States, \$481,000; United Kingdom, \$448,000. The principal export markets were: Argentina, \$7,097,000 (including goods in transit); Uruguay and France. Direct imports from and exports to the United States (1933) were valued at \$450,653 and \$261,931, respectively.

FINANCE. For the fiscal year ended Aug. 31, 1930, total government receipts were 275,096,000 paper pesos (ordinary revenue, 268,656,000 pesos) and total expenditures were 286,549,000 paper pesos (ordinary, 279,028,000). For 1930-31, total receipts were 227,468,000 paper pesos (ordinary 227,099,000) and total expenditures 230,364,000 paper pesos (ordinary, 226,778,000 pesos). The public debt on Nov. 30, 1931, was as follows: External, 695,104 pounds sterling and 56,856 Argentine gold pesos; internal, 93,602,224 paper pesos, of which 65,100,729 represented the consolidated debt. The paper peso previous to 1934 had a par value of \$0.0226 United States currency; the average exchange rate in 1932 was \$0.0137.

COMMUNICATIONS. The main artery of commerce is the Paraguay River, which is navigable as far north as Concepción to vessels of 12-foot draft. Asunción, the main river port, is 950 miles from the Atlantic. In 1931 vessels entering the port numbered 3535; their aggregate tonnage was 392,333 tons. Railway lines extended 632 miles in 1931. There are few highways, transport in rural districts being mainly by bullock carts.

GOVERNMENT. The Constitution of 1870 vests executive power in a President, elected for four years, and legislative power in a Congress of two chambers—the Senate, of 20 members, elected for six years (one-third every two years), and the Chamber of Deputies, of 40 members, elected for four years (one-half every two years). President in 1933, Dr. Eusebio Ayala, who assumed office Aug. 15, 1932. For history in 1933, see **BOLIVIA**, **BRAZIL**, and **ARGENTINA** under *History*; **PAN AMERICAN CONFERENCE**; **LEAGUE OF NATIONS**.

PARATUBERCULOSIS. See **VETERINARY MEDICINE**.

PARIS, FRANCE. See **AQUEDUCTS**.

PARK COLLEGE. A nonsectarian institution for the higher education of men and women at Parkville, Mo., founded in 1875 and cooperating with the Presbyterian Church in the United States of America. The enrollment for 1933-34 totaled 448. The faculty numbered 32. The endowment funds amounted to \$1,718,000, from which the income was \$54,000. Tuition and fees amounted to \$96,400 and donations to \$9000; \$19,000 was yielded from other sources. The library contained 26,000 volumes. There was completed construction of a Y. W. C. A. building, the Meetin' House. President, Frederick W. Hawley, D.D., LL.D.

PARKHURST, CHARLES HENRY. An American clergyman and social reformer, died in Atlantic City, N. J., Sept. 8, 1933. He was born at Framingham, Mass., Apr. 17, 1842, was graduated from Amherst College in 1866, and for two years was principal of the Amherst High School. After studying theology at the University of Halle during 1869-70, he taught for a year at the William Seminary in Easthampton, Mass., and in 1872

was ordained to the Presbyterian ministry. He completed his theological training at the University of Leipzig during 1872-73 and on his return to the United States became pastor of the Congregational Church at Lenox, Mass. In 1880 he was called to the Madison Square Presbyterian Church in New York City, where he remained until the merger of that body with the First Presbyterian Church in 1918.

Notably effective as a preacher, even when in his seventies, Dr. Parkhurst had early attracted attention by sermons practical, terse, and fearless. It was one of these delivered in February, 1892, denouncing the corruption of New York City's government under the Tammany political machine, that resulted in the appointment by the State Senate of the committee, headed by Clarence Lexow, which investigated the conditions of vice existing in New York City under police protection. Thanks to Dr. Parkhurst's awakening of civic consciousness, there was insured the election of William L. Strong as mayor of New York in November, 1894, on a fusion ticket of Republican and anti-Tammany Democrats.

During his presidency of the Society for the Prevention of Crime (1891-1908) Dr. Parkhurst continued to further the cause of civic and social righteousness. His death was coincident with another attempt at the overthrow of Tammany and government reform in New York City. (See **NEW YORK: Political and Other Events**). Among his publications were: *The Blind Man's Creed, and Other Sermons* (1883); *The Pattern on the Mount, and Other Sermons* (1885); *The Question of the Hour* (1886); *Three Gates on a Side* (1887); *What Would the World Be Without Religion?* (1888); *The Fellowship of Suffering* (1891); *Our Fight with Tammany* (1895); *The Sunny Side of Christianity* (1901); *A Little Lower than the Angels* (1909); *The Pulpit and the Pew* (Yale Lectures on Preaching, 1913); and *My Forty Years in New York* (1923).

PARKS, NATIONAL. On June 10 President Roosevelt issued an Executive order which among other consolidations, provided that "All functions of administration of public buildings, reservations, national parks, national monuments, and national cemeteries are consolidated in an Office of National Parks, Buildings, and Reservations in the Department of the Interior, at the head of which shall be a Director of National Parks, Buildings, and Reservations," and that this transfer and consolidation of functions "shall include, among others, those of the National Park Service of the Department of the Interior and the National Cemeteries and Parks of the War Department which are located within the continental limits of the United States." This merger of functions took effect partially on August 10 when officials of the National Park Service became officials of the new Office of National Parks, Buildings, and Reservations, and took over supervision of certain national monuments formerly under the supervision of the Department of Agriculture.

As usual, developments during the year were varied and interesting, according to the annual report of the director from which this article is taken. Outstanding among the achievements was the operation of 175 citizens civilian conservation summer camps in national parks, national monuments, national military parks, State parks, and other related areas. Approximately 35,000 young men carried on this valuable emergency conservation work.

Exclusive jurisdiction over the Hot Springs National Park in Arkansas was ceded to the Federal government by the act of the State legislature approved Mar. 25, 1933. Heretofore the Federal government had been ceded jurisdiction over three separate areas in the park. This newest cession gives exclusive jurisdiction over all lands now or hereafter to be included in the park.

Important among road achievements were the completion and dedication of the Wawona Tunnel and the practical completion of the Wawona Highway in Yosemite National Park, completion and dedication of the Going-to-the-Sun Highway in Glacier National Park, completion of the General Grant unit of the Generals' Highway, and improvement of approach roads to the Southwestern monuments. Noteworthy achievements were made in museum expansion and other phases of the educational work were conducted intensively with reduced personnel. The Division of Wild Life Studies was established as a full-time government activity. Master development plans were completed for most of the national parks and national monuments under the supervision of the National Park Service before consolidation of the various Federal functions took place. Winter sports use of the national parks continued to gain in popularity.

The Stephen T. Mather Appreciation, an organization formed to honor the memory of the first Director of the National Park Service, practically completed its work this year. In all, 18 bronze plaques have been presented to the proper authorities for placement in parks and monuments. Fifteen of these have been fittingly installed and dedicated, many of the ceremonies taking place last year on July 4, Mr. Mather's birthday.

MORRISTOWN NATIONAL HISTORICAL PARK. The first national historical park to be established, as such, was created on July 4, 1933, when the deeds to lands in the Morristown (N. J.) area were accepted on behalf of the United States and formally dedicated to public-park use. Morristown fittingly was chosen as the first national historical park, since throughout the dark days of the Revolutionary War it served as the base hospital of the Colonial Army and during the winters of 1776-77 and 1779-80 was the main camp site of the American armies.

NEW NATIONAL MONUMENTS. Five new national monuments were established during the year, as follows:

Black Canyon of the Gunnison National Monument, Colo., consisting of 11,157.76 acres; established Mar. 2, 1933. This monument takes in 10 miles of the most scenic section of the Black Canyon of the Gunnison River.

Cedar Breaks National Monument, Utah, containing approximately 5,790.05 acres, established Aug. 22, 1933. This area will come under the jurisdiction of the superintendent of Bryce Canyon and Zion National Parks, and with them and the Grand Canyon will tell the story of erosion in the area.

Death Valley National Monument, Calif., containing 1,609,800 acres; established Feb. 11, 1933. In Death Valley, the outstanding desert in the United States and made famous by the early pioneers and prospectors and later by "Death Valley" Scotty, is the lowest point in the United States.

Grand Canyon National Monument, Ariz., consisting of 273,145 acres, and immediately west of and adjacent to the Grand Canyon National Park; established Dec. 22, 1932.

White Sands National Monument, N. Mex., containing an area of 142,987 acres; established Jan. 18, 1933. With its white sand dunes of almost pure gypsum, it is of great interest from a scientific and geologic standpoint.

ADDITIONS TO EXISTING PARKS. During the past year consideration was given to the problem of

adjusting boundaries of existing parks and monuments, to simplify administration by providing natural boundaries along topographic lines, and in some cases to include areas of scenic or scientific importance. These adjustments included:

*Acadia National Park, Me.—*The total area of this park was increased to 12,812.11 acres by the donation of 452.79 acres to the Government. Credit is due John D. Rockefeller, Jr. and Superintendent Dorr of the park for this donation.

*Carlsbad Caverns National Park, N. Mex.—*An area of 9,239.94 acres was added to this park by Presidential proclamation dated Feb. 21, 1933, for administrative and development purposes. The addition of this land makes possible the improvement of the road up Walnut Canyon from the main highway to the caverns' entrance. The total area for the park is now 9,959.16 acres.

*Hot Springs National Park, Ariz.—*Through a re-survey of its old boundaries, 18.79 acres were added to this park, bringing its total area to 949.79 acres.

*Yellowstone National Park, Wyo.—*By Presidential proclamation dated Oct. 20, 1932, 7600 acres were added on the north boundary. The new area is an important winter feeding ground for the Yellowstone elk.

*Petrified Forest National Monument, Ariz.—*The addition of 53,309 acres in the famous Painted Desert, including the Black Petrified Forest and a parkway between the Petrified Forest and the Painted Desert, more than doubled its area, which now has a total of 90,302.87 acres. The new parkway serves a double purpose in that it gives direct access to the Petrified Forest from Highway U S 86, the main transcontinental highway through the State of Arizona. Enlargement of the forest was the result of exchange agreements reached with the Santa Fe Railroad and private individuals owning lands in the newly added areas.

*Grand Teton National Park.—*During the year it was proposed to add to Grand Teton Park a portion of the northern part of the Jackson Hole including more than 30,000 acres of private lands acquired by John D. Rockefeller, Jr., to be granted to the United States, over 40,000 acres of unappropriated public domain, and a tract of national-forest lands including the northern third of the Teton Range, Jackson Lake, and the road to Yellowstone. Misunderstanding of this project continued to the end of the year and the grant was not yet accepted.

WINTER USE. Use of the national parks and monuments during the winter was marked by an increased interest in all forms of winter sports, but notably in skiing. Sixteen of the national parks were open all year, with varying types of accommodations, ranging from hotel and lodge service to camp grounds for travelers carrying their own equipment. These included the Yosemite National Park, Mt. Rainier, Crater Lake, and Rocky Mountain.

EMERGENCY CONSERVATION WORK. As soon as the emergency conservation programme received presidential approval on March 31, 70 emergency conservation camps were established in national parks and monuments, including the military areas, and 105 on State park and allied lands, making a total of 175 camps thus supervised. The personnel of these camps included 35,000 enrolled men and approximately 2300 men in supervisory and advisory capacities.

All work within the areas under the jurisdiction of the National Park Service was carefully planned by experienced landscape architects, park engineers, and foresters, and in the historical and military parks historical technicians were employed to insure the careful preservation and interpretation of the historic values. The establishment of emergency conservation camps within these areas, particularly in the national parks, permitted the accomplishment of work that had been needed greatly for years, but which was impossible and would doubtless have continued impossible of accomplishment under the ordinary appropriations available.

Especially the fire hazard was reduced and the appearance of forest stands greatly improved by clean-up work along many miles of park high-

ways; many acres of unsightly burns were cleared; miles of fire trails and truck trails were constructed for the protection of the park forests and excellent work accomplished in insect control and blister-rust control and in other lines of forest protection; improvements were made in the construction and development of telephone lines, fire lookouts, and guard cabins; and landscaping and erosion control was undertaken.

PATHOLOGY. See BOTANY.

PEACE. When the Oxford Union startled England by voting not to bear arms "for King or country" echoes were soon heard in United States universities. A nation-wide poll on arms-bearing was undertaken by the Student Federation of America, the Brown University *Daily Herald*, which had editorially denounced war, and the Intercollegiate Disarmament Council. The vote showed that in 27 States, at 70 colleges, 22,627 students voted as follows: for downright pacifism, 8938 or 39 per cent; for bearing arms only in case of invasion, 7342 or 33 per cent; for bearing arms in any U. S. war, 6347 or 28 per cent. Most wholeheartedly pacifist were 13 women's colleges (49 per cent against, 23 per cent semi, 28 per cent for) and ten State colleges (42 per cent against, 37 per cent semi, 21 per cent for). Least pacific were 23 universities (37 per cent against, 33 per cent semi, 30 per cent for).

Brown University's attitude led to an investigation by the Rhode Island Legislature. Voting in the poll was forbidden at the University of Nebraska, Hartwick College (Oneonta, N. Y.) and the College of the City of New York.

Judge Joseph N. Ulman of the Superior Court of Baltimore in a formal opinion held that the University of Maryland should reinstate and exempt from drill a Methodist freshman suspended for refusal of military training on conscientious grounds. Ennis H. Coale, son of a Maryland farmer, a member of a rural Methodist church, had been denied exemption first by the college authorities and then by the Board of Regents and was suspended until he would attend R.O.T.C. drill. Supported by his family and his pastor, young Coale appealed to the courts. In a four-day hearing, the University attempted to prove that the training was not military but "citizenship"; that Methodists were not entitled to the treatment granted members of the Society of Friends; that the boy had been guilty of "insubordination" in refusing to go to military classes; and that the compulsory feature of drill was a legitimate college requirement, imposing no undue restraint upon any student. On all points the court ruled against the college authorities. The University appealed the case.

In Ohio, John P. Klassen, a Bluffton College professor, was admitted to citizenship despite the fact that he qualified his oath of allegiance to the United States by a declaration that he could not, in view of his religious convictions, bear arms. This case is likely to precipitate fresh litigation before the Supreme Court. In this instance, the presiding judge said:

The Constitution provides for religious liberty; then we make rules that all citizens must bear arms. In a case like this, the rule is contrary to the Constitution's guarantee of religious freedom. In all our past wars we have allowed our conscientious objectors to serve in the Red Cross or some other body, which does not carry arms, and probably will do so in the future. So why impose future obligations when we don't intend to enforce them?

The Federal Council of Churches, at its Quadrennial Meeting in Indianapolis, in December,

1933, reaffirmed its position with respect to the rights of conscience. The Council said:

God alone is Lord of the conscience. We hold, therefore, that citizenship should not be conditioned upon the willingness to bear arms, contrary to conscience, or to take part as a war combatant, in contradiction to moral convictions. We believe that to base citizenship upon such a test is not only unjust to the individual, but contrary to public welfare and in conflict with the ideals of a nation into whose very structure the principle of political and religious liberty has been built. Our country needs citizens who unwaveringly follow the dictates of conscience, making allegiance to God the supreme guide to life and conduct. Since 62 nations have, in the Pact of Paris, renounced war and pledged themselves to seek only the methods of peace in the settlement of their controversies, applicants for citizenship should not be required to make pledges that conflict with the spirit and intent of this Pact. We recommend such changes in the present laws of the land that citizenship shall not be conditioned upon the willingness to bear arms. Civilian educational institutions should not make military instruction compulsory.

The offer of World Peaceways to exhibit "War the Super-Racket," a one-ton book, at the World's Fair was refused by the Chicago World's Fair on the ground that it was controversial. The giant volume sponsored by World Peaceways was seven feet high and five feet wide, and was filled with signatures to a peace pledge. Loaded on a truck, it was exhibited on a tour through 14 cities.

The National Peace Congress held at Oxford, England, from July 7 to 10, 1933, was the 23rd in a series which began in 1906. Nearly 500 delegates and individual members assembled, drawn from about 120 national local organizations.

The Seventh Annual Conference of the Roman Catholic Association for International Peace was held in Washington, D. C., April 17-18. At its annual conference held at Saffron Walden, England, from August 1 to 8, the Fellowship of Reconciliation faced the challenge of the world situation to Christian people to work out a more righteous as well as a more efficient social order. It was recognized that the chief menace to international peace lies in the "push and grab" spirit which is also the cause of so much social and economic failure.

Arthur Henderson, president of the Disarmament Conference, had conferred on him the Wateler Peace Prize of 1933, for "valuable services in furthering disarmament and promoting the peace of the world." Mr. Henderson was chosen as recipient of the prize by the Carnegie Foundation at The Hague.

The Federal Council of Churches presented a programme for world justice and peace. It was laid before Secretary of State Hull on Apr. 17, 1933, by a delegation of churchmen headed by (Methodist) Bishop William F. McDowell, of Washington. The Federal Council's policies, as explained by Bishop McDowell, were put forward as concrete means of making the Christian interest in world understanding and goodwill effective in the relations of nations. Bishop McDowell, on behalf of the delegation, expressed deep appreciation of the international vision being shown by President Roosevelt and Secretary of State Hull in their handling of pressing national and world problems. The Council's representatives placed in Secretary Hull's hands a copy of the "Statement on Coöperation in International Problems," which had been adopted by the Council's Executive Committee on March 24, as follows:

The Executive Committee of the Federal Council of the Churches of Christ in America believes that the well-being of the United States intimately depends on the well-being of the world as a whole and that this in turn

depends on the unqualified success of the Disarmament Conference in reducing arms and in establishing right conditions for enduring peace. In such an outcome the churches, committed to the gospel of brotherhood and peace, are supremely interested. We accordingly express our earnest hope that our government will authorize its delegation to the Conference vigorously to support large and courageous plans looking toward a drastic reduction of armaments.

The extraordinary menace of aerial warfare to civilian populations creates mental and moral reactions that are peculiarly inimical to right and friendly international relations and to all spiritual values. We therefore believe that the complete abolition of all naval and military aircraft, except for police purposes, is an essential part of any effective disarmament programme. We earnestly hope that our government will cordially cooperate with the nations in such a programme. In order to make this possible we urge cooperation by the United States in perfecting plans for the international supervision of civilian aviation, with a view to preventing the misuse of such aviation for military purposes.

We pledge our hearty support to our government in assumption of its full part in the new system of collective responsibility for world justice, security, and peace. We hold that every international issue should be solved without resort to the sword and that every controversy, whatever its origin or nature, should be submitted for impartial consideration and settlement. In the maintenance of this collective system the United States should cooperate fully. We therefore urge early membership of our country in the Permanent Court of International Justice, official commitment to the obligation of international conference whenever the menace of war may threaten, and the adoption of some plan for continuous, full, active cooperation with the League of Nations.

We believe that the forthcoming World Economic Conference is of crucial importance to the well-being of our own and of other nations and respectfully urge the imperative need of devising such measures through international cooperation as will restore the world's trade and industry.

The Christian principle that we are all "members of one another" and should "bear one another's burdens" should, we believe, be translated into reality in our international life. In keeping with this principle we believe that the economic, moral, and spiritual interests of our people require prompt and favorable response to the requests of foreign nations for reconsideration of the problems arising out of intergovernmental war-debts.

We deeply appreciate the indications already given by President Roosevelt that such considerations as these weigh heavily in his thinking and pledge him that we will exert our best efforts to secure expression of the widespread convictions supporting these objectives.

Turkey and Greece signed an amity treaty at Angora on September 16. This was a part of the plans of Kemal Pasha, the first president of the Republic of Turkey, to stabilize the Balkan situation. The treaty runs for a period of ten years and was believed to be a prelude to a much desired Balkan Union.

Seven states that border on the Soviet Union signed in July a unique pact against aggression. In 1928 nearly all nations signed the Briand-Kellogg Pact "renouncing war as an instrument of national policy," but that defined nothing, least of all aggression, the primary act of war. For the first time in history aggression was defined in a binding treaty which Russia signed along with Poland, Rumania, Turkey, Persia, Afghanistan, Estonia, and Latvia. "There shall be recognized as an aggressor," declared this pact, "that state which shall be the first to have committed one of the following actions:

First—a declaration of war on another state.

Second—invasion by armed forces of the territory of another state even without a declaration of war.

Third—attack by its land, sea, or air forces, even without declaration of war upon the territory, on the vessels or flying machines of another state.

Fourth—a naval blockade of coasts or ports of another state.

Fifth—support accorded armed bands which are organized on its territory and which shall have invaded the territory of another state; or refusal, in spite of the demand of the invaded state, to take on its own territory all steps in its power to deprive the bandits aforesaid of all aid or protection.

The Four Power Pact, signed at Rome on July 15, was considered to be an international paper of the first rank. It was due primarily to the initiative of Signor Mussolini, in whose office at the Palazzo Venezia it was signed by the Duce, and by the Ambassadors of France, of England, and of Germany. This Pact, in the judgment of peace men, resulted in a deeper confidence that peace lies before Europe for at least a period of ten years. See ITALY under *History*.

The International Peace Bureau, with headquarters in Geneva, issued an appeal to the public opinion of the world concerning chemical warfare. The appeal, while disavowing any desire to attempt the "humanization" of war, recalls that there has been a large measure of agreement in the Disarmament Conference in condemnation of the use of poisonous gases and urges citizens of every country to bring the greatest possible weight of public influence to bear on their respective governments with a view to securing a declaration from the Conference on the illegality of all preparation for or use of chemical warfare.

The 105th Annual Meeting of the Board of Directors of the American Peace Society was held at the headquarters of the Society, 734 Jackson Place, Washington, D. C., May 26, 1933, President John J. Esch presiding.

Dr. Nicholas Murray Butler, President of the Carnegie Endowment for International Peace and of Columbia University, broadcast over Columbia Network an appeal to the United States to join in the movement to end the present economic war which is laying waste the world's trade. Dr. Butler is chairman of the National Advisory Council of the League of Nations Association and his address was a feature of the dinner programme at the three-day convention which the League of Nations Association was holding in St. Louis. At this convention the 10th anniversary of the League of Nations Association was celebrated.

The fifth Biennial Conference of the World Federation of Education Associations was held in Dublin, Ireland, from July 29 to August 4. Previous conferences had been held in Edinburgh, 1925; Toronto, 1927; Geneva, 1929; Denver, Colo., 1931. The number of delegates registered was a few hundred in excess of a thousand. In all, 27 countries were represented. The Congress recommended that the educational material gathered together by the Herman-Jordan Committees to be used for the purpose of furthering international understanding and goodwill, should be printed.

PEEK, FRANK WILLIAM. An American electrical engineer, died at Port Daniels, Que., Canada, July 26, 1933. He was born at Mokelumne Hill, Calaveras Co., Calif., Aug. 20, 1881, and six years after his graduation from Stanford University in 1905 received the M.E.E. degree from Union College. Entering the employ of the General Electric Co. at Schenectady, N. Y., in 1905, he was advanced to consulting and research engineer five years later, working with Charles P. Steinmetz. After his transfer to the Pittsfield (Mass.) plant in 1916 he served as consulting engineer in charge of the company's high voltage experimental laboratory, and from 1927 to 1931 was engineer in charge of the general transformer engineering department. There, after Steinmetz's death in 1923, he continued his experiments in the generation of artificial lightning, being credited with the production of as many as 10,000,000 volts. In addition he investigated the various problems connected with high-voltage transmission and formu-

lated the laws of corona, the luminous discharge from a high-voltage conductor produced at the electrodes. At the time of his death he was chief engineer at the Pittsfield plant of the General Electric Co.

Besides being a director and fellow of the American Institute of Electrical Engineers, Mr. Peek represented that society on the National Research Council. The American Society of Civil Engineers awarded him the Thomas Fitch Rowland prize in 1924, and two years later he received the Levy gold medal from the Franklin Institute of Philadelphia in recognition of the paper he read the previous year on "High-Voltage Phenomena." He wrote *Dielectric Phenomena in High Voltage Engineering* (1915, 1929; in French, 1924).

PEMBA. See ZANZIBAR PROTECTORATE.

PENANG. See STRAITS SETTLEMENTS.

PENNSYLVANIA. POPULATION. The population of the State on Apr. 1, 1930, according to the Fifteenth Census, was 9,631,350, as against 8,720,017 in 1920. Philadelphia had (1930) 1,850,961 inhabitants; Pittsburgh, 669,817; Scranton, 143,433; Reading, 111,171; Harrisburg, the capital, 80,339.

AGRICULTURE. The following table shows the acreage, production, and value of the principal crops for 1933 and 1932:

Crop	Year	Acreage	Prod. Bu.	Value
Hay (tame) .	1933	2,424,000	3,107,000*	\$32,624,000
	1932	2,425,000	2,605,000*	24,748,000
Corn	1933	1,280,000	50,560,000	26,291,000
	1932	1,255,000	46,435,000	19,038,000
Potatoes ...	1933	189,000	21,357,000	19,221,000
	1932	195,000	21,450,000	9,652,000
Wheat	1933	878,000	15,783,000	12,784,000
	1932	898,000	13,465,000	7,006,000
Oats	1933	925,000	20,812,000	8,117,000
	1932	944,000	24,072,000	6,740,000
Apples	1933	.....	7,293,000	6,199,000
	1932	.....	9,537,000	5,245,000
Tobacco ...	1933	25,300	26,563,000*	1,455,000
	1932	42,100	46,316,000*	2,401,000
Buckwheat .	1933	141,000	2,679,000	1,818,000
	1932	138,000	2,070,000	807,000
Rye	1933	119,000	1,606,000	1,076,000
	1932	124,000	1,550,000	682,000

* Tons. ♢ Pounds.

MINERAL PRODUCTION. The production of anthracite, 49,900,000 net tons for 1932, fell 16.3 per cent short of that for 1931, which totaled 59,646,000. The output of bituminous coal was more severely reduced, to 75,772,000 net tons (1932), from 97,658,698 (1931), or by some 22 per cent. The production of coke, chiefly in by-product ovens but still to a minor extent in beehive ovens, attained 4,037,810 net tons, in value \$16,131,015. There were produced, in 1932, 2,103,170 gross tons of pig iron, as against 5,036,305 in 1931. The production of petroleum rose to 12,403,000 barrels (1932), from 11,892,000 (1931). The output of natural gas declined to 63,286,242 M cu. ft. (1932), from 74,797,000 M for 1931. Producers' sales of lime decreased to 374,000 short tons (1932) at an average value of \$6.64 a ton, from 497,268 tons (1931), at \$6.79.

EDUCATION. All public schools opened in September under legislation permitting the reduction of teaching salaries for a period of two years in order to meet the difficulties caused by reduced revenues for school purposes. While some of the features of the schools' service had been restricted, few functions, according to the *Journal* of the National Education Association, were entirely eliminated. The commission organized in

1931 to study the State's problems in the field of public education continued its work in 1933.

CHARITIES AND CORRECTIONS. A department of Welfare, created by statute in 1921, exercised in 1933 the central supervisory functions over the State's institutions for the care and custody of persons. It had as its head a Secretary of Welfare (Mrs. I. Albert Liveright), holding office by appointment for four years. The State institutions of care and custody, with their populations of May 31, 1933, were: Eastern State Penitentiary, Philadelphia and Graterford, 3133; Western State Penitentiary, Rockview, 2135; Pennsylvania Industrial School, Huntington, 933; State Industrial Home for Women, Muncy, 184; Pennsylvania Training School, Morgantown, 717; eight State hospitals for the mentally afflicted, situated at Allentown (1518 inmates), Danville (1812), Farview (675), Harrisburg (1732), Norristown (3168), Torrance (1360), Warren (1932), and Wernersville (1292); for the feeble-minded and epileptics, State schools at Pennhurst (1661), and Polk (2808), a State Village at Laurelton (668), and a State Colony for Epileptics at Selingsgrove (378); ten medical and surgical hospitals, chiefly to serve the special needs in the mining districts, situated at Ashland (146), Blossburg (60), Coaldale (90), Connellsville (78), Hazelton (141), Locust Mountain (62), Nanticoke (108), Philipsburg (81), Scranton (212), and Shamokin (91).

LEGISLATION. A regular session of the Legislature convened on January 3 and adjourned on May 6. It included in appropriations for the ensuing year \$45,000,000 for the relief of the needy unemployed and made extensive reductions in public salaries, both under the State government and under the governing bodies of localities. In view of the need to provide money for the State's heavy prospective disbursements for poor-relief several proposals to add to revenue were adopted. A tax on beer by the barrel (see below) was to bring in \$10,000,000 a year, and the Einstein act, designed to render banks liable for the payment of a tax of 4 mills to the dollar on money at interest, was to furnish \$8,000,000. A proposal to raise \$25,000,000 by issue of State bonds was submitted to the voters for their approval on November 7. Economies effected in State expenditure were to reduce yearly disbursements, apart from those for relief, by \$3,000,000. During the session, owing to delay in adopting a full programme to cover the future needs for relief of the needy, it was necessary on April 13 to pass an emergency appropriation of \$5,000,000 to cover support for the needy until June 30.

In the midst of the banking collapse of March an act was passed to enable banks in the State's system to limit withdrawals in emergency, while continuing operation and receiving new deposits that were to be kept segregated and wholly liquid. Additional measures of regulation were enacted to apply to banks and to building-loan associations. The Legislature rejected Governor Pinchot's proposals for amending the code of regulation of public utilities.

To express the State's will on the proposed repeal of the Federal Eighteenth Amendment, a State convention was created, to be composed of 15 delegates at large, who were to be elected by popular vote on November 7. Beer of the alcoholic strength of 3.2 per cent was legalized with provision for a tax of \$1.24 a barrel, licenses for manufacturers, wholesalers, and retailers, pro-

hibition of bars, permission to sell for spot consumption at soda-water stands, and local option as to the permission of retailing. The playing of games of baseball and football on Sundays was made lawful in districts in which voters should declare for it at a later regular election. The mountain laurel was made the State flower. An act was passed to compel the financial responsibility of motorists for damage they might do. Bakeries were placed under a system of licensing and sanitary inspection. The accounts of milk dealers were made subject to investigation by the State secretary of agriculture.

A special session convened on November 13 to create a system of control over traffic in alcoholic drink. A chain of State shops was created and endowed with a monopoly of sales of alcoholic beverages in the unbroken package; licensed hotels, restaurants and clubs were permitted to serve such beverages. A State board of liquor control was to operate the retail shops and issue the licenses. The session also ratified the proposed Federal constitutional amendment as to child labor.

POLITICAL AND OTHER EVENTS. During the banking panic many of the State banks, early in March, restricted their depositors' withdrawals in accordance with an emergency measure of the Legislature. This expedient did not suffice, and the outgo of money from banks was stopped by the declaration on March 4 of a series of legal holidays. The greater part of the banks, State and National, reopened promptly at the end of the period of the Federal suspension of banking and were meeting demands for withdrawal in full by March 15. In Pittsburgh it was necessary to create the Pitt National Bank to take over the sounder part of the assets of the Diamond National and the Monongahela National banks and thus to render available about half of the money of some of these institutions' 14,000 depositors.

A proclamation of Governor Pinchot on March 23 called on creditors not to foreclose mortgages where the debtor was genuinely unable to pay and demanded that courts discourage real-estate executions. Disregarding the State constitution the Interstate Commerce Commission ruled on January 12 that railroads must apply in the State the traffic rates accordant with its rates for interstate traffic, without reference to the State's own prescribed rates within its borders. An emergency board of public works was created in July, to aid in planning and starting projects with a view to reducing unemployment. United States Senator John J. Davis, retired on the charge of having conducted a lottery among members of the Loyal Order of Moose, was acquitted in October.

A strike beginning among the workers of the H. C. Frick Coke Company's collieries late in July spread among soft-coal miners until some 50,000 joined it. It was occasioned largely by discontent with the provisions made for the soft-coal workers in the preparation of a Federal code, under the National recovery act, to govern the soft-coal industry; the miners' leaders were insistent that such a code provide fully for recognition of the union. Rioting rendered it necessary for Governor Pinchot to send National Guard forces into Fayette County on July 28. The Governor arranged for 2000 members of the striking union to cooperate with the troops to prevent disorder. The strikers agreed to resume work on August 9, on the understanding that

they would be fully heard by an adjustment board. The issue was composed by the adoption of a code acceptable to the labor leaders on September 18.

A great number of the miners, however, had failed to return to work; these were particularly the group working for so-called captive mines, operated in connection with the steel industry of the Pittsburgh area. Dissatisfied with exceptions made by the National Recovery Administration with regard to such mines, their workers rejected pleas of their organization leaders to go back to work at the beginning of October.

At the election of November 7 the voters, by a majority of some 4 to 1, chose delegates favorable to the repeal of the Federal Eighteenth Amendment, who met in State convention on December 5 and declared the State's adoption of repeal by way of the superseding amendment proposed by Congress. A proposed bond issue of \$50,000,000 for means to pay a State bonus to war veterans was approved by popular vote but the payment was subject to further needed legislation.

In the local elections of November 7 opponents of the Vane Republican organization were elected in Philadelphia to the offices of city controller and city treasurer, by a combination of Democrats and of independent Republicans having the support of Governor Pinchot. Philadelphia voted to permit Sunday sports. In Pittsburgh William N. McNair, Democrat, was elected mayor. Leaders of the striking employees of the "captive" soft-coal mines (see above) reached an understanding with President Roosevelt on November 3 that the strikers, then said to number 40,000, should return to work with assurance of Federal action to protect them in the event of collective bargaining with their employers.

OFFICERS. The chief officers of the State, serving in 1933, were: Governor, Gifford Pinchot; Lieutenant-Governor, Edward C. Shannon; Secretary of the Commonwealth, Richard J. Beamish; Treasurer, Edward Martin (until May 1), C. A. Waters (from May 1); Auditor, C. A. Waters (to May 1), Frank E. Baldwin (from May 1); Attorney General, William A. Schnader; Superintendent of Public Instruction, James N. Rule.

Judiciary. Supreme Court: Chief Justice, Robert S. Frazer; Judges, Alexander Simpson, John W. Kephart, William I. Schaffer, George W. Maxey, James B. Drew, William B. Linn.

PENNSYLVANIA, UNIVERSITY OF. A non-sectarian institution of higher education in Philadelphia, founded in 1740. It is composed of the college of arts and sciences, the college of liberal arts for women; the Towne Scientific School (engineering and chemistry), the Moore School of Electrical Engineering, the Wharton School of Finance and Commerce, the school of fine arts (architecture, fine arts, music), the school of education, the graduate school, and the professional schools of medicine, graduate medicine, law, dentistry, veterinary medicine. The 1933 autumn enrollment was 11,805, including all schools and departments. Of those enrolled, 7422 were candidates for degrees; 2189 were candidates for certificates; and 2194 were partial students and auditors. The enrollment for the 1933 summer session was 1466. The faculty numbered 1273. The productive funds amounted to \$18,698,075. The income for the year from all sources, exclusive of hospitals and museums, was \$5,195,-

525. The library contained 797,126 bound volumes and 95,300 pamphlets. President, Thomas S. Gates, Ph.B., LL.B., LL.D. Provost, Josiah H. Penniman, Ph.D., Litt.D., LL.D., L.H.D.

PENNSYLVANIA ACADEMY OF FINE ARTS. See ART EXHIBITIONS.

PENNSYLVANIA RAILROAD. See ELECTRICAL TRANSPORTATION.

PENNSYLVANIA STATE COLLEGE. THE. A nonsectarian institution for the higher education of men and women at State College, Pa., founded in 1855. On Nov. 1, 1933, the undergraduate enrollment totaled 4351. The 1933 summer session enrollment was 2657. The resident faculty numbered 646. The productive funds of the college amounted to approximately \$517,000 and the income for operation for the year to \$3,980,230. The library contained 140,950 volumes. President, Ralph D. Hetzel, LL.D.

PENOLOGY. See LAW.

PERAK, pā'rāk. See FEDERATED MALAY STATES.

PERIM. See ADEN.

PERKIN MEDAL. See CHEMISTRY, INDUSTRIAL OR APPLIED.

PERLIS. See UNFEDERATED MALAY STATES.

PERMANENT COURT OF ARBITRATION. See ARBITRATION, INTERNATIONAL.

PERMANENT COURT OF INTERNATIONAL JUSTICE. See WORLD COURT.

PERSIA. A kingdom of southwestern Asia. Capital, Tehran (Teheran); reigning Shah in 1933, Riza Khan Pahlevi (crowned Apr. 25, 1926).

AREA AND POPULATION. Persia has an area of about 628,000 square miles and a population estimated at 9,000,000 on Dec. 31, 1931 (including about 2,000,000 nomads and 6000 Europeans). The estimated population of the chief cities was: Tehran and suburbs, 350,000; Tabriz, 240,000; Meshed, 152,000; Isfahan, 126,000. The bulk of the population are Moslems of the Shiite sect.

EDUCATION. The population is about 90 per cent illiterate. In 1930 there were 97,500 pupils in primary schools, 25,000 in higher grade schools, and 4600 in high schools. About 150 students were maintained in European universities at government expense.

PRODUCTION. A predominantly agricultural country, Persia produces chiefly wheat, barley, rice, tobacco, fruits, wool, opium, gums, cotton, and silk. Estimated production (1930-31) was (in tons): Rice, 350,000; tobacco, 30,000; wheat, 1,420,000; cotton, 46,000. Petroleum is the chief mineral; output in 1932 was 6,513,000 metric tons (5,843,000 in 1931). The Anglo-Persian Oil Company controlled the bulk of Persian production. Iron, coal, copper, lead, manganese, marble, borax, nickel, and cobalt deposits exist, but remain undeveloped. The leading industries are rug making and oil refining. Several sugar and cement factories and spinning and textile mills have been established with government encouragement.

COMMERCE. Persia's merchandise balance of trade, by value, during the fiscal years 1929-30 to 1931-32 is shown in the accompanying table.

PERSIA: IMPORTS AND EXPORTS

Fiscal year *	Imports	Exports	Balance
1929-30 ...	\$77,176,000	\$132,129,000	+\$54,953,000
1930-31 ...	81,600,000	111,250,000	+ 49,650,000
1931-32 ^b ..	30,000,000	70,000,000	+ 40,000,000

* The 1929-30 and 1930-31 figures are for fiscal years ended Mar. 19, 20, or 21. For 1931-32 the fiscal year was changed to end June 21. ^b Approximate.

Figures are converted from krans or rials to dollars at gold parity.

Of the total value of 1931-32 imports, the Soviet Union supplied 42.6 per cent; British India, 17.5 per cent; United Kingdom, 10.5 per cent; and the United States, 6.8 per cent. The United Kingdom took 29 per cent of the value of all merchandise exports; Soviet Union, 15.4; Egypt, 10; British India, 9.7; and France, 9.5 per cent. Cotton piece goods, motor vehicles, sugar, tea, machinery, and iron and steel were the chief import items while the leading export items were mineral oils, wool rugs, rice, opium, raw cotton, almonds, and raisins. Exports to the United States in the calendar year 1933 were valued at \$3,353,303 (\$2,764,428 in 1932) and imports from the United States were \$1,409,005 (\$1,082,481 in 1932), according to U. S. statistics.

Foreign trade was declared a government monopoly on Feb. 25, 1931. On Oct. 21, 1931, a commercial treaty was negotiated with the Soviet Union under which Persia agreed to reserve 51 per cent of the import trade to the Soviet Union in return for the Soviet pledge to purchase an equal amount of Persian products.

FINANCE. According to a statement by the Persian Minister to Washington, government revenues for the fiscal year ended June 21, 1933, reached the equivalent of \$41,000,000, in addition to some \$6,600,000 collected on sugar and tea and diverted to railroad construction. In 1931-32 total revenues were 506,912,227 rials. Budget estimates for 1932-33 were: Revenues, 421,400,000 rials and £787,000; expenditures, 421,399,870 rials and 407,176 pahlevi. The revenues excluded the annual royalty from the Anglo-Persian Oil Company and expenditures excluded certain appropriations for railways and highways. The public debt in August, 1933, amounted to £1,069,397. On Mar. 21, 1932, the Persian government had £2,700,000 on deposit in London, most of it representing petroleum royalties. The actual currency unit in 1933 was the silver rial, with the same value as the obsolete kran (exchange value, \$0.0760 in 1931, \$0.0839 in 1930, and \$0.1007 in 1929).

COMMUNICATIONS. Railway lines in 1933 extended 467 miles and a new trans-Persian railway, connecting the Caspian Sea and the Persian Gulf was under construction. There were approximately 8000 miles of highways, of which 2206 miles had been constructed in the preceding seven years. The Junkers Aircraft Co. discontinued its air services in Persia in 1932, after five years' operation.

GOVERNMENT. Executive power is vested in the Shah, an absolute ruler down to 1906, when he consented to a constitutional form of government, with a parliament or Medjliss of 136 deputies. The actual running of the government was in the hands of a cabinet, appointed and controlled by the Shah. The Medjliss gave legislative sanction to measures and policies adopted by the ministry. Premier at the beginning of 1933, Mehdi Quli Khan Hedayat. For changes in 1933, see *History*.

HISTORY

SETTLEMENT OF PETROLEUM DISPUTE. The Persian government's dispute with the Anglo-Persian Oil Company, which led to the cancellation of the company's concession in Persia in 1932 (see 1932 YEAR BOOK), was settled in Persia's favor early in 1933. The issues were debated before the League of Nations Council in January, followed by private

discussions between the parties under the guidance of Foreign Minister Benes of Czechoslovakia. On February 2 the conferees capitulated to the Persian demand for direct negotiations between the oil company and the Persian government and the British government withdrew from the dispute. Negotiations between Sir John Cadman, head of the company, and Persian government officials commenced in Tehran April 3 and ended with the signing of the new lease on April 30.

The chief terms of the lease were: (1) reduction of the concessioned area from 500,000 to 250,000 square miles immediately and a further reduction to 100,000 square miles in 1938; (2) payment by the company of a royalty of four shillings per ton on all oil sold in Persia or exported; (3) allocation to the Persian government of 20 per cent of the net profits of the company, after payment of £671,000 to the stockholders; (4) additional payments to Persia in case of further depreciation of sterling; (5) tax payments to Persia by the company of £225,000 during the first 15 years and £300,000 during the second 15 years; (6) progressive replacement of the company's foreign employees by Persians; (7) determination of the basic price of oil sold in Persia by prices prevailing in the Gulf of Mexico or in Rumania, whichever might be lower, with a discount of 10 per cent for oil sold to the public from the refinery and of 25 per cent for oil sold to the Persian government. As against these provisions, all favorable to Persia, the Persian government agreed not to cancel the concession for 60 years but to refer all disputes to international arbitration. The new concession was ratified by the Medjliss on May 28, 1933, and came into force when signed by the Shah the following day.

RELATIONS WITH SOVIET UNION. In addition to this favorable settlement with Great Britain, Persia during 1933 extended its treaty relations with its great neighbor, the Soviet Union. The non-aggression agreement signed in 1927 was supplemented on July 3, 1933, by a new non-aggression treaty containing an inclusive definition of aggression. The new treaty was ratified by the Medjliss on September 18. The Persian government continued its commercial agreement with the Soviet Union. Import quotas announced for the fiscal year 1933-34 reserved 51 per cent of the total Persian imports to the Soviet Union and gave Russia a complete monopoly in supplying Persia with imported sugar, matches, and petroleum products (except 50 per cent of lubricating oil imports).

INTERNAL DEVELOPMENTS. The Shah continued his efforts to modernize the country materially as well as politically. Work on railways and highways was pushed, while another blow was struck at the feudal and semi-independent Bakhtiari chiefs, who resisted the authority of the Crown. The arrest of a number of such tribal leaders was reported toward the end of 1933. The severity with which the Shah punished corruption among his officials was exemplified by the treatment accorded Abdul Hussein Khan Timurtash, Minister of the Court and the Shah's chief adviser from his accession to the throne in 1926 to December, 1932. On Mar. 18, 1933, the minister was sentenced to prison for five years and fined \$700,000 for embezzlement, swindling, and extortion.

For reasons unstated, the ministry headed by Mehdi Quli Khan Hedayat resigned on Sept. 13, 1933, and was succeeded by a new cabinet headed

by Mirza Mohamed Ali Khan Foroughi, who was Foreign Minister in the previous cabinet.

PERSONALITY. See **PSYCHOLOGY.**

PERU, pé-roo'. A South American republic. Capital, Lima.

AREA AND POPULATION. Peru has an estimated area of 481,698 square miles, but several of its boundaries are in dispute, notably those with Ecuador and Colombia. The latest official population estimate, that for 1932, placed the total at 6,237,000. The population is about 57 per cent pure Indian, 25 per cent mestizo, 14 per cent white, and 4 per cent Asiatics, Negroes, and others. In 1931, recorded living births were 165,838; deaths, 71,745; marriages, 15,598. The city of Lima had a population of 281,425 in 1931. In 1932, the estimated population of other leading cities was: Arequipa, 70,000; Cusco, 40,000; Chiclayo, 35,000; and Trujillo, 30,000. Spanish is the language of the government and educated classes, but the Indians speak Aymara or Quechua.

EDUCATION. Education is free and nominally compulsory for children between the ages of 7 and 14, but the Indian and mestizo masses remain largely illiterate. In 1930, there were 3562 primary schools, with 342,016 pupils; 36 national secondary schools, with 11,826 pupils; and 4 normal schools, with 1610 students. The principal university was that at Lima (2201 students in 1930), which was closed by the government in 1930. Other universities, with their 1931 enrollment, were: Arequipa, 223; Cusco, 106; and Trujillo, 104.

PRODUCTION. Agriculture supports about 80 per cent of the population, while mining is the most important secondary industry. The production of the chief crops in 1931-32 was: Cotton, 107,913,000 pounds (114,355,000 in 1930-31); sugar, 396,000 metric tons (426,000); rice, 4,985,000 bushels (5,527,000); wheat, 3,485,000 bushels (4,525,000 bushels in 1930-31). The wool output in 1931 was 12,125,000 pounds of sheep's wool and 9,921,000 pounds of llama, alpaca, and other wool. Provisional figures for mineral production in 1932 were: Gold, 1729 kilogrammes; silver, 209,488 kilogrammes; copper, 22,890 metric tons; lead, 1164 metric tons; petroleum, 1,313,207 metric tons. The value of all mineral production was 126,839,359 soles (1 sole = 28 cents at par) in 1931 (183,230,292 soles in 1930). Vanadium, coal, bismuth, salt, and cement are other leading minerals. The mining industry is largely under foreign domination. Manufacturing is confined chiefly to petroleum refining, smelting, and the production of textiles, flour, etc.

COMMERCE. The value of Peruvian imports declined to \$15,852,000 in 1932 from \$27,488,000 in 1931 and \$48,749,000 in 1930. Exports fell off to \$37,376,000 in 1932 from \$55,415,000 in 1931 and \$88,207,000 in 1930. These three years witnessed a decline in the value of imports from the United States to \$4,621,000 in 1932 from \$11,231,000 in 1931 and \$18,646,000 in 1930. At the same time Peru's exports to the United States were reduced to \$6,810,000 in 1932 from \$20,192,000 in 1931 and \$34,684,000 in 1930. Imports from the United Kingdom and Germany were smaller in 1931 than in 1930, but in 1932 and 1933 they showed substantial increases. The United States in 1932 supplied 29.2 per cent of all imports (40.9 per cent in 1931); United Kingdom, 17.8 per cent (12.4 in 1931); Germany, 9.8 (8.8). The United

Kingdom purchased 36.1 per cent of all exports in 1932 (21.9 in 1931); the United States, 17.3 per cent (36.4); Germany, 7.2 per cent (8.7). Petroleum, copper, cotton, sugar, and wool are the chief exports.

In 1933, exports totaled 257,000,000 soles and imports 103,000,000 soles. Imports from and exports to the United States were \$4,985,293 and \$5,472,219, respectively.

FINANCES. Total governmental expenditures in the calendar year 1931 were 135,909,923 soles, including extraordinary expenses of 26,549,330 soles, ordinary expenses of 194,819,139 soles, and debt amortization of 4,541,454 soles. Total revenues amounted to 129,118,555 soles, including ordinary receipts of 99,755,106 soles, extraordinary receipts of 28,203,449 soles, and credits of 1,160,000 soles. The ordinary budget estimates for 1932 balanced at 99,928,290 soles. The public debt on June 30, 1932 totaled 532,011,847 soles (523,517,174 soles on June 30, 1931). Of the 1932 total, 402,411,827 soles represented the external and 129,600,020 soles the internal debt. Interest and sinking-fund payments on all national debts were suspended on May 29, 1931. The monetary unit is the sol, stabilized at 28 cents U. S. in April, 1931. After the abandonment of the gold standard by Peru, May 14, 1932, the exchange value of the sol depreciated to an average of 17.3 cents for the year 1932.

COMMUNICATIONS. Railways in operation in 1931 had 2075 miles of line, including 2373 miles of private and 702 miles of state lines. In 1931 the railways carried 5,399,005 passengers and 2,341,974 metric tons of freight. Highways suitable for motor traffic extended 11,200 miles in 1932. There were 252 miles of new highway built during 1932; the Lima-Cerro de Pasco-Huanuco road, crossing the Andes at the height of 15,912 feet, was completed during the year. Lima is connected by air lines with the other capitals of South and North America, and with the principal Peruvian cities. During 1931, 7567 vessels of 12,174,608 tons entered the ports of Peru and 7537 ships of 12,178,247 tons cleared.

GOVERNMENT. Constitutional government, suspended upon the overthrow of President Leguía in 1930, was restored on Dec. 8, 1931. A Constituent Assembly, elected Oct. 11, 1931, drafted a new Constitution, which was promulgated Apr. 9, 1933. President at the beginning of 1933, Gen. Luis M. Sánchez Cerro, who assumed office Dec. 8, 1931, for a five-year term. For developments during 1933, see *History*.

HISTORY

THE LETICIA DISPUTE. The beginning of the year 1933 found Peru on the verge of war with Colombia over the Amazon river port of Leticia and surrounding territory, which had been seized from Colombia by a group of Peruvian citizens on Sept. 1, 1932. Peruvian troops were being concentrated in Leticia, while a Colombian flotilla was steaming up the Amazon to assist Colombian troops marching overland from Bogotá in driving out the Peruvians. Early in January, Brazil offered to mediate the dispute and proposed that Peru turn Leticia over to Brazilian troops who would then return it to Colombia. The offer, accepted by Colombia, was rejected by Peru. Colombia then appealed to the United States and other signatories of the Kellogg-Briand Pact to restrain Peru, while Peru invoked the aid of the League. However, the United States government,

on January 25, the League Council on January 26, and other American states joined forces in denouncing Peru's action as a violation of its treaty obligations.

Under the nationalistic leadership of President Sánchez Cerro, Peru declined to evacuate Leticia and clashes between the opposing forces commenced on February 14. Three days later Colombia formally invoked Article XV of the League Covenant, which required the Council to attempt to conciliate the dispute and if it failed in this to adopt a report setting forth its recommendations. Through its special committee, the Council on February 25 submitted a comprehensive plan for settlement of the dispute. It involved (1) control of Leticia by a League commission, (2) replacement of Peruvian by Colombian troops, which would function as an international police under the League commission, and (3) direct negotiations between Peru and Colombia for a permanent settlement of the boundary dispute. In a note of Feb. 27, 1933, the U. S. government urged acceptance of this proposal.

Immediately accepted in full by Colombia, the League proposal was accepted by Peru with qualifications tending to nullify it. On March 18, the committee of the Council ended its efforts at conciliation and submitted a report to the Council embodying the same recommendations as in its proposal of February 25. The report asserted that "the presence of Peruvian forces in Colombian territory is incompatible with the principles of international law, with those of the Covenant of the League of Nations, and of the Pact of Paris . . ." Despite protests of the Peruvian delegate, the Council adopted the report and named a committee of 13, with which the United States and Brazil collaborated, to advise it and to secure joint action on the basis of the report. The Advisory Committee instructed its president, Sean Lester of the Irish Free State, to reopen negotiations with Peru and Colombia, and these were in progress when the assassination of President Sánchez Cerro opened the way for settlement of the controversy.

Meanwhile there had been several clashes in the Leticia district. Peruvian planes bombed a Colombian gunboat on the Putumayo River February 14 and the next day Colombian forces captured the town of Tarapaca at the northern end of the disputed Leticia corridor. Preparations for war continued in both countries. Diplomatic relations between Colombia and Peru were severed and the Colombian Legation in Lima was attacked by a mob on February 18. The Colombian Minister, who had not yet left the capital, was forced to take refuge with his family in the Chilean Legation. On March 26, Colombian forces drove 500 Peruvian troops out of Guepi, a settlement on the right bank of the Putumayo River. Colombia had concentrated some 10,000 men in the Leticia region, but following the Council's active measures the offensive was delayed to allow time for further negotiations.

ASSASSINATION OF SÁNCHEZ CERRO. While reviewing 20,000 army recruits conscripted for service against Colombia, President Sánchez Cerro was shot to death in Lima April 30. His assassin was Dr. Abelardo Hurtado de Mendoza, an alleged sympathizer with the revolutionary Aprista party, banned by the President in 1932. Dr. Hurtado was instantly killed by the President's guards.

The killing of President Sánchez Cerro was the

climax of numerous uprisings and one previous attempt at assassination which had marked his short but increasingly arbitrary rule. Less than two months before, the President ruthlessly crushed the last of a series of revolts. This was led by Lieut. Col. Gustavo A. Jiménez, former Provisional President and former Minister of War, who raised the standard of rebellion at Cajamarca, on March 11, supported by the 11th Police Regiment. The revolt failed to gain the expected support and Colonel Jiménez, defeated by government troops at San Cristobal March 14, committed suicide. Five of the officers implicated were executed April 8.

On the day of President Sánchez Cerro's assassination, the Cabinet declared martial law and then hastily elected Gen. Oscar Benavides, commander-in-chief of the Peruvian forces in the Leticia area, to serve out the balance of the presidential term. The new President had had a distinguished career as Chief of Staff of the army, Provisional President in 1914-15, and, after the overthrow of the Leguía régime, as Peruvian Minister in London.

LETICIA DISPUTE SETTLED. One of the first results of the change in the Presidency was the temporary settlement of the Leticia dispute. When President Benavides assumed power the Peruvian cruiser *Almirante Grau* and two submarines were en route to the Leticia district from the west coast via the Panama Canal and the Amazon River. They passed through the canal May 3. Informed by Peru that the ships were headed for the upper Amazon, the League of Nations Advisory Committee requested neutral nations to withhold food, fuel, and other supplies from the flotilla. However, they secured supplies at Willemstad, Curaçao, on May 8 and proceeded, with many delays, up the Amazon.

Meanwhile, on May 6, President Benavides received a telegram from Dr. Alfonso Lopez, a Colombian with whom he had formed a close friendship while the two were serving their respective countries as Ministers in London. The telegram, pointing out the folly of armed conflict, urged a settlement of the Leticia controversy. President Benavides replied by inviting Dr. Lopez to confer with him in Lima. Arriving in Lima May 16, Dr. Lopez reached an understanding with the President, which was approved by the Peruvian Congress in a secret session May 21. On May 24, the Peruvian government notified the League of Nations of its acceptance of new proposals advanced by the League Committee on May 10. These proposals were embodied in a protocol signed May 25 in Geneva by the Peruvian and Colombian delegates there and by the President of the League Council. They provided for evacuation of Leticia by Peru, administration of the Leticia corridor by a League commission on behalf of Colombia, direct negotiations for a settlement of the territorial disputes, and the payment by Colombia of the expense of the League commission. About the same time (May 22) diplomatic relations between Peru and Mexico were restored through the friendly intervention of the Spanish government. These relations had been severed in 1932, when President Sánchez Cerro had demanded the recall of the Mexican Minister in Lima for his alleged friendly association with the Aprista leader, Haya de la Torre.

The League commission named to administer the Leticia corridor pending a settlement of the territorial question involved consisted of Col.

Arthur Brown, U. S. A., president; Capt. Alberto Lemos Basto of the Brazilian Navy; Capt. Francisco Iglesias, Spanish aviator; and Dr. Armando Mencia, of Cuba. Peruvian troops withdrew from Leticia immediately upon the arrival of the Commission June 25. The conference for settlement of the territorial issue opened in Rio de Janeiro October 25. The Peruvian delegates were Dr. Victor Andrés Belaúnde and Dr. Victor M. Maúrtua, both well-known jurists; those of Colombia included Dr. Roberto Urdaneta Arbeláez, Minister of Foreign Affairs; Dr. Luis Cano, and Guillermo Valencia. The negotiations were in progress at the end of 1933.

THE BENAVIDES REFORMS. No less striking than the settlement of the Leticia affair was the new President's success in terminating the fierce party and class strife into which Peru had plunged after the deposition of President Leguía. He pledged his administration to a policy of "peace and concord" and strove to soften the bitter animosities aroused by his predecessors. His government's amnesty bill, unanimously adopted by Congress on August 9, released Victor Raul Haya de la Torre, the Aprista leader, from prison and permitted the return of numerous political exiles. In order to avert the disorders of a political campaign, he induced Congress on September 16 to postpone until the first Sunday in June, 1934, the Congressional elections scheduled for Nov. 5, 1933. *La Tribuna*, organ of the Aprista party suppressed by Sánchez Cerro, was permitted to resume publication early in November and on November 12 the Aprista party, with government sanction, held a huge mass meeting in Lima. Newspaper attacks upon high officers of the army and navy, causing them to demand the reestablishment of the press censorship law, led to the resignation of the Cabinet on November 23 when the demand was rejected. A new ministry was formed November 25, headed by José de la Riva Agüero.

The government announced officially on October 22 that it had frustrated a plot to assassinate President Benavides and arrested eight conspirators. Meanwhile a new political party was in process of organization by followers of President Sánchez Cerro, led by Dr. Clement J. Revilla, president of the Constituent Assembly. It was to be known as the National party.

NEW CONSTITUTION. The new Constitution framed by the Constituent Assembly went into effect April 8, 1933. Despite the many months spent in drawing up the instrument it differed little from the Constitution of 1920, which it replaced. It contained a provision prohibiting the reelection of a President until an interval of five years had elapsed after his leaving the office. Voting was made compulsory for all men between 21 and 60 years of age.

PETERSON, OLOF AUGUST. An American paleontologist, died in Pittsburgh, Pa., Nov. 12, 1933. Born at Hellgum och Rådom, Sweden, Jan. 2, 1865, he received his education there and in 1882 emigrated to the United States with his family. His interest in the subject, in which he was later to become one of the foremost authorities, was stimulated by Othniel C. Marsh, professor of paleontology at Yale University. During 1888-91 he assisted Professor Marsh in his discoveries of fossil vertebrates from the geological formations of the Western States. He was next associated during 1891-96 with Henry Fairfield Osborn, curator of vertebrate paleontology at the

American Museum of Natural History, in his Western explorations. He accompanied to Patagonia, the region of Argentina and Chile lying east of the Andes and south of the Rio Negro, the expeditions sponsored by Princeton University during 1896-1900. After the latter date Mr. Peterson held the post of curator of mammalian paleontology at the Museum of Science of the Carnegie Institute in Pittsburgh. His researches were concerned principally with the evolution of the rhinoceros from the Oligocene period, the camel from the Miocene, and the horse from the Upper Pliocene.

PETROLEUM. The production of crude petroleum for the world during 1933 amounted to 1,417,520,000 barrels according to estimates of the American Petroleum Institute. This indicates an increase of approximately 9.3 per cent over the 1932 production, which amounted to 1,297,478,000 barrels. Approximately 97.5 per cent of the crude petroleum produced in 1933 came from the ten foremost producing countries of the world, United States, Russia, Venezuela, Rumania, Persia, Netherland East Indies, Mexico, Argentina, Peru, and Colombia. Together, it is estimated, these countries produced 1,382,664,000 barrels. The United States remained the world's greatest producer, supplying 63.4 per cent of the total in 1933, against 60.5 per cent in 1932; 62.1 per cent in 1931; 63.7 per cent in 1930; 67.8 per cent in 1929; 68.0 in 1928; and 71.4 per cent in 1927. The output in the United States during 1933 was 898,874,000 barrels, according to the U. S. Bureau of Mines, as compared with 785,159,000 barrels in 1932, an increase of 14.5 per cent. Russia maintained second place ranking with a total of 148,902,000 barrels, or 10.5 per cent of the world total, compared with 149,719,000 barrels in 1932. This indicates a decrease from 1932 of 0.5 per cent. Third place was held by Venezuela with a total of 120,883,000 barrels, or 8.5 per cent of the world total, compared with 119,597,000 barrels in 1932.

**WORLD PRODUCTION OF CRUDE PETROLEUM
IN 1933**
[American Petroleum Institute]

	Total	Per cent of total
United States	898,874,000	63.41
Union of Soviet Socialist Republics *	148,902,000	10.50
Venezuela	120,883,000	8.53
Rumania	50,971,000	3.60
Persia	49,581,000	3.50
Netherland East Indies	38,513,000	2.72
Mexico	33,905,000	2.39
Argentina	13,955,000	.99
Peru	13,923,000	.98
Colombia	13,157,000	.93
Trinidad	9,560,000	.67
British India	8,543,000	.60
Poland	8,865,000	.27
Japan *	2,340,000	.17
British Borneo	2,288,000	.16
Germany	1,718,000	.12
Ecuador	1,628,000	.12
Egypt	1,592,000	.11
Iraq	1,200,000	.08
Canada	1,148,000	.08
France	552,000	.04
Others	482,000	.03
Total	1,417,520,000	100.00

* Includes Sakhalin Russia. * Includes Sakhalin Japanese.

In the United States, Texas, as in past years, led in output with 44 per cent of the total production. Oklahoma passed California for second place with 20 per cent of the total, with California a close

third with 19 per cent. Comparisons of the production by states in 1933 with that in 1932 is shown in the attached table from figures furnished by the U. S. Bureau of Mines.

**CRUDE OIL PRODUCTION IN THE UNITED
STATES, BY STATES**
[In barrels of 42 gallons]

	1933	1932
Arkansas	11,608,000	11,907,000
California	173,085,000	178,128,000
Colorado	947,000	1,177,000
Illinois	4,227,000	4,661,000
Indiana	728,000	804,000
Kansas	41,942,000	34,300,000
Kentucky	4,605,000	6,264,000
Louisiana	24,636,000	21,478,000
Michigan	7,851,000	6,729,000
Montana	2,122,000	2,449,000
New Mexico	14,074,000	12,511,000
New York	3,174,000	3,501,000
Ohio	4,264,000	4,597,000
Oklahoma	181,506,000	152,621,000
Pennsylvania	12,639,000	12,403,000
Tennessee	6,000	5,000
Texas	396,453,000	311,069,000
West Virginia	3,811,000	3,882,000
Wyoming	11,196,000	13,359,000
Total United States ...	898,874,000	781,845,000

Aside from increased production, the petroleum industry in the United States was immensely benefited through the operation of the National Industrial Recovery Act. Voluntary proration of crude oil production failed to effect the desired limitation in important producing areas, and prices dropped in the early months of the year to the ruinous price of ten cents a barrel. Upon the announcement of the passage of the Recovery Act in June, a slight improvement was felt, though not satisfactory until in September when, by virtue of the approval of the code of fair competition on August 20, the Secretary of the Interior, Mr. Ickes, took over the supervision of the industry. In his first major effort to keep production in line with consumption, he established an allowable daily production of 2,409,700 barrels to October 1. Successive reductions thereafter brought the allowance to 2,210,000 barrels as of December 1, or about 600,000 barrels per day less than the average unrestricted daily output during August. Prices reflected the improved conditions and reached, in the Mid-Continent field, a top figure of \$1.12 a barrel.

REFINED PRODUCTS. Total crude runs to stills in 1933 amounted to 861,254,000 barrels, of which 35,468,000 barrels were from foreign sources. In

UNITED STATES REFINERY AND CONSUMPTION STATISTICS

	1933	1932
Crude oil run through refineries (barrels):		
Domestic	825,786,000	777,696,000
Foreign	35,468,000	42,301,000
Total	861,254,000	819,997,000
Production of:		
Gasoline barrels.	401,952,000	392,823,000
Kerosene do...	48,921,000	43,838,000
Gas and fuel oils .. do...	318,811,000	294,750,000
Lubricants do...	23,805,000	22,438,000
Wax pounds.	469,520,000	458,920,000
Coke short tons	1,576,000	1,788,800
Asphalt do...	2,220,000	2,474,900
Gasoline (by method of manufacture):		
Straight run barrels.	195,961,000	195,386,000
Cracked do...	180,662,000	170,905,000
Natural do...	25,329,000	26,332,000
Domestic consumption of motor fuel ... barrels.	381,561,000	377,791,000

1932 the total amount was 819,997,000 barrels. The extraction, as compared with 1932, is shown in the table on page 644.

NATURAL GASOLINE. The total production of natural gasoline for 1933 was 1,411,600,000 gallons, a decline of 6.4 per cent below the 1,502,400,000 gallons produced in 1932. Production by major districts as compared with production in 1932 is shown in the accompanying table.

NATURAL GASOLINE
[Thousands of gallons]

	1933	1932
Appalachian	59,200	66,700
Illinois, Kentucky, Indiana	8,100	8,100
Oklahoma	859,700	877,700
Kansas	22,900	24,600
Texas	859,400	852,500
Louisiana	38,100	46,400
Arkansas	15,000	19,400
Rocky Mountain	56,200	62,000
California	493,000	545,000
Total	1,411,600	1,502,400

PHILIPPINES, fil-ŭ-pĭns, -pĕns, -pĭns. The largest island group of the Malay Archipelago; a possession of the United States, ceded by Spain in the treaty of Apr. 11, 1899. Capital, Manila.

AREA AND POPULATION. The archipelago has a total area of 114,400 square miles. It comprises 7083 islands, the largest of which are Luzon, 40,814 square miles; Mindanao, 36,906 square miles; Samar, 5124; Negros, 4903; Palawan, 4500; Panay, 4448; Mindoro, 3794; Leyte, 2799; Cebu, 1695; Bohol, 1534; and Masbate, 1255 square miles. The population in 1932 was estimated at 13,636,074 (10,314,310 at census of 1918). The people are chiefly of the Malay race; about 91 per cent are Christians (mostly Roman Catholics) and 9 per cent Mohammedans (Moros) and pagans. English and Spanish are the languages of government and commerce, but only about 1,500,000 speak English and about 660,000 Spanish. Tagalog, Ilocano, and Visayan are the chief native dialects. The estimated population of the chief cities in 1932 was: Manila, 341,034; Cebu, 79,008; Iloilo, 43,913; Laoag, 42,046. During 1932, 3088 Filipinos left the Philippine Islands for the United States and insular possessions, of which number 618 went to Hawaii. On the other hand, 12,451 Filipinos arrived in the Philippines Islands from the United States and insular possessions, 7005 coming from Hawaii. Births in 1931 numbered 440,159 (35.44 per 1000 inhabitants); deaths, 240,829 (19.39 per 1000); marriages, 70,182.

EDUCATION. Education is free, secular, and co-educational, with English the language of instruction. Enrollment for the school year 1931-32 totaled 1,213,419 (1,224,548 in 1930-31), of which 1,135,221 were enrolled in elementary and 78,198 in secondary grades, including 16,839 in vocational schools. Private schools numbered 363, with 100,399 pupils. The state-supported University of the Philippines had 7597 students in 1932.

PRODUCTION. Agriculture is the basic industry, cultivated land (1932) totaling about 9,990,000 acres (13.5 per cent of the total area). Agricultural production declined 10.32 per cent in 1932, compared with 1931, although centrifugal sugar output rose 26 per cent due to improved methods of cultivation and manufacture. Crop yields in 1932, with 1931 figures in parentheses, were (in metric tons): Sugar, 1,065,328 (869,121); cleaned rice, 1,359,852 (1,427,159); shelled corn, 414,711

(344,577); copra, 405,188 (419,636); abacá (Manila hemp), 130,394 (162,194); tobacco, 45,138 (43,516); cacao, 1024 (1238); coffee, 1090 (1408); maguey, 8100 (11,411). Livestock (1931) included 2,149,652 buffaloes, 1,282,381 cattle, 319,421 horses, 2,491,245 hogs, 394,367 goats, and 111,670 sheep.

The mineral output in 1931 was valued at 15,887,841 pesos (peso equals \$0.50), including: Gold, 7,524,867 pesos; sand, gravel, and crushed rock, 3,805,283; cement, 2,882,916. Cigars manufactured in 1932 numbered 257,958,585 (274,529,511 in 1931); cigarettes, 3,953,734,473 (4,249,702,393 in 1931); spirits, liquors, and wines, 11,610,746 liters (14,252,204 liters); electricity, 109,177,924 kw.-hrs (106,776,463 in 1931).

Economic and business indices for the Islands during 1932 showed the following percentage declines from the 1931 levels: Average bank debits to individual accounts, 24 per cent; average bank loans, discounts, and overdrafts, 6.26 per cent; average monetary circulation, 12.21 per cent; corporate investments, 7.70 per cent; foreign trade, 13.99 per cent; total gross sales, 23.42 per cent; average wholesale prices, 17.14 per cent; building construction, 3.24 per cent. Freight loadings, on the other hand, increased 17.15 per cent.

COMMERCE. The decline in the trade of the Philippines during the world depression is shown in the accompanying table from the *Annual Report* of the Insular Collector of Customs.

PHILIPPINE IMPORTS AND EXPORTS
[In pesos, equivalent to 50 cents]

	Imports	Exports	Surplus of exports
1929	294,320,549	328,893,685	34,573,136
1930	246,185,907	266,334,255	20,148,348
1931	198,357,437	207,944,148	9,586,711
1932	158,790,170	190,676,161	31,885,991
1933	149,472,000	211,542,000	62,070,000

Imports from the United States in 1932 were 102,595,499 pesos (124,279,366 in 1931) and exports to the United States were 165,295,733 pesos (166,844,793 in 1931). Imports from other countries amounted to 56,194,671 pesos (74,078,071 in 1931) and exports to other countries were 25,380,428 pesos (41,099,355 in 1931). The United States thus took 86.69 per cent of all Philippine exports, by value, in 1932 (80.25 per cent in 1931) and supplied 64.61 per cent of the imports (62.65 per cent in 1931). The chief imports in 1932 were: Cotton goods, 33,523,243 pesos (32,802,095 in 1931); iron and steel, 19,977,574 pesos (26,729,765); mineral oils, 13,718,021 pesos (18,935,275); meat and dairy products, 8,128,254 pesos (12,150,885); automobiles, parts and tires, 8,058,776 pesos (9,030,872); tobacco products, 5,386,142 pesos (5,443,428). The value of the principal 1932 exports was: Sugar, 119,603,769 pesos (99,926,210 in 1931); coconut oil, 15,302,287 pesos (30,070,644); tobacco products, 12,800,118 pesos (14,841,675); copra, 10,266,454 pesos (18,300,808); abacá, 10,031,204 pesos (17,885,813).

Imports from the United States in 1933 were valued at \$44,781,832, against \$44,968,230 in 1932, a decline of 14.5 per cent. Exports to the United States amounted to \$93,037,796, compared with \$80,877,402 in 1932, an increase of 10.5 per cent. Imports from Japan were valued at 19,000,000 pesos, an increase of 56 per cent over 1932.

FINANCE. Actual revenues (ordinary and extraordinary) during the fiscal calendar year 1932 totaled \$37,358,386 and expenditures \$39,848,444,

leaving a deficit of \$2,490,058. Subtracting the deficit from the balance of \$31,961,288 on hand on Jan. 1, 1932, there remained a balance of \$29,471,231 at the beginning of 1933. Total revenues from ordinary sources in 1932 were \$28,295,158, a decrease of \$4,586,165 (about 16 per cent) from 1931. Proceeds of the sales tax declined 23 per cent; income-tax receipts, 12 per cent. Ordinary expenditures were \$32,860,824, a decrease of \$5,349,925 (16 per cent) from the previous year. The budget estimates for 1933 and 1934, as passed by the Legislature, balanced at \$30,500,000 and \$27,037,151, respectively.

On Dec. 31, 1932, the total outstanding bonded indebtedness of the Islands, consisting of \$64,463,500 insular and \$9,128,500 provincial and municipal bonds, amounted to \$73,592,000. The net balance of insular bonded indebtedness was \$52,696,118.

COMMUNICATIONS. There were 837 miles of railway line in 1932, the chief systems being the Manila Railroad (705 miles on Luzon) and the Philippine Railroad Co. (132 miles on Panay and Cebu). The Manila Railroad reported a deficit of \$48,688 in 1932. During the same year 289 miles of first-class highways and 163 miles of second-class roads were built, making a total of 9106 miles of all classes of highways in existence. Motor vehicles registered during 1932 numbered 41,585. Radio telephone service between Manila and Washington was inaugurated Mar. 30, 1933. During 1932, 1258 vessels of 5,263,001 net tons entered Philippine ports in the foreign trade and 1279 vessels of 5,279,047 net tons cleared. Official air-mail service between the Islands and Europe, via Hong Kong, Saigon and other points en route was inaugurated May 1, 1933, by the Philippine Bureau of Posts through an arrangement with the French postal authorities.

GOVERNMENT. Executive power rests in a governor-general, appointed by the President of the United States, and in six departmental secretaries, all Filipinos except the vice-governor, who is also secretary of public instruction. A senate of 24 members and a house of 96 members are elected by popular vote (except for 9 representatives and 2 senators appointed by the Governor-General). A council of state, headed by the Governor-General, serves as a link between the executive and legislative branches. Governor-General Theodore Roosevelt, who was appointed Jan. 20, 1932, resigned effective Mar. 24, 1933. He was succeeded on June 15, 1933, by Frank Murphy, former mayor of Detroit, Mich. Vice-Governor, John H. Holliday, reappointed Mar. 7, 1933.

HISTORY

INDEPENDENCE BILL PASSED. On Jan. 13, 1933, President Hoover vetoed the Philippine independence bill passed by the United States Congress in December. (For provisions of the bill and the reasons for its passage, see *INTERNATIONAL YEAR BOOK* for 1932.) The President's veto message objected to the measure on three grounds. He declared it weakened the authority of the United States "to a point of practical impotence" during the transition period of 12 years without relieving the American government of its responsibilities. Secondly, it placed the Filipinos at the mercy of stronger Asiatic nations, who threatened them with "infiltration or invasion." Thirdly, Mr. Hoover considered the transition period too short. He charged that the measure, if adopted, would project the Philippines "into economic and social

chaos, with the probability of a breakdown in government, with its consequences in degeneration of the rising liberty which has been so carefully nurtured by the United States."

Within two hours after its reception in the House, the veto message was overridden by a vote of 274 to 94. It was likewise rejected by the Senate on January 17, by a vote of 66 to 26, after Senators Borah, La Follette, Bingham, and others had defended the bill against the President's charges. The fate of the independence act now rested with the Philippine Legislature, whose approval was necessary before the act could go into effect.

LEGISLATURE REJECTS MEASURE. In the Philippines the question of the acceptance or rejection of the Hawes-Cutting independence bill precipitated an unexpectedly violent political strife. It disrupted the Islands' most powerful political party and resulted in a complete reorganization of the government personnel. The measure had been passed by the United States Congress largely because it was approved by the Philippine independence mission, headed by Acting Senate President Sergio Osmena and the Speaker of the House, Manuel Roxas. The mission contained the majority and minority floor leaders of both houses. Moreover, the measure was supported by Camilo Osias, Philippine Resident Commissioner at Washington.

On the other hand, certain provisions of the measure had been vigorously criticized by Manuel Quezon, President of the Senate and one of the Islands' most powerful political leaders. When his objections were disregarded by the independence mission, and the bill was passed, Quezon announced that he would oppose it to the end. The return of the mission to the Philippines was the signal for the commencement of a bitter political conflict between Senator Quezon and the Osmena-Roxas group. Quezon met their challenge to his leadership of the Nacionalista party by forcing a showdown in the Legislature. Osmena and Roxas were defeated by Quezon's well organized political machine and were forced to resign their legislative posts.

Osmena and Roxas now demanded that the issue of the acceptance or rejection of the Hawes-Cutting bill be submitted to popular vote. The proposal for a referendum was accepted by Quezon, who insisted, however, that the electorate be presented with the alternatives of voting for the Hawes-Cutting bill or for immediate independence. His opponents opposed this proposal, pointing out that immediate independence had not been offered and that the sole question at issue was the acceptance or rejection of the Hawes-Cutting measure. To stave off a referendum in the form desired by Quezon, the Osmena-Roxas group moved for a vote on the independence bill in the legislature. Their motion favoring acceptance of independence under the terms of the Hawes Cutting Act was defeated in the Senate on October 7 and in the House on October 10. This action was followed on October 11 and 12 by legislative rejection of the Act, in its existing form, as "inacceptable to the people of the Philippine Islands." On October 13, the Senate authorized the dispatch to Washington of a new mission, headed by Mr. Quezon, to seek amendments to the Hawes-Cutting Act before that measure lapsed on Jan. 17, 1934.

Senator Quezon and his independence mission sailed from Manila November 4. They were authorized to work for amendments to the Hawes

Law or for other new legislation satisfying to the aspirations of the Filipino people. In a speech at Tokyo on November 15, he said he would demand "either complete independence, with the Philippines maintaining their own defenses and responsible to themselves for national survival, or, if a probationary period is necessary, then maintenance of the present economic ties with the United States during that period."

Arriving in Washington in December, his mission found Congressional leaders indisposed to reopen the independence issue. They conferred with President Roosevelt December 27 in an effort to enlist his support for modification of the Hawes-Cutting Act.

NEW POLITICAL PARTY FORMED. Meanwhile the Osmena-Roxas group on December 17 had formally seceded from Senator Quezon's Nacionalista party and launched a new party called the Nacionalista Party for Independence. Senator Osmena was elected president and Mr. Roxas vice-president of the executive committee. The previous day the once defunct Democratic party was revived. Later an alliance between the two new parties was concluded and a campaign inaugurated to secure control of the Legislative Assembly at the June, 1934, elections. They made Senator Quezon's opposition to the Hawes-Cutting Act the main issue in their campaign.

LEGISLATION. A second special session of the Philippine Legislature was called by Governor-General Roosevelt on Jan. 16, 1933, and continued to January 31. The special session devoted itself to a consideration of means of balancing the budget without discontinuing public works, a measure providing gratuities for government employees dismissed in connection with governmental reorganization, a law governing the relationship between tenants and owners, and a law providing for arbitrators in the Department of Justice.

The session of the Legislature extending from the second week in July to November 9 was devoted largely to the struggle over the Hawes-Cutting measure. The unexpected adjournment left some 600 bills awaiting legislative action, including the public works bill and a measure extending a franchise for an air service by the Pan American Airways. Bills passed included those providing for a balanced budget, woman's suffrage, limitation of sugar output, and the reorganization of administrative procedure. The suffrage law, effective Jan. 1, 1935, placed women upon the same electoral basis as men. To vote they must be 21 years of age, able to read and write, and own property worth at least \$250. The Philippines thus became the first Oriental country to adopt woman suffrage.

Governor-General Murphy vetoed 24 and signed 59 of the bills adopted by the Legislature during the session, arousing much criticism for his extensive use of the veto power. Among the bills rejected was the sugar limitation bill. The Governor-General declared that it not only did not limit production but practically guaranteed a larger crop the next year. A bill providing a basic eight-hour day for industry was approved.

OTHER DEVELOPMENTS. Upon his arrival in Manila June 15, 1933, Governor-General Murphy announced his intention to give the Islands a business administration, while warring "on human exploitation, on ignorance, on disease, on dishonesty and on injustice in any form." This promise he attempted to keep by inaugurating a

far-reaching public welfare programme, based on four months of study.

The Governor-General also studied the possibility of a more satisfactory policy for the peaceful development of the Moro provinces and the pacification of outlaws. A few months after his arrival six members of the constabulary and 13 Moros were killed in an encounter in Jolo. During the year ended Sept. 30, 1933, clashes with the Moros resulted in 101 deaths.

PHILLIPS UNIVERSITY. A coeducational institution of higher learning at University Station, Enid, Okla., founded in 1907. The enrollment for the autumn of 1933 in all departments was 396. The attendance at the 1933 summer session was 190. The faculty numbered 32. The productive endowment amounted to \$641,887. The income for the year was \$99,798. The library contained 21,500 volumes, exclusive of public documents. President, Isaac Newton McCash, D.D., LL.D.

PHILOLOGY, CLASSICAL. The best way to gain a fair conception of the more important contributions to classical philology during the year 1933 is to examine lists of articles, books, reviews, or abstracts of them, or both, given in certain periodicals—*The American Historical Review*, *The American Journal of Philology*, *Antiquity*, *The Classical Journal*, *Classical Philology*, *The Classical Quarterly*, *The Classical Review*, *The Classical Weekly*, *Greece and Rome*, *Historical Outlook*, *Language* (the organ of The Linguistic Society of America), *The Journal of Hellenic Studies*, *The Journal of Roman Studies*, *Speculum* (the organ of The Mediaeval Academy of America), *History*, *Athenaeum* (published at Pavia, Italy), *Rivista di Filologia Classica*, *L'Antiquité Classique* (this replaces *Le Musée Belge*), *Les Études Classiques*, *Philologische Wochenschrift*, *Gnomon*, and *Revue de Philologie*. The reviews, too, in these periodicals are very helpful.

In addition to the periodicals listed above may be named certain monographs that appear with a fair degree of regularity. Especially valuable is *Bibliotheca Philologica Classica*, *Beiblatt zum Jahresbericht über die Fortschritte der Klassischen Altertumswissenschaft*, whose aim is to cover all publications, both articles and books (except such as are definitely pedagogical in character), in the whole field of classical philology. No attempt is made, however, to indicate the relative importance of items listed. A very valuable feature of this work is the "Namenverzeichnis," which gives in alphabetical order the names of the scholars whose articles or books are listed in the body of the work, with references back to the numbered items which describe articles or books. The latest volume of this work is Volume 57, which covers the publications of the year 1931. In France a work of like value is published under the title *L'Année Philologique et Analytique de l'Antiquité*; its editor is J. Marouzeau.

The Year's Work in Classical Studies, published in England, lists material that appears between July 1 and June 30, under such captions as "Greek Literature," "Latin Literature," "Greek History," "Roman History," "Greek and Roman Religion," "Ancient Philosophy," "Greek Archaeology and Excavation," "Italian Archaeology and Excavation," "Papyri," and "Roman Britain."

To *The Loeb Classical Library* (see the In-

INTERNATIONAL YEAR BOOKS, 1911-1932), additions were made, on the Greek side, of versions of Aristotile, *The Metaphysics*, books i-ix, H. Tredennick; *Pausanias* (the third of six volumes), W. H. S. Jones; and *The Geography of Strabo*, H. L. Jones (the eighth and concluding volume. Pages 217-510 of this volume present an "Index of Names, Places, and Subjects" to all eight volumes). On the Latin side there were added a version of Cicero, *De Natura Decorum*, and *Academica* (in one volume), H. Rackham.

During the year progress was made on several lexicographical projects of the highest importance.

Of the tenth edition of Liddell and Scott, *A Greek-English Lexicon*, part vii was published (seven parts out of ten have now appeared, with a total of 1392 pages; the Lexicon has been carried well into the letter Pi). Of the *Thesaurus Linguae Latinae* three parts, each of 160 columns (80 large pages), appeared: vol. v, first series, fascicle x (*donec . . . duco*), vol. v, second series, fascicle iii (*elaboro . . . emetior*), vol. vi, second series, part xi (*gloria . . . gratificor*).

Of A. Walde, *Lateinisches Etymologisches Wörterbuch*, third edition, by J. B. Hofmann (see the INTERNATIONAL YEAR BOOKS, 1931-1932), part vi appeared. This carries the work into *ferre*.

Professor G. Lodge's *Lexicon Plautinum* was completed by the publication of vol. ii, part x. The two volumes of this work contain 1863 large pages. All scholars rejoice at the completion of this work. It is worth while to repeat here what was said in the INTERNATIONAL YEAR BOOK for 1931 about this work: "This work, the fruit of over 40 years of devoted labor, is the most extensive undertaking that any American classical scholar has thus far, single-handed, essayed and accomplished. By this work Professor Lodge has made the fact concerning Plautus's vocabulary and syntax accessible to all, in convenient form; in so doing he has rendered a service of the highest importance not only to students of Plautus but also to all students of early Latin. Since Plautus is the first Latin author whose writings have come down to us in anything like complete form, the facts about his usage of words and his syntax bulk large in any view of the vocabulary and the syntax of early Latin."

In *The American Journal of Philology*, liv, appeared "Insomnia in the Lexica," R. J. Getty (a study of the Latin words *insomnia* and *insomnium*); "On the History of the *Cum*-Construction," H. C. Nutting; "Die Älteste Attische Kleruchie," W. Schwahn; "Durative and Aoristic," C. W. Peppler (the author lays stress on some of the meanings of the durative tenses in Greek, and maintains that a knowledge of these meanings can be made very helpful in determining the text of various passages of Greek authors); "On Some Financial Legislation of the Sullan Period," T. Frank; "Herodotus on the Pelasgians in Attica," A. G. Laird (the author holds that there is no evidence in Herodotus for a late Pelasgian settlement in Attica. Certain expressions of Herodotus which have been interpreted to mean 'settled with' really mean 'dwelt with.' "The Pelasgians driven from Attica to Lemnos were in his <Herodotus's> view a remnant of the original population from whom the Hellenized Athenians 'split off'"); "Quirinius and the Census of Judaea," Lily R. Taylor (a presentation of "the evidence for the reliability of <St.> Luke's account (2, 1-5) of the census

of Judaea"); "Some Notes on the War with the Homonadeis," T. R. S. Broughton (a discussion of part of Tacitus, *Annales*, iii 48); "Some Traces of Serfdom in Cicero's Day," R. M. Haywood; "Galen and Posidonius' Theory of Vision," H. Cherniss ("Arranged from notes left by the late Roger M. Jones"); "An Interpretation of Cato, *Agriultura*, 136," T. Frank; "The Mythological Paradigm <παράδειγμα, exemplum> in Greek and Latin Poetry," H. V. Canter; "Divinity and Deliberation," E. B. Stevens (a discussion of a question much mooted in ancient Greek writers, Did the gods deliberate, or have the faculty of deliberation?); "Statius' Adulation of Domitian," K. Scott; "On Suetonius' Life of Terence," T. Frank (Professor Frank discusses the meaning of *Afer* in the name of the comic poet, P. Terentius Afer; he refuses to accept the view, often held, that Terence was of Berber stock; he holds that *Afer* = 'Carthaginian,' and that Terence was born at Carthage and had his *cognomen* from Carthage. He hazards various guesses concerning the way in which Terence came to be born a slave at Carthage); "Vergil's Use of *Interea*, A Study of the Treatment of Contemporaneous Events in Roman Epic," O. W. Reinmuth; "Critical Notes: Seneca's Dialogi I-VI," W. H. Alexander.

From *Classical Philology*, xxviii, may be mentioned "The Financial Activities of the Equestrian Corporations, 200-150 B.C.," T. Frank; "Fear in Spartan Character," P. H. Epps (the author marshals evidence in support of a view set forth long ago by J. P. Mahaffy, that the Greeks were as a whole "a very warlike but not a very courageous people," and that "Spartan valor was an artificial and factitious thing"); "The Traditional <Fixed> Metaphor in Homer," M. Parry (the author sums up thus: "There is not a verse in Homer that does not become clearer and greater when we have understood that he too was a traditional poet. This way lies <sic!> all true criticism and liking of his poems"); "Classical Rhetoric and the Mediaeval Theory of Preaching," H. Caplan; "The Four Elements in the *Prometheus Vincit*," S. M. Adams; "The Types of Counsel and Deliberation in Prephilosophic Greek Literature," E. B. Stevens; "Lucan and Civil War," Eva M. Sanford (the author inclines to believe that those medieval commentators on Lucan are right who hold that his purpose was to "describe the civil war and to dissuade Romans from civil wars by showing the misfortunes on both sides"); "The Memoirs of Rutilius Rufus," G. L. Hendrickson; "The Ins and Outs of the Three-Actor Rule," A. C. Schlesinger; "Quintilian's Use of Earlier Literature," M. M. Odgers; "A Grammatical Papyrus," H. M. Hubbell (the author discusses an abstract of Greek grammar, "written in a large, clumsy, school hand," on the back of a papyrus that can be dated in 9-12 A.D.); "The Origin of the Syllogism Again," P. Shorey; "The Mutual Borrowings of Catullus and Lucretius and What They Imply," T. Frank; "The Constitution of the Peloponnesian League," J. A. O. Larsen; "Simonides on the Fallen of Thermopylae," C. M. Bowra; "Poggio's Manuscripts of Livy—Alleged and Actual," B. L. Ullman; "Non-Assertive Elements in the Language of the Roman Historians," J. J. Schlicher.

In *The Classical Journal*, xxvii, xxviii, appeared "The Wooden Horse at the Gate of Troy," W. F. J. Knight; "Persius as a Literary Critic," W. C. Korfmacher; "Ancient Universities and

Student Life," C. A. Forbes; "The Two Younger Tullii," J. Stinchcomb; "Reflection of Character in Art," H. N. Couch; "Terence and Menander Once More," R. C. Flickinger; "Nature-Imagery in Vergil's Aeneid," A. L. Keith; "The Ancient Military Writers," O. L. Spaulding, Jr.; "Roman and Modern Military Science," L. K. Born; "The Frogs of Aristophanes as a Type of Play," A. M. Young; "Terentianus Maurus, Metrical Metriician," R. M. Geer; "Fate and Freedom in Greek Tragedy," W. M. Agard.

The Classical Weekly, xxvi, xxvii, contained the following articles: "Classical Mythology in Contemporary American Poetry," J. Stinchcomb; "Some Motives in Greek Tragedy Which Can Be Classified As Belonging to the Poetry of Escape," W. F. J. Knight; "The Loeb Classical Library: Thirty Recent Additions," C. Knapp; "Latin Poems <Original>," F. G. Moore; "Horace and Edgar Allan Poe," J. P. Pritchard; "Remarks on Lucan's Pharsalia," H. C. Nutting; "The Early History of the Greek People and the Indo-Germanic Migrations During the Second Millennium B.C.," F. Bilabel; "The Origin of the Actio per Formulam," E. J. Urch; "The Uses of Pendeo and Suspendo in Latin Poetry," J. H. Mozley; "The Perusine War," M. Reinhold; "American Doctoral Dissertations in Classics, 1922-1930," C. Knapp; "Greek and Roman Weather Lore of the Sea," E. S. McCartney; "Statius as an Imitator of Vergil and Ovid," J. H. Mozley; "Remarks on Lucan's Pharsalia: Second Group," H. C. Nutting; "The Influence of Astrology on Life and Literature at Rome," E. Riess.

In *Transactions and Proceedings of the American Philological Association*, lxiii, which contains the papers read before the Association at its meeting of December, 1932, the following articles appeared: "The Scene of the *Persians* of Aeschylus," A. Harmon; "Magical Motives in Seneca's *Troades*," W. F. J. Knight; "Witchcraft in the Lecture Room of Libanius," C. Bonner; "A Further Study of the Letters of Symmachus, based on a New Manuscript of the *Florilegium* Group," Olivia N. Dorman; "The Art of Terence's *Eunuchus*," E. K. Rand; "Cicero's Legacies," S. L. Mohler; "The Significance of the Speech of Maecenas in Dio Cassius, Book LII," M. Hammond; "Criteria of Originality in Plautus," H. W. Prescott; "The Problem of Macedonian Holdings in Epirus and Thessaly in 221 B.C.," J. V. A. Fine; "The Elder and Younger Pliny on Emperor Worship," K. Scott; "Notes on the History of Epicureanism," N. W. DeWitt; "On the Origin of Diana," A. E. Gordon; "The Decree of Demophilus, 340-345 B.C.," A. Diller; "Observations on Sabbadini's Variorum Edition of Vergil," H. R. Fairclough; "The Accounts of Wages Paid in Kind in the Zenon Papyri," Elizabeth Grier; "Zeus Didymaeus," J. E. Fontenrose; "The Dating of the *Lex Naronensis*," Aline Louise Abacherli; "The Interdiction of Magic in Roman Law," C. Pharr.

There remains only space enough to mention a very few of the more important books that have come to the writer's attention. Since it is, in general, clear from its title to which field of classical philology each book belongs, the books are listed in the alphabetical order of their authors' names:

Bailey, C., *Phases in the Religion of Ancient Rome*; Barbagallo, C., *Storia Universale, Volume ii, Part 2, Roma Antica, L'Impero* (49 A.C.-476 D.C.); Boak, A. E. R., *Papyri from Tebtunis,*

Part I; Brehaut, E., *Cato the Censor on Farming, Translated*; Buck, C. D., *Comparative Grammar of Greek and Latin*; Bush, D., *Mythology and the Renaissance: Tradition in English Poetry*; Burton, H. W., *The Discovery of the Ancient World*; Casson, S., *The Technique of Early Greek Sculpture*; Cook, A. S., Adcock, F. E., Charlesworth, M. P., Editors, *The Cambridge Ancient History*, vol. ix (this volume contains 21 chapters, by various scholars, describing "The Roman Republic 133-44 B.C.");

Dickinson, R. E., and Howard, O. J. R., *The Making of Geography*; Dodds, E. R., *Proclus, The Elements of Theology, a Revised Text, With Translation, Introduction, and Commentary*; Drexler, H., *Plautinische Akzentstudien*, 3 volumes; Fairbanks, A., *Greek Art*; Farnell, L. R., *Pindar, Complete Works, With Translation, and Critical Commentary*; Ferguson, W. S., *Athenian Tribal Cycles in the Hellenistic Age*; Frank, T., *Rome and Italy of the Republic* (this is volume 1 of *An Economic Survey of Ancient Rome*); Gernet, L., and Boulanger, A., *Le Genie Grec dans la Religion*; Glotz, G., *Mélanges Gustav Glotz*, 2 volumes; Gomme, A. W., *The Population of Athens in the Fifth and Fourth Centuries B.C.*; Groag, E., and Stein, A., *Prosopographia Imperii Romani, Pars I (A-B)*, second edition; Greene, W. C., *The Achievement of Rome: A Chapter in Civilization*;

Hammond, M., *The Augustan Principate*; Hansen, Hazel D., *Early Civilization in Thessaly*; Harry, J. E., *Greek Tragedy, Emendations, Interpretations, and Critical Notes*, vol. i (this volume deals with Aeschylus and Sophocles); Haywood, R. M., *Studies on Scipio Africanus*; Jones, L. W., and Morey, C. R., *The Miniatures of the Manuscripts of Terence*, 2 volumes; Laidlaw, W. A., *A History of Delos*; Miller, W., *Daedalus and Thespis: The Contributions of the Ancient Dramatic Poets to our Knowledge of the Arts and Crafts of Greece*, 2 volumes; Murray, G., *Aristophanes: A Study*; Parke, H. W., *Greek Mercenary Soldiers from the Earliest Times to the Battle of Ipsus*; Powell, J. U., and Barber, E. A., *New Chapters in the History of Greek Literature, Third Series. Some Recent Discoveries in Greek Poetry and Prose of the Classical and Later Periods*;

Richardson, Bessie E., *Old Age Among the Ancient Greeks. The Greek Portrayal of Old Age in Literature, Art, and Inscriptions*; Ross, A., *Greek Geometric Art, Its Symbolism and Its Origin*; Seltman, C. T., *Attic Vase-Painting*; Seltman, C. T., *Greek Coins: A History of Metallic Currency and Coinage Down to the Fall of the Hellenistic Kingdoms*; Shorey, P., *What Plato Said*; Stein, E., and Rittlering, *Beiträge zur Verwaltungs- und Heeresgeschichte von Gallien und Germanien*; Taylor, A. E., *Socrates*; Tod, M. N., *A Selection of Greek Historical Inscriptions to the End of the Fifth Century B.C.*; Walbank, F. W., *Aratos of Sicyon*; West, R., *Römische Porträt-Plastik*; Winter, J. G., *Life and Letters in the Papyri*.

PHILOLOGY, MODERN. In our discussion of the progress of philology during the year 1932, special attention was called to the publication of the late Prof. Henri Hubert's *Les Celtes et l'Expansion celtique jusqu'à l'époque de la Tène* (Paris, 1932). It was there predicted that this remarkable compendium of the achievements made since the War by archaeological research in the Celtic field would have a marked influence on

the future course of philology. Subsequent events have, however, exceeded our most glowing expectations, inasmuch as the influence of this carefully prepared study is far from being limited to philology alone.

An example may be cited here. Ever since the 7th century of our era and, especially, since Benoît de Sainte-Maure's *Roman de Troie* (written circa 1165), through Jean Lemaire de Belges' *Illustrations de Gaule et Singularitez de Troie*, a prose epic in three books dating from 1510 to 1513, and Pierre de Ronsard's unsuccessful epic poem, *La Franciade* (1572) in four books, the French have cherished the idea that their legendary cultural ancestry derived from Troy,—or, in other words, Greece. Thus, Francio, according to Lemaire, or Francus, according to Ronsard, who was supposed to have been the son of Hector and grandson of Priam, outwitting the Greek conquerors, escaped, with a large following, from Troy, and, after having wandered through various countries, settled in France. In this manner the earlier poets and chroniclers explained the name of their country, France, for they did not desire to attribute it to the Franks, their real conquerors in the 5th century of our era, inasmuch as they considered the latter to be barbarians—and what people would want to claim descent from such uncultured folk?

Having realized the fancifulness and improbability of this legend, the French, since the 17th century, have firmly adhered to the equally unfounded tradition that they are to the modern world what the Greeks were to the ancient world, i.e., that their culture knows no superior. It may be added that this somewhat naïve nationalistic pride is more or less common to all modern nations, for do not the present-day Germans—taking their cue from their own philologists—insist that they are the direct modern descendants of the Indo-Germanen, or Aryans? Similarly, the Italian Fascists maintain that they go back to Julius Cæsar, whereas the Spaniards hold that the source of their national culture is to be found in the venturesome spirit of the *Conquistadores*, who had assimilated the loftiest traits that the Moors—and, hence, the Arab civilization—had to offer. Other examples could easily be cited.

So, the Frenchman loved to believe that, while his governmental institutions, laws, etc., might be Roman in origin, his culture was derived from a more refined people, those whom even their Roman conquerors admired and imitated, i.e., the Greeks. Any suggestion that the Celts might also have been contributory factors would have been hailed, even as late as the end of the 19th century, with derision—"for how could it have been possible," a Frenchman would ask, "for such an uncultured race to have exercised any influence of that sort?"

But the 19th century offered some startling revelations, at least so far as Celtic was concerned. First, back in the 30's and 40's, Francis Bopp, the founder of comparative philology, deigned to give Celtic attention in the original German edition of his famous *Comparative Grammar of Sanskrit, Zend, Armenian, Greek*, etc. (published 1833-52); then Johann Kaspar Zeuss (1806-56) published in 1850 his *Grammatica Celtica*, which was revised by his pupil, Hermann Wilhelm Ebel (1820-75) in 1871; next the *Revue Celtique* was founded in 1870 by Henri Gaidoz; finally, Jules Ferry, then French Minister of Public Instruction, established in 1880, at the

Collège de France, the first chair of Celtic to be created in any European university or educational institution, and the following year (1881) when he became Premier, sent the occupant of that chair, Henri d'Arbois de Jubainville (1827-1910), to the British Isles to catalogue all the Celtic MSS to be found in their libraries and archives. The consequence of all these events was that Celtic became recognized at once as an important field of study by all European scholars.

So, when d'Arbois completed issuing, in the 1890's, his now celebrated *Cours de Littérature celtique* in eight substantial volumes, the French people began to realize that the Gauls, or Celts, were far from being the barbarians that they had always imagined them to be. D'Arbois' great work was followed by Prof. Camille Jullian's masterly *Histoire de la Gaule* in eight volumes (1884-1926), then by Joseph Déchelette's *Manuel d'Archéologie préhistorique celtique et gallo-romaine* (3 vols., 1908-10),* and, lastly, by the work of M. Hubert, mentioned above. And what has been the result? Last June, an opera, entitled *Vercingétorix*, was given at the Grand Opéra in Paris. The authors of the libretto were M. Étienne Clémentel, a former Minister of State, and M. Louwyck, and the composer, M. Canteloube. This "épopée lyrique nationale" was then presented under the most auspicious circumstances—before President Lebrun and his Conseil d'État. French musical and literary critics hailed with enthusiasm this "monument patriotique," citing at the same time the above-mentioned works as well as the discovery in February, at Clermont-Ferrand, of the immense Gaulish *oppidum*, or town, which has been identified as Gergovia where Vercingetorix defeated Julius Cæsar in 52 B.C., and for which, says a critic, "on a vu le public français se passionner." And Vercingetorix, theretofore considered as a mere insignificant chief of a tribe of ferocious barbarians, was at once transformed into the national hero, or, to quote the words of André George, "l'incarnation du sens national, en face des résistances locales et du 'défaitisme' de ses rivaux." Thus, the modest contributions of philologists and archaeologists have succeeded in toppling over the Trojan-Greek idol before which the French have so insistently worshipped for more than a thousand years—a fact that would have appeared hopelessly incredible even as late as 25 years ago.

In fact, the year 1933 marked an epoch in the history of Celtic research, for at no time in the past was such widespread interest manifested for this subject. Indeed, it may well be said that, if much of Europe was "war-minded" at this time, the Celtic nations were distinctly "culture-minded." Thus, the first important Celtic Congress was held at Dinard, Brittany, from Sept. 4th to 9th. The delegates not only succeeded in perfecting an organization for conducting work in all of the six Celtic languages, but voted unanimously a resolution requesting the French government that Breton might be officially taught in the state schools of Lower Brittany. Among the important papers read was one by Miss M. R. Dobbs, of Cushendall, Ireland, on "The Lost Folk Songs of Celtic Literature" and by Prof. Tomas OMáille, of University College, Galway, on the "Dialect Survey of Ireland," undertaken by the Committee of Irish Studies of the Royal Irish

* Special attention was given to these works, at the time of their publication, in these columns. Cf. the NEW INTERNATIONAL YEAR BOOK of those dates.

Academy with funds provided by the Free State. According to Prof. O'Máille, in three sessions of 15 days each, 215 records were made, providing typical specimens of the three principal dialects. This survey will be continued until every vestige of dialectal variation is recorded.

In Ireland itself the same fervor for scholarship was evident on all sides. The MSS Commission has undertaken to publish facsimiles, with transcription and translation, of all the MSS in existence in Ireland. And new MSS are continually being discovered. Thus, the *Bretha Crolige*, or "Judgments on Blood-Lyings," a valuable Old Irish law tract of the 8th century, hitherto believed to have been lost, turned up in an Irish medical MS recently acquired by the National Library of Ireland. This MS supplies additional information to the *Senchas Mor*, the great collection of Irish customary law compiled at the beginning of the 8th century, for it deals with the primitive system of compensation for non-fatal injuries which imposed on the injurer the duty of providing for the nursing of his victim back to health and supplying him with medical attendance.

The Folklore Society of Ireland is gathering the folklore not only of that country but also that of the Irish people in foreign countries, especially in America. Though founded in 1927, the Society has heretofore been hampered by lack of funds in making a systematic effort to collect the fast-disappearing oral traditions of the Irish people. In cooperation, then, with the government-aided Irish Folklore Institute, established in 1930, the Society has succeeded in the past two years in recording verbatim more than 2000 popular tales, related in various Irish dialects. Next, a great impetus to Irish archaeology has been given by the excavations made by the second Harvard University Archaeological Mission to Ireland, which have revealed that the little island is a veritable mine of untouched archaeological treasures. This mission, which aims to make a systematic survey of the entire country, has discovered that Ireland is very rich in monuments dating back to the Bronze Age (2000-350 B.C.) and has, further, come across evidence that the first immigrants to the island arrived there about 7000 years ago and "that they probably came from the continent by land bridges then existing." The pronounced success of this mission has resulted in plans for the establishment of an American School of Celtic Studies in Ireland under the auspices of the National Museum. Finally, it may be noted that the general use of the Irish language is spreading rapidly in all parts of the Free State. This will no doubt be encouraged by the publication of Dr. Hans Hensen's *Irish Lexicon, a Concise Dictionary of Early Irish with Definitions in German and English*, of which the first fasciculus appeared at Halle in 1933. When completed this valuable work, edited by Séamus Caomhánach, Dr. Rudolf Hertz, V. E. Hull, and Gustav Lehmacher, S.J., with the assistance of many collaborators, will contain more than 800 pages. In all of the above undertakings scholars in Ireland have received the indefatigable cooperation of the large and influential American Irish Historical Society (132 E. 16th St., New York), which, under the administration of its able and efficient President-General, James McGurrian, and his zealous co-workers (notably former Justice Daniel F. Cohalan), has become, through its many activities and productions, the

outstanding historical society, devoted to a racial element, in America.

Economic depressions may be transitory, but—and most fortunately for us!—discussions on language and its use never cease. Thus, in the very midst of our recent financial crisis Prof. R. L. Ramsay, of the University of Missouri, maintained, in the March issue of *American Speech*, that there are only some 250,000 "legitimate and authoritative" words in the English language, and "over 50,000 of these are obsolete." Not satisfied with having reduced English to this limited quota, which any one might have thought a sufficiently large task, Professor Ramsay becomes a world-arbiter and fixes definitely the amount of words a foreigner may use in his own tongue. Hence, we are told that "a careful and conservative estimate of the largest published dictionaries of foreign languages gives approximately 71,750 for German without counting compounds, or 184,704 with recorded compounds; 93,032 for French, 70,683 for Spanish, 69,642 for Italian, 51,686 for ancient Latin, 96,438 for ancient Greek, and 41,142 for Anglo-Saxon." But Professor Ramsay overlooks one vital fact in his estimates for French, Spanish and Italian, and that is that there are no adequate or complete dictionaries existing for those tongues, or, in other words, that it would be necessary to bring together two or more dictionaries in each language in order to arrive at a fair evaluation of the numbers of words used by the combined population. Thus, the *Dictionnaire Général de la Langue française*, which is, excepting the antiquated Littré and the encyclopedic dictionary of Larousse, the only work approaching a standard lexicography in French, is limited not only to so-called living words, but represents, more or less, the choice of one editor, Antoine Thomas, since he carried on the undertaking most of the time alone. Nevertheless, this dictionary was advertised as containing more than 100,000 words in its original edition. And as for its inadequateness, that can easily be discovered by reading any French magazine, literary work, or daily journal and looking up the words used in that dictionary. If we now return to English we find that a noted and experienced lexicographer, Dr. Frank H. Vizetelly, fails to agree with Professor Ramsay. In an illuminating historical article published in the *New York Times* of March 5, Dr. Vizetelly points out that—to cite only one example of the many included in his list—"the present vocabulary strength of Funk and Wagnalls *New Standard Dictionary* is 455,000 words," and that "the publishers have in reserve for the consideration of its editors, for future editions, not less than 125,000 more terms, a number that can be swelled almost indefinitely, depending entirely upon where the bars of exclusion are let down." And since Professor Ramsay had challenged Dr. Vizetelly's estimate of 1,000,000 words in the English language as well as that of two to three millions made by Mr. Harold Wentworth, former associate editor of Webster's *New International Dictionary*—"these astonishing figures," says Professor Ramsay, "backed by imposing names and indorsed by standard publications, seem hitherto to have gone unchallenged"—Dr. Vizetelly finds himself in accord with Mr. Wentworth, for, in making his estimate, he "did not take into account any of the variations," such as verbal inflections, comparisons of adjectives and adverbs, irregular plurals of nouns, etc., referred

to by Mr. Wentworth. Finally, Dr. Vizetelly remarks that, in the *New English Dictionary on Historical Principles*, which contains a total of 414,825 terms, Dr. Murray was obliged by the Clarendon Press to limit himself to "the literary vocabulary" and to exclude "the vast vocabulary of the sciences." As an example of the rapid growth of the scientific vocabulary in one phase alone, the present writer recalls that when, in 1899, Gen. (then Lieut.) C. D. Willcox sent him a copy of his new *French-English Military Technical Dictionary* (Washington, Government Printing Office), it contained less than a half-dozen words pertaining to aviation. Scarcely 16 years later this vocabulary had grown to some 3000 words. And the same may be said of the automotive industry, of the moving picture, radio, psychology, etc. How suddenly and rapidly the scientific vocabulary has grown may be seen in the storm that raged in the British press, shortly after the last meeting of the British Association for the Advancement of Science, about the "New Jargon of Science." In fact, in an address on "Technical Language" delivered before the London Authors' Club on October 23, Dr. Francis Aveling, Professor of Psychology at London University, stated that much complaint was made at the British Association meeting this year "that some of the communications of the younger men were couched in terms so obscure and befogging that many even of the older men of science were unable to understand them." He attributed this to "the immense complexity of inter-related detail which is nature," which is so difficult "to grasp in human thought and to translate into words," rendering the ordinary vocabulary in current use insufficient and requiring, for the sake of exactness, the invention of "a terminology like that of chemistry, or a symbolic notation such as those of mathematics or statistics." Is it astonishing then that archaeologists and ethnologists, as stated in recent news dispatches, are finding it necessary to systematize and prepare dictionaries of their nomenclature? And what is true of science is also true of philology and linguistics, where scholars are likewise striving to arrive at more exact shades of meaning in describing the inter-relations of words and ideas. Consequently, Prof. J. Marouzeau, of the University of Paris, has issued recently a *Lezique de la Terminologie grammaticale et linguistique* (Paris), which contains 182 pages.

It is obvious, therefore, that all attempts to introduce an artificial international language such as Esperanto are bound to fail, because, first, most of them consider language as static—and how far could we get along to-day with the vocabulary used in the '90's of the past century?—and, secondly, if they admit growth in language their vocabularies become as great as—if not greater than—those of existing languages. And so, notwithstanding the great gains claimed for Esperanto at the Congress held at Cologne on July 30-31, a first showing was made of a new picture language, *Mundaneum*, which, according to its inventors, presents economic and social facts understandably to all peoples. On the other hand, the eminent French grammarian, Ferdinand Brunot, President of the Academy of Inscriptions, maintains that "the universal tongue that will be developed by the extension of world relationships will probably be a kind of language analogous to algebra." Already, he said, the languages of the different important nations

had assumed an extension—due to the culture they represented—far beyond the sphere of their natural domain and were becoming merged. It is possible, then,—if we accept the view of Professor Brunot—that at some distant future date our present-day languages will go the way of Etruscan and Berber. But, for the time being, English, by reason of its great flexibility and rich borrowings, has, in the parlance of the race-track, the pole, and may yet win the great race of universality.

GENERAL. Among the general works on linguistics, the following merit attention: Karl Bühler, *Die Axiomatik der Sprachwissenschaft* (Berlin), in which the author examines linguistics in comparing it with the *ideas* of Plato, the *forms* of Aristotle, and the modern conception of *structure*, especially the distinction between *language* and *speech*; Charles Bally, *Linguistique Générale et Linguistique française* (Paris), in which the author holds that "la langue parlée est une abstraction"; Karl Vossler, *The Spirit of Language in Civilization* (New York), a translation from the German of a study on the philosophy of language; Valéry Larbaud, *Technique* (Paris), which, though containing an arraignment of some of the methods of philologists, reveals an enthusiastic admiration for the results obtained; L. Bloomfield, *Language* (N. Y.), a revised and enlarged edition of the author's *Introduction to the Study of Language*, first published in 1914; A. Cuny, *La Catégorie du duel dans les langues indo-européennes et chamito-sémitiques* (Brussels), in which the author seeks to trace a genetic relationship between the formations of the dual in Indo-European and Hamito-Semitic; J. Lohmann, *Genus und Sexus, eine morphologische Studie zum Ursprung der indogermanischen nominalen Genus-Unterscheidung* (Göttingen), which is a further development of Antoine Meillet's thesis that the feminine gender is of more recent origin, having been superimposed upon the animate, or masculine, and the inanimate, or neuter, genders; A. von Blumenthal, *Die Iguvinschen Tafeln: Text, Übersetzung, Untersuchungen* (Stuttgart), another attempt to interpret the Umbrian Tables of Iguvium; H. N. Shenton, *Cosmopolitan Conversation* (ib.), a survey of the language problems of international conferences; C. O. S. Mawson, *International Book of Names* (ib.), a pronouncing dictionary of proper names; C. N. Gould, *Oklahoma Place Names* (Norman, Okla.), an account of their origins and meanings; W. R. Halliday, *Indo-European Folk-Tales and Greek Legends* (N. Y.), a comparative study of the origin of legends; S. Thompson, *Motif-Index of Folk Literature* (vols. i, ii, Bloomington, Ind.), a classification of narrative elements in folk-tales, ballads, myths, local legends, etc., going through the letter E; Mary Entwistle, *There Was Once* (N. Y.) a collection of folklore and legends; A. F. Bentley, *Linguistic Analysis of Mathematics* (Bloomington, Ind.), a study of the language, symbols, and expressions used in mathematics; and L. H. Bailey, *How Plants Get Their Names* (N. Y.), a study in botanical nomenclature with a self-pronouncing list of generic names.

AFRICAN. The most important contributions to this field of research include W. H. Worrell, *Coptic Sounds* (Ann Arbor, Mich.), of which Part I deals with the main currents of their history; J. H. Breasted, *The Dawn of Conscience* (N. Y.), a study in the beginnings of moral

consciousness in ancient Egypt; S. R. K. Glanville, *The Egyptians* (ib.), an account of history, life, and art in ancient Egypt; K. S. Sandford and W. J. Arkell, *Paleolithic Man and the Nile Valley in Nubia and Upper Egypt* (Chicago), a study of the region in Pliocene and Pleistocene times, forming volume ii of the *Prehistoric Survey of Egypt and Western Asia*; W. F. Edgerton, *The Thutmosid Succession* (Chicago), a study in Egyptian dynastic history; L. Spence, *Myths and Legends of Ancient Egypt* (New York); A. S. Yahuda, *The Language of the Pentateuch in its Relation to Egyptian* (vol. i; ib.), a new approach to higher criticism of the Old Testament; H. G. Evelyn White, *The Monasteries of the Wadi 'N Natrān: The Architecture and Archaeology* (ib.), the third and final volume of the late author's studies on these Coptic monasteries, issued by the Metropolitan Museum of Art; C. Meinhof and N. von Warmelo, *Introduction to the Phonology of the Bantu Languages* (Berlin); and R. Lenton, *The Tanala, A Hill Tribe of Madagascar* (Chicago), an anthropological and cultural study.

CHINESE AND JAPANESE. Among the interesting studies devoted to Chinese we may note L. Cranmer-Blyng, *The Vision of Asia: An Interpretation of Chinese Art and Culture* (New York), revealing the art of life the Chinese developed, by an authority on Oriental philosophy; M. Granet, *Festivals and Songs of Ancient China* (ib.), an interpretative study, translated from the French; F. T. C. Werner, *Myths and Legends of China* (ib.), a study in folklore; Genevieve Wimsatt, *The Lady of the Long Wall* (ib.), a translation of *Meng Chiang Nu*, one of the *Ku Shih*, or Drum Songs, of China, a collection of ageless narratives which have only recently been set down in writing; Pearl S. Buck, *All Men are Brothers* (ib.), a translation of the classic fifteenth century Chinese novel, *Shui Hu Chuan*; *Chinese Rhymes for Children* (ib.), a collection of Chinese rhymes, including some from Japan, India, and Korea, translated by I. Taylor; *Careers for Students of Chinese Language and Civilization* (Chicago), a symposium on vocational opportunities, edited by L. Hodous; E. D. Harvey, *The Mind of China* (New Haven, Conn.), a study of the national psychology; R. H. Tawney, *Land and Labour in China* (N. Y.), an economic study of the traditional agricultural and industrial systems in China; and H. J. Coolidge, Jr., and Theodore Roosevelt, *Three Kingdoms of Indo-China* (ib.), a record of the Field Museum's expedition to Southeastern Asia.

Japanese is represented by K. K. Kawakami, *Manchoukuo, Child of Conflict* (New York), a discussion of recent developments in Manchuria; Sven Hedin, *Jehol, City of Emperors* (ib.), a history and description of the Mongolian city; Lady Murasaki, *The Bridge of Dreams* (Boston, Mass.), the sixth and last volume of the 1000-year old classic, *The Tale of Genji*, translated by Arthur Waley; A. L. Sadler, *The Art of Flower Arrangement in Japan: A Sketch of its History and Development* (N. Y.); M. Anesaki, *Art, Life, and Nature in Japan* (Boston, Mass.), a description and interpretation of art in the everyday life of the Japanese; and W. H. Erskine, *Japanese Festival and Calendar Lore* (Tokyo), an almanac dealing with Japanese customs.

INDIA. Contributions to this extensive and intriguing field of research include the following: G. Morgenstierne, *Report on a Linguistic Mission*

to North-Western India (Oslo, Norway), a valuable survey; H. Courbin, *Grammaire élémentaire du Sanskrit classique* (Paris), which, though useful, is far inferior to the standard work of W. D. Whitney; P. L. Vaidya, *The "Prākṛta-Prakāśa" of Vararuchi* (Poona, India), a study of a well-known text; C. V. Joshi, *A Manual of Pali* (ib.), an outline of an important ancient language; R. V. Jahagirdar, *An Introduction to the Comparative Philology of the Indo-Aryan Languages* (ib.), a general study; R. Carlyle, *The Psalms of Krishna* (Los Angeles, Calif.), a metrical version of the *Bhagavad-Gita*, translated from the Sanskrit; S. Dasgupta, *Indian Idealism* (New York), a collection of essays on Indian philosophy; C. Bragdon, *An Introduction to Yoga* (ib.), an explanation of the meaning of Yoga, with advice and instruction for the practice of "Raja" Yoga; R. J. Minney, *India Marches Past* (ib.), an account of India, its history and present problems; D. G. Mukerji, *The Master Monkey* (ib.), a legend from the folklore of India; Ian Hay, *The Great Wall of India* (Boston, Mass.), an account of a trip to the Northwestern frontier of India; H. C. E. Zacharias, *Renascent India* (N. Y.), a résumé of the Indian problem during the past century; and one work on Tibet, viz., Henrietta S. Merriek, *Spoken in Tibet* (ib.), a description of life in Tibet.

PERSIAN. Antoine Meillet's splendid *Grammaire du Vieux-Perse* (Paris), although originally published as recently as 1915, had nevertheless become antiquated by reason of the new light thrown upon the ancient language of Persia by the important archaeological discoveries as revealed in V. Scheil, *Les Inscriptions des Achéménides à Suse* (Paris, 1929), F. W. König, *Der Burgbau zu Susa* (Leipzig, 1930), R. G. Kent, *The Recently Published Old Persian Inscriptions* (Philadelphia, 1931), E. Herzfeld, *Arch. Mitt. aus Iran* (III, 29-124, Berlin, 1931), and W. Brandenstein, *Die neuen Achamenideninschriften* (WZfKdM, XXXIX, 7-97, 1932). Consequently a new edition, utilizing the fresh material found in the Susian and other inscriptions as well as the Iranian material found in transcription in the Aramaic documents of Elephantine, was greatly desired, and this has now been supplied in a second edition of the Grammar, revised and enlarged by the brilliant pupil of the great philologist, E. Benveniste.

Other works, dealing with Persia, include Sir Arnold Wilson, *Persia* (New York), which contains a survey of the country, its history, customs, and peoples and of the present transition; Eleanor F. Noxon, *Rubā'iyāt of the Twentieth Century* (Philadelphia), a new translation of Omar Khayyam's poem; *The Rubā'iyāt of Omar Khayyam* (N. Y.), a new metrical version by David Eugene Smith, based upon a verbatim translation by Hashim Hussein; Laurence Binyon, *Persian Miniatures* (London), a magnificent volume, prepared with the cooperation of J. V. S. Wilkinson and Basil Gray; S. Katchadourian, *Persian Fresco Painting* (N. Y.), a catalogue of paintings reconstructed from the seventeenth century originals in Isfahan and published by the American Institute for Persian Art and Archaeology; and M. A. Sohrab and Julie Chanler, *Living Pictures* (ib.), an account of the origin and spread of the Bahā'ī movement in Persia in the nineteenth century.

CELTIC. As has already been indicated in the introductory section of this survey, there was

extraordinary activity in this field during the year 1932. A few characteristic works may here be added. Thus, on Irish we have E. Henry, *La Sculpture irlandaise pendant les douze premiers siècles de l'ère chrétienne* (Paris), a very valuable contribution; J. F. Kenney, *St. Patrick and the Legend*, a reprint from *Thought*, in which the author shows that the celebrated saint was born before 389 and traces the course of the legend that grew up about him; P. Grosjean, S.I., *La Christianisation de l'Irlande et la Méthode de Saint Patrice*, reprinted from *La Semaine de Missiologie de Louvain* (Belgium), as well as the author's *La Prophétie de S. Malachie sur l'Irlande*, which proves that Dr. J. F. Kenney was right when he stated, in his *Sources of Early Irish History* (1, 767), that the alleged prophecy of St. Malachy regarding English domination in Ireland was "quite obviously a modern concoction" and *Le Martyrologe de Tallaght*, dealing with one of the triptych of ancient Irish martyrologies, both of which studies have been reprinted from the *Analecta Bollandiana* (Brussels); Dom Louis Gougaud, *Christianity in Celtic Lands: A History of the Churches of the Celts, Their Origin, Their Development, Influence, and Mutual Relations* (London), translated and expanded from the French edition of 1911 by Miss Maud Joynt; D. Mathew, *The Celtic Peoples and Renaissance Europe* (New York), a study of Celtic and Spanish influences on Elizabethan history; W. A. Phillips, *History of the Church of Ireland* (ib.), a survey; Padraic Colum, *Other Roads in Ireland* (ib.), the third volume of his series on travels in Ireland, the other two being *Crossroads in Ireland* and *The Road Round Ireland*; E. E. Somerville and M. Ross, *Irish Memories* (ib.), a popular-priced edition, and the same authors' *The Smile and the Tear* (Boston, Mass.), containing sketches of Irish hunting life and the Irish peasantry; W. F. P. Stockley, *Essays in Irish Biography* (N. Y.), supplying studies on Thomas Moore, Canon Sheehan, and Dr. Henebry; W. Moss, *Political Parties in the Irish Free State* (ib.), a description of the growth, organization, and methods of these parties; and D. Gwynn, *De Valera* (ib.), outlining the life and career of the President of the Irish Free State. A few works on the Irish in foreign lands may be added to the above, viz., G. F. Donovan, *The Pre-Revolutionary Irish in Massachusetts, 1620-1775* (Webster Groves, Mo.), a doctoral dissertation; W. F. Adams, *Ireland and Irish Emigration to the New World* (N. Y.), a pioneer work of the utmost value; *The Journal of the American Irish Historical Society* (ib.), containing the record of the thirty-fourth annual meeting, with a collection of historical papers; and P. S. Cleary, *Australia's Debt to Irish Nation-Builders* (ib.), an account played by the Irish in settling and governing Australia.

Scottish, Welsh, and Cornish are represented by Sir William A. Craigie, *A Dictionary of the Older Scottish Tongue, from the Twelfth Century to the End of the Seventeenth* (Chicago), of which Part III includes words from *Berk to Broke*; H. C. Dieckhoff, *A Pronouncing Dictionary of Scottish Gaelic* (Edinburgh), based on the Glengarry Dialect according to oral information obtained from natives born before the middle of the last century; John Rolland of Dalkeith, *The Sevin Seages translatit out of prois in Scottis meter* (Glasgow), edited by Dr. George F. Black from the unique copy of the first edition of 1578,

now in the Huntington Library at San Gabriel, Calif., with an introduction, notes, and a comprehensive glossary of nearly 4000 words, for the Scottish Text Society; G. G. Coulton, *Scottish Abbeys and Social Life* (New York), revealing the distinctive characteristics of Scottish monasticism and its influence upon civilization and social life; F. R. Fraprie, *Castles and Keeps of Scotland* (Boston, Mass.), a new edition of this descriptive and historical study; A. Cunningham, *The Loyal Clans* (Cambridge, Eng.), in which the author attempts to prove the rationality of Highland Jacobitism; H. F. Wallace, *A Stuart Sketch Book, 1542-1746* (New York), being a review of the House of Stuart in Scotland, with sketches of places associated with them; C. Mackenzie, *Prince Charlie* (ib.), a biography of the Young Pretender; John Buchan, *The Massacre of Glencoe* (ib.), a narrative of the massacre of the MacDonald clan of Glencoe in 1692; H. V. Morton, *In Scotland Again* (ib.), a companion volume to *In Search of Scotland*; Jane D. Harding, *The Arthurian Legend* (Chicago), a check list of books and other monographic material in the Newberry Library, dealing with this famous Welsh legend; A. H. Dodd, *The Industrial Revolution in North Wales* (N. Y.), a study in economic history; A. K. H. Jenkin, *Cornwall and the Cornish* (ib.), an account of Cornish social life and folklore from the Elizabethan period to modern times; and the same author's *Cornish Seafarers* (ib.), a history of the smuggling, wrecking, and fishing life of Cornwall, with an introduction by Sir Arthur Quiller-Couch.

SLAVIC. The *Grundriss der Slavischen Philologie und Kulturgeschichte* (Berlin), edited by Profs. R. Trautmann of Leipzig and M. Vasmer of Berlin, which not long ago issued such valuable works as N. van Wijk's *Geschiede der Altkirchenslavischen Sprache*, S. Mladenov's *Geschichte der Bulgarischen Sprache* and D. Zelenin's *Russische (Ostslavische) Volkskunde*, has now added to its collection of philological manuals D. Ainalov's *Geschichte der Russischen Monumentalkunst der Vormoskovitischen Zeit*. Unfortunately, however, this *History of Russian Monumental Art in the Pre-Muscovite Period*—to give the title in English—which was originally intended as the first volume of a four-volume history of Russian art, has not come up to the standard established by the works mentioned above—in fact, it is decidedly inferior to L. Réau's *L'Art russe* (Paris), for which Professor Ainalov does not hesitate to express his disdain. But, in spite of its shortcomings, the present *History* will prove valuable to students of primitive and medieval Russian art and architecture. The splendid *Histoire de Russie* (3 vols., Paris), by P. Milliukov, Charles Seignobos and L. Eisenman, will no doubt rank as one of the most valuable contributions ever made to the subject. W. E. D. Allen, *A History of the Georgian People from the Beginning Down to the Russian Conquest in the 19th Century* (London), is also valuable especially for the 10th and 11th centuries. Mention should be made, finally, of Stephen Graham's two biographies, both published by the Yale University Press (New Haven, Conn.), i.e. *Ivan the Terrible*, relating the life and times of Czar Ivan IV, and *Boris Godunof*, devoted to the sixteenth-century Czar.

On the other Slavic languages we have M. Spinka, *A History of Christianity in the Balkans* (Chicago), being a study of the spread of

Byzantine culture among the Slavs; E. C. Corsi, *Poland, Land of the White Eagle* (New York), a history of the country from the earliest times; Lucia M. Borski and Kate B. Miller, *The Gypsy and the Bear* (ib.), a volume of fairy tales translated from the Polish; F. Schevill, *The History of the Balkan Peninsula* (ib.), a revised and enlarged edition of a work first published in 1922; and Henrietta Leslie, *Where East Is West* (ib.), a description of life in Bulgaria. Finally, the attention of the reader should be called to the *Wörterbuch der Latawischen Schriftsprache* (vol. i; A-K; Heidelberg), a Lithuanian-German dictionary, edited by M. Neidermann, A. Senn and F. Brender; and O. Stepanek, *Simplified Czechoslovak Grammar and Conversation Book* (Omaha, Nebr.).

ENGLISH. The indefatigable lexicographer and grammarian, Dr. Frank H. Vizetelly, added during the year two new volumes to his long list of publications, viz., *How to Speak English Effectively* (New York) and *How to Use English* (ib.). The former is a handbook on modern speech, while the latter not only includes advice on the manner of detecting the important shades of meaning in words by everyday examples, but also helps to build an impressive vocabulary. In fact, the extensive material it contains is arranged in alphabetical order so that the volume may be used "as a dictionary, as a book of synonyms, as a guide to correct usage," to quote the *New York Times*. During his long editorship of the section entitled "The Lexicographer's Easy Chair" in *The Literary Digest*, Dr. Vizetelly selected from the thousands of questions submitted regarding the origin and use of the English language those that appeared to him most apposite and most important. The results achieved are well expressed as follows, in *The American Mercury*: "His immense erudition is always visible. Nothing that has ever been said or written about English lexicography seems to be unfamiliar to him. His judgments, in the main, are conservative, but he welcomes changes and innovations when they seem to add anything to the vividness of the language." Other works along the same line are W. L. Mason, *How to Say It Correctly* (ib.), also a handbook of correct speech; Janet R. Aiken, *A New Plan of English Grammar* (ib.), a textbook; and *Picturesque Word Origins* (Springfield, Mass.), a study in semantics. Of a philological nature are F. Holthausen, *Altenglisches Wörterbuch* (Lief., 3 and 4, Heidelberg); J. F. Bense, *A Dictionary of the Low Dutch Element in the English Vocabulary* (The Hague); E. Dieth, *A Grammar of the Buchan Dialect (Aberdeenshire), Descriptive and Historical* (vol. i, Cambridge); and *Dialect Notes* (vol. iv, part v; vol. vi, part vi; New Haven, Conn.), the latter containing Part IV of R. H. Thornton's "An American Glossary."

Among dictionaries we may mention M. M. Mathews, *A Survey of English Dictionaries* (New York), a brief history; *A New English Dictionary on Historical Principles* (Oxford), by J. A. Murray, H. Bradley, W. A. Craigie, and C. T. Onions, which, though it contains an Introduction, Supplement, and Bibliography, is, in fact, the concluding volume of what is often known as *The Oxford Dictionary*; W. Little, C. T. Onions, and H. W. Fowler, *The Shorter Oxford English Dictionary* (ib.), an abridgment of the above work; Gov. J. G. Pollard, *A Connotary* (New York), a brief collection of humorous defini-

tions not usually found in standard dictionaries; George McDonald, *McDonald's Electrical Dictionary* (Boston, Mass.), an explanatory vocabulary of electrical terms; and Eric Partridge, *Slang Today and Yesterday* (New York), which is not only unreliable, but very naïve at times, since the author inserts therein, as specimens of American slang, imaginary words taken from a "phony" "Lexicon of a Fight Manager," created by an American sports writer for the delectation and amusement of his readers.

Anglo-Saxon and Old English are represented by G. P. Krapp, *The Paris Psalter and the Meters of Boethius* (New York), which forms the fifth volume of *The Anglo-Saxon Poetic Records*; E. T. De Wald, *The Illustrations of the Utrecht Psalter* (Princeton, N. J.), a facsimile edition of the ninth-century manuscript, with explanatory text on the illustrations; *The Exeter Book of Old English Poetry* (London), with introductory chapters by R. W. Chambers, M. Förster and R. Flower; D. D. Egbert, *The Tichhill Psalter* (N. Y.), a descriptive and historical study of an English illuminated manuscript of the early fourteenth century, issued by the New York Public Library; Carleton Brown, *English Lyrics of the Thirteenth Century* (ib.), with introduction, glossary, and notes; W. O. Wehrle, *The Macaronic Hymn Tradition in Medieval English Literature* (Washington, D. C.), a doctoral dissertation of the Catholic University of America; G. R. Owst, *Literature and Pulpit in Medieval England* (N. Y.), a study of the influence of medieval preaching on English literature; Dorothea W. Singer, *Philobiblon of Richard de Bury* (Berkeley, Calif.), a reprint of a work written between 1281 and 1345; S. Painter, *William Marshall: Knight-Errant, Baron and Regent of England* (Baltimore), a biography of a typical Knight of the twelfth century; J. Clayton, *St. Anselm* (Milwaukee, Wis.), a biography of Anselm, Abbot of Bec and Archbishop of Canterbury under William II; and C. Stephenson, *Borough and Town* (Cambridge, Mass.), a study of urban origins in England, issued by the Medieval Academy of America.

Chaucer continued to be the dominating author of medieval literature, as shown by the following works: the late Sir William McCormick and Mrs. J. E. Hazeltine's edition of *The Manuscripts of Chaucer's Canterbury Tales* (Oxford), in which the 57 MSS and 28 fragments of the *Canterbury Tales* were collated, and the points of variation from the standard edition were noted; *The Complete Works of Geoffrey Chaucer* (Boston, Mass.), edited with notes, introduction, and glossary for the Cambridge Edition of Poets by Prof. F. N. Robinson; Chaucer's *Troilus and Criseyde* (New York), a modern verse rendering of the poem, by Prof. G. P. Krapp; and R. Krauss, H. Braddy and C. R. Kase, *Three Chaucer Studies* (ib.). Belonging to the same period is *A Survey of the Manor of Wye* (ib.), a fifteenth-century text in Latin describing a Kentish manor house, edited, with introduction and notes, by Helen E. Muhlfield.

Finally, a few works on the English Renaissance deserve to be mentioned, viz., D. Sargent, *Blessed Thomas More* (New York), a biography; G. Constant, *The Reformation in England: Henry VIII (1509-1547)* (ib.); M. Creighton, *Queen Elizabeth* (ib.), a new edition of a biography first published in 1896; Mona Wilson, *Queen Elizabeth* (ib.), a new title in the

Appleton Biographies series; Emma M. Denking, *Elizabeth and Leicester* (ib.); D. M. Henderson, *The Crimson Queen* (ib.), a life of Mary Tudor; E. Linklater, *Mary, Queen of Scots* (ib.), another new title in the Appleton Biographies; Iris Brookes, *English Costume in the Age of Elizabeth* (ib.), a detailed description of sixteenth-century costume; G. T. Buckley, *Atheism in the English Renaissance* (Chicago), an analysis of unbelief in England in the sixteenth century, its sources, development, and some famous examples; Clara L. Gebert, *An Anthology of Elizabethan Dedications and Prefaces* (Philadelphia); Brittons Bowre of Delights, 1591 (Cambridge, Mass.), a facsimile reproduction of the Huntington Library copy of the first edition of this Elizabethan miscellany of poetry, edited by H. E. Rollins; Thomas Lodge and Other Elizabethans (ib.), containing five biographical studies by C. J. Sisson; M. Eccles, and Deborah Jones; *The Voyage and Trauail of Syr Iohn Maundeville, Knight* (N. Y.), an edition reprinted from the English edition of 1568; B. E. C. Davis, *Edmund Spenser* (ib.), a critical study; and *The Works of Edmund Spenser, Volume I: The Faerie Queene* (Baltimore), a variorum edition, with commentary, based on the 1596 edition, by E. Greenlaw, C. G. Osgood, and F. M. Padelford.

GERMAN AND SCANDINAVIAN. Among the important contributions to the language, literature, and history of Germany the following may be mentioned: F. Loewenthal, *Bibliographisches Handbuch zur deutschen Philologie* (Halle), a brief bibliography of linguistics; K. Bergmann, *Deutsches Wörterbuch* (Leipzig); H. Paul, *Deutsches Wörterbuch* (4th ed., Halle), revised by Dr. K. Euling; F. Dornseiff, *Der deutsche Wortschatz synonymisch geordnet* (Berlin and Leipzig), a dictionary of synonyms; K. Wichmann, *Miniature Dictionary of the German and English Languages* (New York), containing German-English and English-German vocabularies; C. J. Kullmer and E. Thelin, *German Vocabulary Drill Book* (Syracuse, N. Y.), a vocabulary of 850 words based on the technique of the "memory drum" system; C. C. Barber, *Die vorgeschichtliche Betonung der germanischen Substantiva und Adjektiva* (Heidelberg); J. Dal, *Die germanischen Pronominalkasus mit N-Formen* (Oslo); F. Gennrich, *Grundriss der Formenlehre des mittelalterlichen Liedes* (Halle); H. Pinnow, *History of Germany* (New York), a translation from the German of a history of the people and the state since the tenth century; E. N. Johnson, *The Secular Activities of the German Episcopate, 919-1024* (Lincoln, Neb.), a historical study of medieval Germany; *Wolframs von Eschenbach Parzival und Titivel* (3 vols., Leipzig), the fourth edition of Karl Bartsch's edition, revised by Marta Marti; *Wolfram von Eschenbach, Parzival* (Paris), edited by Prof. M. Wilmotte; *Middle High German Translations of the Regula Sancti Benedicti* (Cambridge, Mass.), the eight oldest versions edited, with an introduction, a Latin Middle High German Glossary and facsimile pages, by C. Selmer for the Mediæval Academy of America; John Erskine, *Tristan and Isolde* (Indianapolis, Ind.), a new rendering of the German version of the old romance; L. Spence, *Hero-Tales and Legends of the Rhine* (New York); E. P. Booth, *Martin Luther, Oak of Saxony* (ib.), a biography; L. Schrott, *Pioneer German Catholics in the American Colonies (1734-1784)* (ib.), a his-

torical monograph, containing an article on "The Leopoldine Foundation and the Church in the United States (1829-1839)" by T. Roemer, prepared for the United States Catholic Historical Society; F. Bertaux, *Panorama of German Literature* (ib.), a translation from the French of a study presenting the main tendencies of German literature during the past forty years; and A. Elsesser, *Modern German Literature* (ib.), a study of the background and aspects of German literature during the past seventy years, translated from the German.

The Scandinavian countries are represented by W. Krause, *Beiträge zur Runenforschung* (Halle); J. Jakobsen, *An Etymological Dictionary of the Norn Language in Shetland* (2 vols.; London); G. Bach, *A History of Scandinavian Literatures* (New York), an account of the literatures of Norway, Sweden, Denmark, Iceland, and Finland from their origins to the present day; C. M. Smith, *Northmen of Adventure* (ib.), a history of the Vikings from the earliest times to the Norman conquest; T. Jorgenson, *History of Norwegian Literature* (ib.), a study which begins with the ancient runes, but which stresses the literature of the twentieth century; O. J. Falnes, *National Romanticism in Norway* (ib.), a study in Norwegian literature, folklore, and philology; *Norwegian-American Studies and Records, Volume III* (Northfield, Minn.), a collection of articles concerning Norwegian pioneers in America, prepared by the Norwegian-American Historical Association; K. Gjerset, *Norwegian Sailors in American Waters* (ib.), a study in the history of maritime activity on the Eastern seaboard; Henrik Ibsen, *Peer Gynt* (New York), a new translation, with introduction and critical notes, by G. Hult; J. Falkberget, *Broomstick and Snowflake* (ib.), a collection of fairy stories, translated from the Norwegian; J. Roosval, *Swedish Art* (Princeton, N. J.), the Kahn Lectures for 1929; and Elsa Beskow, *The Sun-Egg* (N. Y.), a fairy story translated from the Swedish.

Finally, a few studies dealing with the folklore and literature of Holland and Switzerland may close this list, viz., C. Hollis, *Erasmus* (Milwaukee, Wis.), a new biography appearing in the Science and Culture Series; F. Muirhead and L. R. Muirhead, *Holland and the Rhine* (New York), a new volume in the Blue Guides Series; Marian King, *The Golden Cat Head* (Chicago), a collection of Dutch legends and hero tales; H. W. Van Loon, *An Indiscreet Itinerary* (N. Y.), a guide to the picturesque country of Holland for the unconventional traveler; G. R. de Beer, *Alps and Men* (ib.), a tableau of Switzerland from 1750 to 1850, based on tourists' diaries of the times; and M. D. Hottinger, *The Stories of Basel, Berne and Zurich* (ib.), an addition to the Mediæval Towns Series.

ROMANCE. General. W. Meyer-Lübke's *Romanisches Etymologisches Wörterbuch* (Heidelberg), which is now going through a third revision, reached its twelfth Lieferung (*talaik to verbasum*). It consists of an etymological dictionary of all the Romance languages. The most interesting contribution of the year, however, is I. Iordan's *Introducere in Studiul Limbilor romanice, Evolutia si Starea actuala a lingvisticii romanice* (Jassy, Rumania), which may be translated into English as follows: *Introduction to the Study of the Romance Languages, The Evolution and Present State of Romance Linguistics*.

This admirable work not only contains a lengthy analysis of Romance philology from its very inception to the year 1900—including medieval groupings, grammars and lexicons of the Renaissance, Romanticism and Romance linguistics, the influence of classical philology, the foundation of Romance studies, phonetic laws, etc.—but stresses the three principal contemporary currents in the following order: Karl Vossler's "idealistic" method, J. Gilliéron's linguistic geography and F. de Saussure's French School. Thus, Vossler, who founded his "idealistic" method about thirty years ago—drawing his inspiration from Humboldt and Croce—distinguishes his school from what he calls the old "positivistic" system (cf. his *Positivismus und Idealismus in der Sprachwissenschaft*, Heidelberg, 1904) in the following terms: "Positivism," says Dr. Jordan, "means, for Vossler, to study language phenomena as a means in itself, and, thus, make of the respective works a very rich collection of material; idealism, on the contrary, tries to establish causality connections between linguistic facts. The Positivists believe that subdivision of grammar into phonology, morphology, syntax, etc., is something more than a practical method for the more commodious and systematic study of language. They ignore the essential: that the sounds, words, and phrases are simple articulations of human speech with the aid of which it can move freely. . . . In the idealistic conception, language appears as an expression of the human soul; and history of the language signifies, thus, the history of the forms of expression, and, consequently, the artistic history in its fullest meaning. According to this definition, grammar belongs to the history of style and literature, which, in its turn, branches out into cultural history." Next, Dr. Jordan characterizes the theory of Gilliéron's *Atlas linguistique de la France* as follows: "Gliding of sound and analogy, which the neo-grammarians used exclusively to explain, from an historic point of view, the customary linguistic material, are insufficient when it is a question of explaining the extremely complicated state of affairs offered by popular dialects. That is the reason why Gilliéron is compelled to have recourse to other causes of change in language, all springing in general from the tendency of the speaking individual to express himself clearly and, consequently, avoid confusion." Among these homonymy and popular etymology play the most important part. Finally, with regard to the late Ferdinand de Saussure's school he says: "Saussure makes a trenchant distinction between 'language' (*langue*) and 'speech' (*parole*). . . . 'Language' is a lexical and grammatical system which exists virtually in the conscience of individuals belonging to the same linguistic community. Without a larger or smaller group of men who talk, one cannot imagine the existence of 'language' . . . 'Speech' means the action by which the individual uses the 'language' to express his ideas. It is, thus, of an individual nation, and contains in itself also the emission of sounds. Consequently, its study must needs be psycho-physiological." And as a further development of this tendency he cites Prof. Antoine Meillet's "Sociologic direction in linguistic studies." As the above movements have divided, for many years, the philologists in Europe, it is important to have thus succinctly presented to us the fundamentals of their theories.

FRENCH. Special attention must be called to J. G. Anderson's *Le Mot Juste: An Anglo-French Lexicon with Verbal Illustrations* (New York), which is indispensable to scholars, students of French or English, translators—in fact, to all who must work accurately in the two tongues. We have noted in these columns in the past two works, viz., *Les Faux Amis* and Professor Boillot's *Le Vrai Ami du Traducteur*, which warn the unsuspecting of the dangerous pitfalls offered by cognate words in French and English. But, whereas the above-mentioned works are mainly negative in conception, Mr. Anderson's vocabulary—the result of thirty years of study and containing suggestions from the French side by Professors Fort and Cazamian—fills in the gap in a constructive manner by informing the English reader precisely what words or locutions to use in a given case.

Among the works dealing with the history of the French language and literature the following may be noted: O. Bloch and W. von Wartburg, *Dictionnaire étymologique de la Langue française* (2 vols., Paris), which is now complete; A. Tabachovitz, *Étude sur la Langue de la Version française des Serments de Strasbourg* (Upsala), a study of the earliest monuments of the French language, which bears the date of Feb. 14, 842; M. A. Pei, *The Language of the Eighth Century Texts in Northern France* (New York), a linguistic study of Merovingian and early Carolingian monuments; L. Constans, *Chrestomathie de l'ancien français* (3d ed., Paris), a revised edition of this useful manual; P. Russell, *William The Conqueror* (New York), a biography; W. Förster, *Wörterbuch zu Kristian von Troyes' Samtlichen Werken* (Halle), of which this second edition has been revised by H. Breuer; R. Levy, *Recherches lexicographiques sur d'anciens textes français d'origine juive* (Paris), a lexicography of 815 medieval Judeo-French words, mostly Biblical glosses; K. Voretzsch, *Altfranzösisches Lesebuch* (2d ed., Halle); J. R. Strayer, *The Administration of Normandy Under Saint Louis* (Cambridge, Mass.), a historical study of thirteenth-century Normandy, issued by the Medieval Academy of America; G. Grober, *Geschichte der mittelfranzösischen Literatur* (Berlin-Leipzig), a second edition, revised by S. Hofer; Sister Mary A. Savoie, *A "Plantaire" in honor of the Blessed Virgin Mary Taken from a French Manuscript of the XIVth century* (Washington, D. C.), containing the text and introduction; Katharine Fedden, *Manor Life in Old France* (New York), a description of French provincial life based on the day-book of the Sire de Gouberville for the years 1549–1562; H. Brown, *Rabelais in English Literature* (Cambridge, Mass.); Pousset de Montauban, *Les Aventures et le Mariage de Panurge* (1674) (Baltimore), a dramatic adaptation of Rabelais in the seventeenth century, with a study of de Montauban's life and other plays by Marion F. Chevalier; and *The Essays of Montaigne* (New York), a one-volume edition according to the famous translation by John Florio.

Finally, miscellaneous studies include A. Ewert, *The French Language* (London), containing a study of the history, phonology, orthography, morphology, and syntax and vocabulary of French; M. Rameau and H. Yvon, *Dictionnaire des Anonymes ou Contraires* (Paris); E. H. Truslove, *Dictionary of the French and English Languages* (New York), revised and enlarged;

A. Mendel, *Dictionary of the French and English Languages* (ib.); *Heath's New French and English Dictionary* (Boston, Mass.), revised by E. A. Baker, with pronunciation based on the system of the Association Phonétique Internationale; Simone Chamoud, *Picture Tales from the French* (New York), a collection of French folk tales; J. K. Ditchy, *Les Acadiens Louisianais et leur Parler* (Baltimore), a doctoral dissertation; N. Serban, *Grammaire française à l'usage des étrangers* (Jassy, Rumania), an excellent manual of an unusual character, prepared by a professor in the University of Jassy; and H. P. Thieme, *Bibliographie de la Littérature française de 1800 à 1930* (3 vols., Paris), a most valuable bibliography edited by a well-known American scholar.

ITALIAN. Important contributions to the study of Italian dialects are G. Rohlfs, *Dizionario dialettale delle tre Calabrie* (Halle), which has now gone through the letter C; and G. Bottiglioni, *Atlante linguistico etnografico italiano della Corsica* (Pisa). A useful small dictionary is E. Stokes, *Dictionary of the English and Italian Languages* (New York), issued in the E. F. G. Pocket Series of Dictionaries, edited by G. F. Barwick. Other works of interest include G. K. Chesterton, *Saint Thomas Aquinas* (ib.), which shows the Saint as opening a new channel for thought to flow in; *La Divina Commedia di Dante Alighieri* (ib.), consisting of a revision of the text, edited and annotated by Prof. C. H. Grandgent; Dante Alighieri, *La Divina Commedia* (ib.), a one-volume edition with Italian text by H. Oelsner, and English translations by J. A. Carlyle, T. Okey and P. H. Wicksteed; *Dante's Inferno* (ib.), a translation in the Spenserian stanza by G. Musgrave, which first appeared in 1893; *Dante's Inferno* (ib.), an edition of the text, with a translation into English triple rhyme by Laurence Binyon; Gertrude Leigh, *The Passing of Beatrice* (London), which consists of a study in the heterodoxy of Dante; *The Paradiso of Dante Alighieri* (New York), with a translation into English triple rhyme and an introduction by G. L. Bickersteth; Ralph Roeder, *The Man of the Renaissance* (ib.), containing studies of Savonarola, Machiavelli, Castiglione, and Aretino; Alice Cameron, *The Influence of Ariosto's Epic and Lyric Poetry on the Work of Amadis Jamyn* (Baltimore), a study in the history of sixteenth-century French verse; *The Works of Aretino* (2 vols., New York), consisting of the "Dialogues" and "Letters and Sonnets," translated from the Italian by Samuel Putnam; M. David, *Who Was "Columbus"?* (ib.), in which the author analyzes the evidence pointing to the identity of Columbus as Cristóbal Colón, a Spanish Jew; V. Thaddeus, *Benvenuto Cellini and His Florentine Dagger* (ib.), a biography; Gertrude R. B. Richards, *Florentine Merchants in the Age of the Medici* (Cambridge, Mass.), a poorly edited selection of letters and documents from the Selfridge Collection of Medici Manuscripts, issued by Harvard University; G. F. Young, *The Medici* (New York), an addition to the Modern Library Giants Series; *The Pentamerone of Giambattista Basile* (2 vols., ib.), a new edition of this famous collection of fairy tales and folklore, translated from the Italian of Benedetto Croce and edited with a preface, notes, and appendices by N. M. Panzer; Corrado Ricci, *Beatrice Cenci* (ib.), a new title in the Black and Gold Library series; L. Collison-Morley, *The*

Story of the Borgias (ib.), a history of the family from Calixtus III (1378-1458) to Saint Francesco Borgia (1610-1572); R. C. Garlick, *Philip Mazzei, Friend of Jefferson* (Baltimore), a study of his life and letters; and B. Roselli, *Vigo: A Forgotten Builder of the American Republic* (Boston, Mass.), a biography of the Italian pioneer who played an important part in the campaign in Vincennes, Ind., and other movements in the Central West in the eighteenth century. Among miscellaneous works we may note *Classical Cities of Sicily* (New York), a descriptive and historical study of Taormina, Syracuse, and other places, issued by the Italian Tourist Information Office; *Magna Graecia* (ib.), a descriptive and historical study which, like the one mentioned above, has been translated from the Italian; and *The Craftsman's Handbook of Cennino d'Andrea Cennini da Colle de Val d'Elsa* (New Haven, Conn.), a technical handbook of the medieval painter's craft, translated by D. V. Thompson, Jr.

CATALAN, PORTUGUESE AND RUMANIAN. The outstanding contributions in Catalan are, first of all, the splendid *Diccionari Català-Valencià-Balear* (Palma de Mallorca), which is edited by Antonio M. Alcover and Francesc de B. Moll. In its first 576 pages it has reached the word *bractea*. Next in order comes J. Massó-Torrens, *Repertori de l'Antiga Literatura Catalana* (Barcelona), of which the first volume is entitled *La Poesia*; and, finally, the *Miscelanea filològica dedicada a Don Antonio M. Alcover* (Palma de Mallorca), containing articles by some thirty scholars. Among the noteworthy contributions thereto is a study on the phonology and vocabulary of the dialect of the old capital of Minorca, entitled "Estudi fonetich y lexical del Dialecte de Ciutadella" (pp. 397-460) by F. de B. Moll; F. Krüger, "Worfeldn und Verwandtes in den Pyrenäen" (pp. 509-524); G. Rohlfs, "Le Patois de Lescun (Basses-Pyrénées)" (pp. 353-387); and S. Gili Gaya, "Estudi fonetich del parlar de Lleida."

Portuguese is represented by J. da Providencia Costa, *Goethe e Portugal* (Coimbra), a valuable contribution; Goethe, *Dedicatória (Fausto)* (ib.), containing verse-translations from the German into Portuguese by A. Garrett, A. de Ornelas, A. F. de Castilho, A. de Quental and E. de Castro, issued by the Instituto Alemão of the University of Coimbra; and Elizabeth Barrett Browning, *Sonnets from the Portuguese* (New York), a new edition, with introduction and notes, by Charlotte Porter and Helen A. Clarke.

The most important study on Rumanian is, without doubt, the long-awaited second part of O. Densusianu's valuable *Histoire de la Langue roumaine* (Paris).

SPANISH. A new review entitled *Investigaciones Lingüísticas* was founded in Mexico City during the summer for the purpose of studying the dialects of Mexico. Along the same lines we have M. de Toro, *L'Évolution de la Langue espagnole en Argentine* (Paris). Among dictionaries we may note E. Macragh, *Amaltea Dictionary of Spanish and English* (Barcelona), containing slang, idioms, localisms, cantos, dialects and words in general, hitherto not to be found in English-Spanish dictionaries; M. E. Bean, *Handbook of Spanish-English and English-Spanish Legal Words and Phrases* (New York); and *Dictionary of the Spanish and English Languages* (ib.), included in the E. F. G. Pocket Series of Dictionaries, edited

by G. F. Barwick. Other works deserving mention are R. S. Willis, Jr., *The Relationship of the Spanish "Libro de Aleandre" to the "Alexandreis" of Gautier de Chatillon* (Princeton, N. J.), a study in comparative literature dealing with the celebrated medieval legend on Alexander the Great, published in the Elliott Monographs Series; C. R. Post, *A History of Spanish Painting* (vol. iv, Parts I and II, Cambridge, Mass.), containing a detailed survey of the Hispano-Flemish style in Northwestern Spain, beginning in the latter part of the fifteenth century; *Catalogue of Sculpture (Thirteenth to Fifteenth Centuries)* and *Catalogue of Paintings (Nineteenth and Twentieth Centuries)*, both issued by the Hispanic Society of America (New York); F. Calcott, *When Spain Was Young* (ib.), presenting accounts of five legendary heroes who lived in Spain between the years 700 and 1000 A.D.; J. B. M. Zabara, *The Book of Delight* (ib.), a translation of a Spanish Jewish narrative of the twelfth century; Sadie E. Trachman, *Cervantes' Women of Literary Tradition* (ib.), a study of the various types of women found in sixteenth-century Spanish literature in relation to Cervantes' conceptions, issued by the Instituto de las Españas; Lorna Rea, *The Armada* (ib.), an account of the destruction of the Spanish Armada; Helen Simpson, *The Spanish Marriage* (ib.), the story of Mary Tudor's determination to marry Philip of Spain; C. E. Kany, *Life and Manners in Madrid, 1750-1800* (Berkeley, Calif.), a study in Spanish civilization of the eighteenth century; A. F. G. Bell, *Contemporary Spanish Literature* (New York), a revised edition; and R. A. Cram, *The Cathedral of Palma de Mallorca* (Cambridge, Mass.), a chronological and architectural study of the cathedral, issued by the Medieval Academy of America. A few titles on Spanish America may close this section: T. A. Willard, *The Lost Empires of the Itzaes and Mayas* (Glendale, Calif.), a history of ancient civilization in Yucatan; C. E. Chapman, *Colonial Hispanic America: A History* (New York), a history of Hispanic America from the fifteenth to the nineteenth century; L. J. Ragatz, *A Guide for the Study of British Caribbean History, 1763-1834* (Washington, D. C.), a bibliography issued by the United States Government Printing Office; S. E. Leavitt, *Hispano-American Literature in the United States* (Cambridge, Mass.), a bibliography of translations and criticisms; *Theses on Pan-American Topics* (Washington, D. C.), a second edition, revised and enlarged, of this bibliography; J. E. Thompson, *Mexico Before Cortez* (New York), an account of the daily life, religion, and ritual of the warlike race that ruled Mexico before the Spaniards arrived; A. P. Newton, *The European Nations in the West Indies, 1493-1688* (ib.), a study of West Indian history as a factor in international events of the times; J. D. M. Ford and M. I. Raphael, *A Bibliography of Cuban Belles-Lettres* (Cambridge, Mass.); S. E. Leavitt, *A Tentative Bibliography of Peruvian Literature* (ib.), another addition to the series of the Harvard Council on Hispano-American Studies; and *A Bibliography of the Liberator Simon Bolivar* (Washington, D. C.), compiled in the Columbus Memorial Library of the Pan-American Union in commemoration of the 150th anniversary of Bolivar's birth, July 24, 1783.

PHONETICS AND UNIVERSAL LANGUAGE. Contributions to phonetics include Sara M. Stinchfield,

Speech Disorders (New York), a physiological study of the various defects of speech; C. E. Parmenter and S. N. Treviño, *Vowel Positions as Shown by X-Ray*, reprinted from the *Quarterly Journal of Speech*, and the same authors' *An X-Ray Study of Spanish Vowels*, reprinted from *Hispania*; A. J. Barthold, *Student's Practical Manual of French Pronunciation* (New York), a method of phonetic instruction for the beginner; and *French Dictation Exercises* (ib.), exercises for introductory classes in French.

Finally, on universal language we have W. S. Benson, *Universala Esperanto Metodo* (Newark, N. J.), a textbook for students of Esperanto.

PHILOSOPHY. The philosophical literature of 1933 shows a decided trend toward ethics and social philosophy, for though many thinkers have remained true to those abstract investigations which Plato and Aristotle regarded as the highest human enterprise, the majority, in this country at least, have chosen to concern themselves in these critical times with the more immediate, practical problems. Of course, every thorough-going social analysis or programme presupposes a metaphysics. The more serious books will have to examine the categories of thought and being on which their concrete conclusions depend.

Thus we find a good deal of metaphysics in Professor Whitehead's new volume *Adventures of Ideas* which is concerned with the history of "the transmission of civilization from the Near East to Western Europe" and with those executive ideas which dominate humanity within this strand. Here the *Sociological*, the *Cosmological* (Parts I and II) and *Civilization* (Part IV) are substantiated by the *Philosophical* (Part III), in which *Objects and Subjects, Appearance and Reality, Past, Present, and Future*, and other topics presupposed in the book, are examined.

The unity of Whitehead's book is rather organic than logical, and it takes some time to see those threads upon which his brilliant discernments and interpretations are strung. Certain attitudes concerning history and world-sociology, however, seem to dominate, viz.: "the slow issue of general ideas into practical consequences" due either to the inefficiency of human character or to the immaturity of the world. Closely related to this dictum is his distrust of sudden social changes. Disregarding the recent sharp transitions of social systems in various countries he agrees with Burke that "successful progress creeps from point to point, testing each step" and he is willing to concede that: "It may be impossible to conceive a reorganization of society adequate for the removal of some admitted evil without destroying the social organization and the civilization which depends on it." Progress, he takes to be the *gradual* realization of Christian ideals, and he believes that the dominant figures in "the new Reformation" will be the leaders of the Protestant clergy. The author is also opposed to the finality of closed systems in social matters, religion, or science. "The collapse of nineteenth-century dogmatism is a warning that the special sciences require that the imaginations of men be stored with imaginative possibilities as yet unutilized in the service of scientific explanation." We must envisage ideas and ideals against the time when the world will endure them. Closed systems like Aristotle's serve their purpose and then give up the ghost while the Platonic vision of possibilities lives on as an ac-

tive force. He is equally opposed to positivists and anti-intellectualists, "who boast that they uphold no system. They are a prey to the delusive clarities of detached expressions which it is the very purpose of their science to surmount." Whitehead's principle here, which distinguishes him so sharply from Russell, and his early colleagues at Cambridge, is "the connectedness of things" (the Idealists called it "coherence") which implies the falsity of any such doctrine as logical atomism.

Although the author opposes the anti-intellectualism of Bergson he adopts it in another sense. "Knowledge is always accompanied with accessories of emotion and purpose," and "the basis of experience is emotional." He employs the words "concern," "feeling" and the earlier terms, "prehension," "taking account of," etc. to indicate a primitive non-cognitive, affective phase of our reactions to relevant things. This important step allies him with the anti-intellectualism of Scheler and permits him to give a plausible account of ethical progress. The author's complex and sensitive analysis of the experience of time is reminiscent of Bergson, but more of Husserl, while his assertion that the most important thing about a proposition is not whether it is true, but whether it is interesting, makes a graceful bow to pragmatism. It becomes obvious that what he is opposing is not "intellectualism" but a false simplification of mental life which has borne that name.

Another book covering much the same field, Ortega y Gasset's *The Modern Theme* shows the influence of Spengler, Meyer, and other German writers, which was missing in Whitehead's book. The analysis of the revolutionary spirit is new and instructive, especially, since the writer believes modern nations are on the eve of a revolutionary era, which had its counterpart in Greece and is inevitable in every culture. What is required for revolution is that heroism and vanity, "these two affective forces must function in a spirit saturated with faith in pure reason," which is invariably a rigid, geometrical, uncompromising, over simplified rationalism. Since every revolution sweeps away not only abuses but many positive values as well, counter-revolution is inevitable. Between the revolution and counter-revolution is a transitional stage called "reaction," a period of disillusion contrasting with the glorious era of certainty and illusion which preceded it. (The author's Hegelian or Spenglerian fatalism blinds him to the fact that Fascist or Communist organization may effectively block any counter-revolution.) While psychologists are coming to doubt the very existence of instincts many philosophers such as Ortega y Gasset assume that what men did in the past they will do again. Meanwhile, Maurice Hindus in his *The Great Offensive*, contends that human nature is being transformed in Russia.

Though Whitehead dismisses Marx with the comment that economists believe him unsound, Prof. Sidney Hook in his *Towards an Understanding of Karl Marx* maintains that the real Marx provides the only solution to present problems. His exposition of dialectical materialism and his criticism of heresies is clear and admirable, but his pragmatism and ethical relativism appear to undermine his revolutionary programme. (The revolutionary, Ortega y Gasset would say, is never a skeptic.) If one ethical position is as true as another, how persuade people to sacrifice their lives

for the revolution? For the revolution is not inevitable, Hook says, but requires the will of the masses. It is not, therefore, a logical or economic, but a moral, necessity. The revolutionist will have to convince the workers that their claims are right, not only from their point of view, but from any point of view. *The Coming Struggle for Power* from the pen of the eminent British economist Strachey, like Hook's book, is in complete agreement with Marx.

Horace Kallen's *An American Way of Life* (1933) written before the N.R.A. began operations, praises the individualism and liberalism of American traditions. G. R. Geiger's *The Philosophy of Henry George*, with its account of this great American thinker's relation to Socialism, his correspondence with Spencer and others, seems much more up to date.

Two much needed volumes appearing this year, one by a philosopher the other by a lawyer, carry over ethics into a professional field. Professor Morris R. Cohen's *Law and the Social Order* and Felix S. Cohen's *Ethical Systems and Legal Ideals* both argue against the separation of law from ethics and the consequent formalism, the class-bias or irresponsibility, of the legal mind.

For the more technical aspects of ethics we may turn to H. Osborne's *The Philosophy of Value*, a brief polemical volume which rejects the traditional arguments for every type of value theory. Not one of them can be proved or disproved, he contends. Psychological theories which define value as the object of biological interest (R. B. Perry) or which make it depend on the psychological states of the individual (Stern), reduce to relativism, since right and wrong, good and evil, will vary as much as individuals vary. It follows that there can be no more dispute about morals than about taste; but this *reductio ad absurdum*, the author states, is not a refutation. The realist (G. E. Moore) who takes value as indefinable, is in no better case, since he relies upon his intuition which is not shared by most authorities. The arguments of the one side against the other are ineffective since each assumes its own premises which the other rejects, and hence all they prove is the incompatibility of the two theories, one with the other. G. E. Moore, who often anticipates and outstrips his critics, long ago saw the weakness of the arguments in question and would doubtless agree with much that the author says. What Osborne seems to forget is that every system has its intuitive premises and that unanimity is not a requisite. He concludes with a cautious defense of the idealist theory which defines positive value as "the property of being an object toward which moral agents ought to experience positive mental states (desire, approval, etc.)." This definition has a number of advantages, he thinks. It does not identify value with a part of nature, nor reduce to relativism, as do the psychological theories, nor does it need to assume with realism two indefinables, "ought" and "value," but only the former. Unfortunately, it has unique defects which the author would have considered had he been aware of the new tradition in value theory sponsored by Scheler and Hartmann.

The appearance of Max Scheler's *Schriften aus dem Nachlass I* with its brilliant and exhaustive analysis of ethical concepts is another reminder that while the best British philosophers confine themselves to the foundations of ethics, it is the Germans and particularly the phenomenologists

who with rigor and insight really advance the subject. Scheler's first essay is concerned with "death." Modern man, misled by biologism and the notion of progress, he points out, no longer regards death as a natural event rounding off the cycle, but as a meaningless accident, a misfortune. He no longer thinks of it seriously. Concerning life after death, the author maintains that science can never disprove it and that phenomenological analysis discloses laws of the mind which are independent of physiological laws. Thus love and personal time are unconditioned by physiological processes and, hence need not be co-terminous with them. Kant's claim for immortality rested upon a consciousness of endless *ought* (*Sollen*), Goethe's, on a consciousness of endless *can* (*Können*) a sense of infinite power and energy. The sinking of the consciousness of potency (*Potenzbewusstsein*) in skeptical eras suggests that Goethe was right psychologically. Scheler's book also contains the most elaborate analysis of "shame" ever written. One conclusion he reaches is that this emotion always involves a generalizing and an individualizing intention. Thus, if the lover treats his sweetheart for a moment like a member of the class of all women or the artist treats his model for a moment like an individual person, the woman in either case feels shame. His analysis shows that shame is necessary to love and that shamelessness results in disgust.

Professor W. P. Montague in his Carus lectures (delivered at Chicago during the World's Fair) made an eloquent appeal for a new philosophy emulating the great systems of the past which were all, he contended, rich in vision, but poor in proof. Philosophers should not be frightened by the advance of science into barren logistics or mere historical recollection but should find their true métier in the envisaging of the Platonic world of possibilities. His second and third lectures were entitled *Democritus and the Vision of a World of Atoms* and *Plato and the Vision of Eternal Things*.

Sir William Mitchell's *The Place of Minds in the World* (Gifford Lectures at the University of Aberdeen 1924-26) is also concerned with two other places. "One place is the world about us, where we feel at home; the other is the cavity of the skull, where we should feel in prison." Now minds exclude nature and nature excludes minds. How then is knowledge possible? he asks. How can a thing outside my head come to be known inside? Mitchell's answer is that the question is artificial since it makes the false assumption that our minds are in our brains, and he attempts to explain the origin of this preposterous theory so popular among the materialists and behaviorists to-day. His conclusion is that though minds are not spatially related to brains or to nature, and though the three are quite unlike, there is a more or less complete correlation between them, and one is needed for the explanation of the others. He denies accordingly that the space we see is a space in the brains which see it, and naturally he rejects every form of the "copy theory" of knowledge.

After dealing with several epistemological dilemmas, the author turns to the practical or ethical "gulf," the conflict of reason and life. How persuade reason to sacrifice? According to Adam Smith rational egoism, without sacrificing anything, promotes the public interest, but this doctrine, the author says, is now discredited.

In Germany Hegel reduced egoism to a mere moment in the universal harmony while in France biology was blamed for its depressing picture of human nature. In England, however, there was no such belief in ideas "that we blamed them for anything,—and our writers fell with one accord on our social system for assuming we are selfish—" But in spite of all that has been said "the civil wars for comfort and luxury are more flagrant than ever." The explanation is that though every one admits that the higher values are higher, and that there are enough of them to go around, hardly any one can be persuaded to forego those vivid lower values which however only the few can enjoy. The solution for valuing, the author claims, is the same as that for knowing. A man must *understand* the better knowledge if he is to give up his vivid illusion, and he must *understand* the higher value before it can compel him to give up the seductive lower. The ideal, often attained, is absorbed self-forgetfulness in the higher things.

As the author proceeds "from the surface to the depth in nature" and in mind he confronts many of the problems of Whitehead, Russell, and Broad, such as the relation of percepts to scientific objects. His method, meanwhile, is quite original and his style, even more so, is often reminiscent of Gertrude Stein.

The publication of McTaggart's *Nature of Existence* has occasioned a number of critical articles and much discussion especially at Cambridge, but it was not until this year that the depths of this intricate and exciting book were fully sounded. C. D. Broad's *Examination of McTaggart's Philosophy* is the most thorough and rigorous criticism ever accorded a 20th century philosopher. This first volume is concerned with the first volume of the *Nature of Existence* and attempts to show that the long concatenation *a priori* arguments by which McTaggart supports his idealistic system—a timeless, changeless system populated only by minds—has many links which crumble at the touch of logic. The crux of the whole matter, the proposition on which McTaggart's system stands or falls, is the Principle of Determining Correspondence. To understand this we must consider certain preparatory principles. McTaggart holds (1) that every particular has parts and, hence, parts of parts to infinity; (2) that every particular must have a "sufficient description," i.e. a description distinguishing it from every other particular, but *not* by referring to other particulars for this would give rise to a vicious regress. A would be uniquely determined by its relation to B and B, by its relation to C, and so on. This is impossible. And so ultimately we must come to a particular which is uniquely determined by its own parts. Some part of each series of parts of any particular must have a sufficient description uniquely determining all its parts and their parts—*ad infinitum*. For if the parts of a particular are not distinguishable from everything else in the world, they cannot exist (according to the Principle of the Identity of Indiscernibles which McTaggart accepts) and if the parts of a particular do not exist, it itself cannot exist, since every particular must have parts. McTaggart thus argues that only a society of minds perceiving their own and each other's perceptions, but nothing else, could provide the sufficient descriptions necessary for existence, and that, therefore, such a society is

the only possible world. Idealism appears to be established by a new and subtle argument.

Broad replies by giving a geometrical example which answers McTaggart's requirements for a possible world quite as well as the "society of minds" does. He contends also that McTaggart did violence to ordinary psychology in order to make this pet idea fit his requirements. If one took equal liberties with customary doctrines of the material world, this too might be made to conform. But Broad has already questioned a score of propositions on which McTaggart's argument (above) depends. Thus, the Principle of Identity of Indiscernibles is doubtful. We can easily conceive of two particulars (e.g. minds) which are diverse without *any* difference. Similarly, "that every particular has parts" is not self-evident. Orthodox mathematics accepts the existence of extensionless points without falling into contradiction. Again, "that every particular *must* have a sufficient description" is false, since it presupposes the doubtful Principle of the Identity of Indiscernibles, and it is also open to other objections.

It is interesting to note that these principles are also being discussed by mathematical philosophers (the intuitionists, formalists, and logicians). Thus, Zermelo's "Principle of Selection," which has considerable prominence these days, requires that one term of each of the infinitely numerous subclasses of a given class should have "sufficient description" and intuitionists are ready to reject certain parts of mathematics which do not seem to meet that requirement. Among this year's papers discussing such matters is Helen Ambrose's "The Logic of Mathematics" in the *Philosophical Review*.

A discussion of another point at issue between McTaggart and Broad occurs in the May number of the *Review*. De Witt Parker there maintains that since a relation by definition has at least two terms, no term can be related to itself. (The argument, of course, is not new.) The related question in Broad's book is whether a particular can be uniquely determined by a reflexive relation. Suppose there are only two particulars in the world, A and B. Each respects himself and despises the other. Are they uniquely determined? Yes, says Broad, if only reflexive relations exist, but this he doubts. The theory that no term is related to itself has other consequences. It seems to give new grounds for accepting the Theory of Types which asserts that classes, propositions, relations, etc., cannot significantly retain the reflexive property. On the other hand, if no term can be related to itself $x = x$, which plays such an important part in *Principia Mathematica*, must be discarded or reinterpreted, and philosophers will now have to defend, not only the law of Excluded Middle, but the Law of Identity as well.

The Law of Identity is rejected for other reasons by Alfred Korzybski in his *Science and Sanity, An Introduction to Non-Aristotelian Systems and General Semantics*. He maintains that A does not equal A anywhere in the world since every A is in constant flux (a man cannot step twice into the same river) and he regards this conclusion as so important that he has enlisted the service of a number of eminent specialists in order to rewrite linguistics and science in general in Heraclitean terms. It would appear that the statue is too large for the pedestal.

The widespread interest in the work of Charles Sanders Pierce will be gratified by the publica-

tion of vol. iii of his *Collected Papers*, entitled *Exact Logic*. Though these papers *On the Algebra of Logic, The Logic of Relatives*, etc., have all been published previously, the collection fills a gap in the history of mathematical logic and displays the importance of "the greatest American logician." C. A. Mace's *The Principles of Logic*, a work greatly influenced by W. E. Johnson and other contemporary English logicians, is an important addition to the recent more popular books on the subject. Chapman and Henle's text also essays to acquaint the public with the new logic. *Invitation to Philosophy* by Durant Drake (q.v.) undertakes the same commission for philosophy as a whole, a dangerous and thankless task, but inestimably important, since no discipline can so little afford to appear a mere scattering of detached investigations.

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PHONETICS. See **PHILOLOGY, MODERN.**

PHOSPHORIC ACID. See **CHEMISTRY, INDUSTRIAL OR APPLIED.**

PHOTOGRAPHY. The practice and science of photography advanced slowly but definitely during 1933. Perhaps the most interesting and

significant development was the improvement made in the sensitiveness and color sensitivity of roll film for amateur use. In December, 1931, the first of a new group of panchromatic emulsions of greatly increased sensitiveness was introduced, coated on glass plates. Since that date, the quality of these newer panchromatic emulsions was improved steadily and they were made available during that time, first, as motion picture film, then as sheet film, as aerial film, and more recently, as roll film.

A simple process of color photography, whereby an amateur can take pictures with short exposures in a small camera and make direct prints in color easily and economically, was still to be found. A new print process was developed, however, which offered some promise of realization of this age-old dream of the photographer. It had not had sufficient commercial application, however, for an accurate judgment to be passed on its effectiveness. Natural color photographs, however, were being used more often in advertising work and for illustrations in several magazines.

A decided improvement in sound and picture quality was noted in connection with cinematographic productions. Very silent camera mechanisms were coming slowly into use, displacing the bulky housings which had been used for several years to absorb extraneous noise. Improved lighting, acoustics, and developing facilities contributed in some portion to make possible the final result—better technical quality. The use of color in motion pictures was still rather limited although excellent examples of color cartoon work were being produced.

In the technical field, several types of ultra-speed cameras were available for rapid motion analysis. The astronomer and the spectroscopist could select from a wide range of materials the specific ones to fit definite conditions. Plates sensitive to infra-red radiation were being used for deciphering charred or faded documents, to detect flaws in textiles, and to reveal disorders related to human skin tissues. In fact, hardly a branch of technical investigation was known which did not already use the camera or for which the camera could not be adapted.

APPLICATIONS OF PHOTOGRAPHY. Man soared to new conquests with the camera in 1933 in four epoch-making flights. On April 3, two British planes flew over Mt. Everest and the surrounding Himalaya territory and many valuable photographs were secured. During a second flight on April 19, many square miles of this inaccessible territory were mapped successfully (*Nat. Geog. Mag.* 64, 1933, p. 127). On the other two flights, the camera was carried higher than ever before by balloonists who penetrated the stratosphere. Three Russians claimed to have ascended to over 62,000 feet (11.8 miles) on September 30, and two Americans reached 61,237 feet (11.5 miles) on November 20. On both flights records of radiation and other scientific data were obtained.

Earlier in the year, a remarkable aerial photograph of Greater New York was made at an altitude of 26,000 feet. An area estimated to be more than 3000 square miles was encompassed in this single picture (*Nat. Geog. Mag.*, 64, Nov., 1933, Photog. Supp.).

Two extensive aerial photographic surveys were announced; the former, covering 20,000 square miles in the Sudan and Uganda, had been completed for the Egyptian government; the

latter, covering 80,000 square miles, is to be made to locate gold mining areas in Western Australia (*Brit. J. Phot.* 80, Sept. 1 and 8, 1933, pp. 514 and 534). The National Air Corps of Chile were engaged in mapping that long and narrow mountainous country (*Camera*, Phila., 46, June, 1933, p. 427). The Canadian Topographical Survey Library was reported to contain about 600,000 aerial and 20,000 ground photographs (*Brit. J. Phot.* 80, June 2, 1933, p. 323).

Photography played a large part in many of the exhibits of the Century of Progress Exposition at Chicago both in the form of still photographs and motion pictures. The first National Soviet Conference on Photographic Science was held in Leningrad in November, 1932, and attracted 350 persons. Over 30 papers were presented which dealt with many aspects of the photographic industry (*Prod. Photo J.*, 1933, p. 43). The next five-year plan calls for large increases in photographic sensitive film and paper production and in the number of motion picture theatres.

About two-thirds of the world's 62,000 motion picture theatres were reported to be wired for sound motion pictures by the end of the year. Over eleven million persons could attend the "movies" at one time in the United States. Approximately 1200 theatres were equipped with the new extended frequency sound equipment introduced in 1932 (see *NEW INTERNATIONAL YEAR BOOK* for 1932, p. 664), which meant that the patrons of these theatres could listen to the ultimate that had been realized in sound quality by the sound-on-film process.

A sound film project initiated by the University of Chicago in 1932 for the purpose of presenting the subject of natural science to the entire student body by means of lectures only, was reported to be successful. Plans were being made for the preparation of additional films covering social, biological, and physical science. A project for education, using sub-standard 17.5 mm. films and phonograph disc reproducing equipment, was being inaugurated in Italy (*Kinemat. Weekly* 193, Mar. 9, 1933, p. 37). More than a hundred amateur 16 mm. sound-on-film projectors were purchased by the U. S. government for instruction and entertainment of members of the Citizens Conservation Corps camps (*Movie Makers* 8, November, 1933, p. 466).

Two cameras for ultra-rapid photography were announced during the year. Both cameras drive the film continuously and employ optical compensation. One type, of German design, used 35 mm. film; the other, an American product, made 2500 pictures per second and used 16 mm. film. An auxiliary device provided for simultaneously recording an illuminated clock face registering time to one-hundredth second.

An improved method of crime detection consists in photographing fingerprints by the phosphorescence given off by the print when dusted with zinc sulphide and excited by exposure to a tungsten arc lamp (*Nature* 132, Aug. 5, 1933, p. 208). Photographs are used for identification of messengers carrying negotiable securities for the New York Stock Exchange (*Camera*, Phila., 46, June, 1933, p. 386).

Lee and Spencer reported promising results of a photomicrographic study of motor fuel sprays for use in aerial motor carburetors (*Report No. 454*, U. S. National Advisory Com. for Aeronautics). A photographic study was made

by Gawthorp of the disturbance sent out by the firing of commercial detonators (*J. Frank. Inst.* 214, December, 1932, p. 467). Edgerton and Gernsheim exhibited at the Royal Photographic Society in September several examples of their stroboscopic photography at exposures of $\frac{1}{75,000}$ sec. (*Rev. Sci. Instr.* 3, October, 1932, p. 535). An analysis of golf club strokes was made by the same investigators with exposure times of $\frac{1}{200,000}$ second duration (*Amer. Golfer* 37, November, 1933, p. 17).

The availability of infra-red plates of greatly increased sensitivity apparently stimulated the interest of many investigators in the use of these materials. Bendikson demonstrated the possibility of deciphering charred documents (*Library J.* 85, Mar. 15, 1933, p. 243); Cunliffe showed that defects may be detected in dark textiles by photographing them with infra-red radiation (*J. Soc. Dyers and Colorists* 49, March, 1933, p. 73); early Egyptian documents on dark brown leather were deciphered at the British Museum (*Brit. J. Phot.* 80, May 26, 1933, p. 311); plant diseases were studied by Bawden (*Nature* 132, July 20, 1933, p. 168); and human skin conditions were recorded which showed that these materials may have great promise in the field of pathology.

A motion picture made by infra-red radiation of subjects in complete darkness was demonstrated by Bloch on October 9 for an audience at the Gaumont-British Theatre in London, England (*Brit. J. Phot.* 80, Oct. 13, 1933, p. 611).

That the motion picture film may assume an important part in future television was demonstrated recently when a motion picture negative, rapidly developed and fixed in 10 to 15 seconds, replaced the "flying spot" scanning of an actual subject (*Tech. cinemat.* 4, January, 1933, p. 15; also *Phot. J.* 73, August, 1933, p. 377).

No commercial use was known to have been made of lenticulated films on standard 35 mm. stock but the large number of patents issued to firms and inventors on improvements in this process, particularly methods of printing such color records, showed that much experimental work was being done. The availability of film of this width for use in still cameras, such as the Leica and Contax, was announced (*Phot. Ind.* 31, 1933, p. 926). Such records presumably would be projected similarly to slide films.

Additional releases of three color animated sound cartoons were produced by Disney, using the Technicolor imbibition process. These productions in their composition, color work, and story represented one of the highest forms of artistry thus far developed in motion pictures. Their production was described by Garity (*J. Soc. Mot. Pict. Eng.* 20, April, 1933, p. 309).

A large number of patents were taken out by Gaspar of Berlin, Germany, relating to a process for the direct production of color prints on paper, from either a screen plate transparency or a set of color separation negatives. The printing paper contains three successive coatings arranged one below another to produce blue, yellow, and red images respectively. The bottom layer is sensitive to infra-red. The color is produced by dyes or dye-forming substances incorporated in the different layers (*Brit. J. Color Supp.* 27, Aug. 4, 1933, p. 29; *ibid.* Oct. 6, 1933, p. 37, and Nov. 3, 1933, p. 41). Exposure time required was claimed to be about the same as for gas-light paper. The process is said to lend itself to the production of color motion pictures.

Another color print process known as *Duochrome* is of interest. The process employs pigmented films of gelatin-bromide coatings on a cellulosic support having dyes blended in the emulsion. The films are printed through the back (from color separation negatives), developed in a tanning developer, and washed in hot water, and the silver image is bleached out, leaving the dye image. The three dye image sheets are assembled on a paper support (*Brit. J. Color Supp.* 27, Oct. 6, 1933, p. 39).

A record of the Ruttledge expedition's attempt to climb Mt. Everest, including the last stages at an altitude of 27,800 feet, was made on 16 mm. panchromatic film. The small cameras worked well under severe temperature conditions which prevailed and assisted materially in reducing the weight of equipment (*Brit. J. Phot.* 80, Sept. 15, 1933, p. 537).

Files of newspapers may be made conveniently and permanently in the future by reducing them to 35 mm. film with the aid of a new copying apparatus described at the Special Libraries Association convention in Chicago in October. A fifty-page newspaper could be recorded on film requiring a storage space of $3\frac{5}{8}$ by $3\frac{5}{8}$ by $1\frac{1}{2}$ inches (*Editor and Publisher* 66, Oct. 28, 1933, Sect. 2, p. 3).

Henry reported that the Library of Congress has copied more than a million pages of manuscript on safety film using the Lemare camera (*Library J.* 58, Mar. 15, 1933, p. 237).

All welded joints of the steel penstocks of the Hoover Dam totaling more than 100 miles in length were subjected to radiographic inspection representing one of the most extensive uses ever made of X-rays on a single industrial enterprise (*Radiography* 9, April, 1933, p. 12). Cottenot described a new form of instrument for making an X-ray of the heart and lungs at a certain point in the cardiac cycle (*Amer. J. Roentgenol.* 29, May, 1933, p. 175).

Failures in color reproduction by continuous tone methods were shown by Bull, Oliver, and Spencer to be due almost solely to faulty technique and to the poor choice of colors for reproduction (*Phot. J.* 73, August, 1933, p. 358). Although these authors state that the limitations of the half-tone process necessitate considerable fine etching, Murray exhibited at the Royal Photographic Society examples of work wherein no fine etching was used. Color correction on both a three-color plate and a four-color plate was done photographically by the masking process ascribed to Albert. Improved color reproduction with a new set of inks was demonstrated by Aron (*Phot. J.* 73, May, 1933, p. 197).

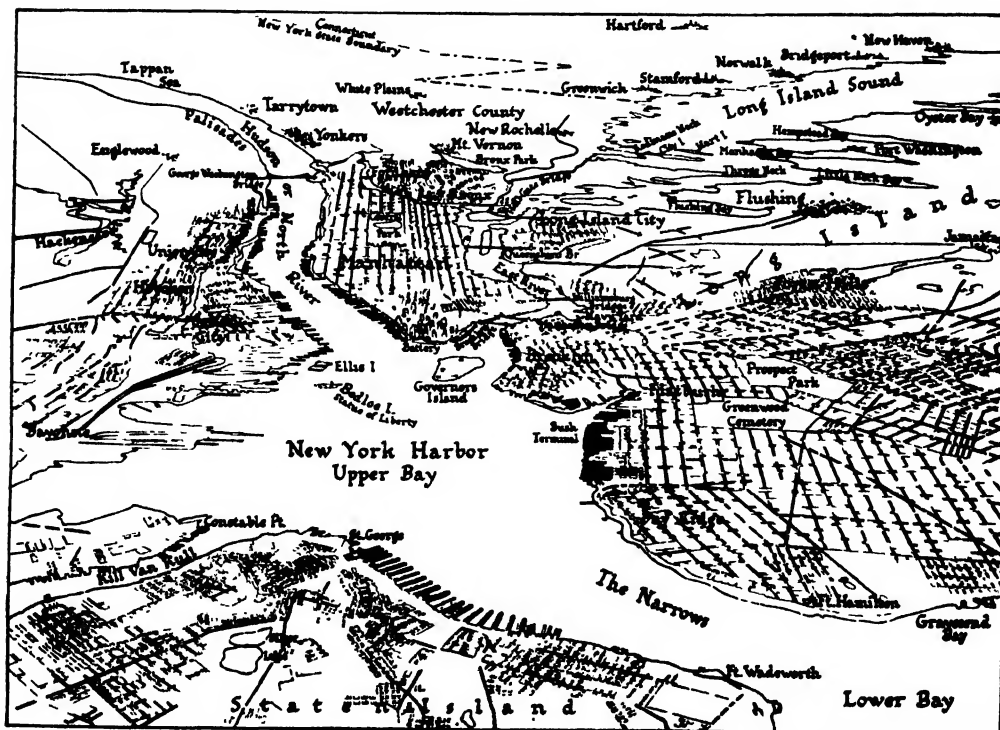
PHYSICAL MEASUREMENTS. Ten years ago the development of motion picture film in most laboratories throughout the world was entirely a manual operation whereas nearly all modern laboratories use machines operating at speeds of about 90 feet per minute. Precision measurements of solution composition and performance are therefore necessary. Huse described such details in connection with the standard procedures used in the laboratories at Hollywood, Calif. (*J. Soc. Mot. Pict. Eng.* 21, July, 1933, p. 54). Chambers and Wratten also reported on the performance of one type of sensitometer used in several laboratories as a control instrument (*J. Soc. Mot. Pict. Eng.* 21, September, 1933, p. 218). A sensitometer produced by a German firm was designed to meet the requirements of the German photo-



Official Photograph, U. S. Army Air Corps

METROPOLITAN NEW YORK

In a Single Photograph Made from an Altitude of 26 300 ft by Capt. A W Stevens Plane piloted by Lieut C D McAllister



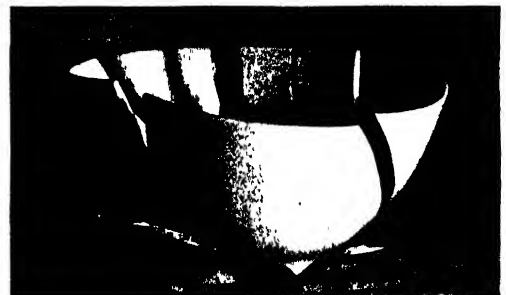
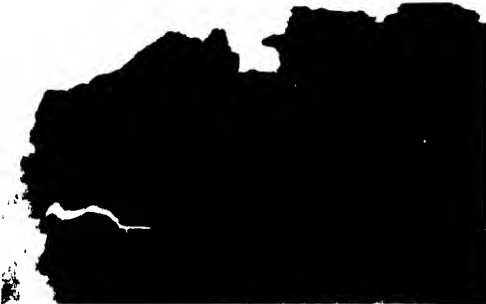
KEY TO PHOTOGRAPH OF METROPOLITAN NEW YORK
PHOTOGRAPHY



By Permission of The Times, London, England

LOOKING DOWN ON THE WORLD'S HIGHEST MOUNTAIN

Mt Everest photographed by Lt Col L V S Blacker from Mt Everest Flight
Plane piloted by Lord Clydesdale



Plates 1, 2, 3, Courtesy of Dr. L. Bendikson, Huntington Library, San Marino, Calif

Courtesy of Arthur D. Little, Inc, Cambridge, Mass.

TWO METHODS OF DECIPHERING A CHARRED DOCUMENT

1. Ordinary Photograph
2. Infra-red Photograph
3. Artificial Image obtained by 40 days contact with photographic plate, charred paper fogged plate, ink protected plate from fog

HIGH SPEED PHOTOGRAPH—1/75,000 SEC.

Broken cup of coffee photographed by high intensity spark discharge set off by means of pair of small wires under board hit by cup when dropped. Photographed by H. E. Edgerton and K. J. Germeshausen, Mass. Institute of Technology, Cambridge, Mass.

graphic industry (*Phot. Ind.* 30, Dec. 28, 1932, p. 1275).

Two new instruments for the measurement of photographic densities were described. A simple, visual comparator designed by Cartwright measured areas 2 mm. in diameter (*Phot. J.* 73, February, 1933), and a microphotometer using two photoelectric cells was described by Schutz (*Phys. Z.* 34, 1933, p. 566).

In an extension of their work on wave form analysis, Sandvik, Hall, and Streiffert studied the relation between the sensitometric conditions and the per cent of harmonic content of variable width sound records and found that the former are much more critical and the latter increases at the higher frequencies (*J. Soc. Mot. Pict. Eng.* 21, October, 1933, p. 323).

It is well known that photographic exposures vary over a wide range depending on the nature of the subject being photographed. It is generally assumed for most types of photographs that equal densities will be produced provided equal values of energy (intensity of illumination multiplied by the exposure time) affect the photographic emulsion. Jones and his co-workers have investigated this phenomenon during the past decade and reported that in general photographic materials do not obey this law which is called the "reciprocity law." Furthermore, a continuous exposure of a definite energy value does not produce the same photographic energy as another exposure given intermittently. This phenomenon, known as the "intermittency effect," was studied further by Webb who found that, provided the frequency of the intermittent flash exposure was above a minimum critical value, no difference existed in the photographic effect compared with a continuous exposure. The reciprocity law failure for radiations of different wave length throughout the visible spectrum was also examined with a non-color sensitized emulsion and with a panchromatic emulsion. It was concluded that the effect of light energy in exposures of equal time and density is the same for radiations of any wave length (*J. Opt. Soc. Amer.* 23, May and September, 1933, pp. 157, 316).

MANUFACTURE OF SENSITIZED MATERIALS. Panchromatic roll films of high speed and color sensitiveness combined with fine grain were made available for the amateur. The fine-grained emulsions were intended primarily for use in miniature cameras necessitating enlargement of the pictures most desired.

A special motion picture negative of fine grain was also announced for use in the projected background process whereby a suitable background is projected on a screen behind a motion picture set during the photography of the action (see *NEW INTERNATIONAL YEAR BOOK* for 1932, p. 665).

Our knowledge of the mechanism of ripening of photographic emulsions was stated to be incomplete by Heyne who reviewed the history of photographic gelatins (*Phot. Korr.* 69, March, 1933, p. 41). Methods of testing gelatins for photographic use were described by Fuchs (*Phot. Ind.* 31, Mar. 8, 1933, p. 254), and factors influencing photographic emulsions were reviewed by Charriou (*Sci. ind. phot.* 4, June, 1933, p. 177). Numerous patents were issued to several well-known firms relating to sensitizing dyes for green, yellow, orange, red, and infra-red sensitization of emulsions. Several papers dealing with the preparation of emulsions were presented to the photo-

graphic convention held in November, 1932, in Leningrad (*Kinophoto Ind.* 1, 1932, p. 70; also *Kinophoto Inst.* 1, 1932, p. 128; *ibid.* 2, 1933, p. 127).

The preparation and structure of tricarbocyanines was described by Fisher and Hamer (*J. Chem. Soc.* 1933, p. 189). Recent advances in infra-red sensitizing dyes were discussed by Brooker, Hamer, and Mees (*J. Opt. Soc. Amer.* 23, June, 1933, p. 216), and by Dieterle, Dürr, and Zeh (*Brit. J. Phot.* 80, Oct. 27, 1933, p. 624).

The improvements made in photographic plates by the introduction of these new dyes have been of incalculable value to the spectroscopist and astronomer. Examples of the results obtained with the new plates won for Mt. Wilson Observatory a well-deserved medal from the Royal Photographic Society (*Illustrated Catalogue* 78th Annual Exhib. Roy. Phot. Soc., September, 1933, p. 32). New spectral lines and better separation of existing lines is now possible. Adams and Dunham photographed the planet Mars in November, 1932, when it was approaching the earth and again in May, 1933, when it was receding from the earth and proved that the atmosphere of the planet contains only about 1 per cent as much oxygen as the earth's atmosphere. They also found that the atmosphere of Venus contains large quantities of carbon dioxide which shows that there is no life of any kind on this planet. Jupiter, on the other hand, was found to have ammonia gas in its atmosphere which is difficult to explain. Menzel and Boyce recently showed that three of the five strongest coronal lines of the sun were due to neutral oxygen atoms (*Sci. News Letter* 24, Nov. 4, 1933, p. 293).

Research on film support appears to expand each year if the number of patents granted on various cellulosic compositions may be regarded as a measure of the work being done in this field. Talbot gave a useful review of the problems entering into the manufacture of photographic paper (*Phot. J.* 73, July, 1933, p. 292).

NEW APPARATUS. An aroused interest in fine-grained small-size negatives was encouraged by the introduction of improved miniature cameras fitted with wide aperture lenses, high precision shutters, range finders, etc. One firm supplied rigid tubes of a cellulosic composition for developing roll films (*Focus* 43, Dec. 24, 1932, p. 416). Several designs of enlargers were made available for enlarging small negatives (*Amat. Phot.* 74, Dec. 28, 1932, p. 597; *Photo Woche* 23, Nov. 29, 1932, p. 242).

In England, a new portrait camera known as "Polyfoto" attracted attention. It produced 48 pictures on a 5 by 7 in. plate in one minute, enlargement to cabinet size or greater of certain selected ones then being made for the customer (*Brit. J. Phot.* 80, July 21, 1933, p. 421).

The motion picture cameras in use in the larger studios were gradually emerging from their blimp housings and assuming more familiar shapes again. Several well-known firms introduced completely silenced cameras that were satisfactory for sound pictures (*Amer. Cinemat.* 13, October, 1932, p. 17; *ibid.* 13, January, 1933, p. 16; *Internat. Phot.* 5, March, 1933, p. 8). Special cameras were equipped and tested under extreme cold conditions for the Mt. Everest flight (*Brit. J. Phot.* 80, June 30, 1933, p. 375).

A few additional wide aperture lenses were introduced working at F/2, F/1.5, and F/0.85. The last named lens was designed particularly

for the exacting requirements of X-ray cinematography of live organs in the body (*Brit. J. Phot.* 80, Mar. 10, 1933, p. 128).

Improved lighting equipment was marketed for the professional and amateur cinematographer, the commercial worker, and the technician. Large and small size photoflash lamps were made available as well as a new size of over-volted incandescent lamp of the photoflood type.

Significant improvements were noted in sound recording and reproducing equipment for motion picture work. A technical description of a method of variable width recording equipment was published (*J. Soc. Mot. Pict. Eng.* 20, May, 1933, p. 396) and papers describing a system of variable density recording were presented at the October meeting of the Society of Motion Picture Engineers held in Chicago. Small compact camera dollies with short crane arms and ball-bearing rubber wheels were finding extensive use in the studios (*Amer. Cinemat.* 13, May, 1933, p. 8).

H. E. Ives demonstrated an experimental apparatus for the projection of motion pictures in relief. A series of 32 posed still pictures was made using a large diameter concave mirror to image them on a transparent concave rigid screen which, in turn, was imaged on lantern slides. Positives from these negatives were mounted on the periphery of a slowly rotating disk in the slide plane of a projector. The projector image (using a flashing mercury lamp source) was received on one side of a translucent convex ridged screen. When viewed from in front, a stereoscopic relief is exhibited according to various observing positions (*J. Soc. Mot. Pict. Eng.* 21, August, 1933, p. 106).

Progress was noted in the amateur cine field, particularly in regard to the quality of sound-on-film reproduction although this quality was generally considered to fall short of that obtainable with disk or 35 mm. sound-on-film records.

THE PHOTOGRAPHIC PROCESS. A new method of physical development was of interest to every one concerned with the production of negatives having minimum graininess. A hypo-silver nitrate-sulphite solution was used to which an amidol solution was added for use. An exposure increase of five times was necessary and development required $1\frac{1}{2}$ hours. A modified system reduced the development time to 45 minutes (*Camera*, Phila., 46, April, 1933, p. 217). The problem of fine-grain development was discussed by many writers but with very little experimental data to support their statements. Developers containing paraphenylene diamine were recommended by several workers, even though most of them seemed to be aware of the reputedly poisonous action of this chemical on the skin.

A committee of motion picture engineers made useful recommendations on the care and development of motion picture film with reference especially to film preservation (*J. Soc. Mot. Pict. Eng.* 20, March, 1933, p. 183).

A method of securing a more uniform degree of development throughout the life of a developer was stated to be possible by using two developer baths in succession (*J. Soc. Mot. Pict. Eng.* 21, July, 1933, p. 21). A paper by Davis and Neeland of the U. S. Bureau of Standards dealt with a comparison of several developers and the specification of relative sensitivity (*Bur. Stand. J. Research* 11, September, 1933, p. 379).

In a paper given before the 1931 Photographic Congress in Dresden, Reinders and Benker

showed that the properties of a developer were dependent largely on the hydrogen ion concentration. This work has now been confirmed by two Russian investigators, Faermann and Shishkina (*Trans. State Opt. Inst. Leningrad* 9, 1933, Pt. 89, p. 1).

The introduction of boric acid into a potassium alum fixing bath containing acetic acid and sodium sulphite was shown by Russell and Crabtree to extend the hardening life and minimize greatly the tendency for sludge formation (*J. Soc. Mot. Pict. Eng.* 21, August, 1933, p. 137).

Hickman and Weyerts devised a new method of optical intensification of silver images which consisted in exposing silver halide or sulphide images to light while immersed in solutions of sodium silver sulphite or nitrite (*Brit. J. Phot.* 80, Aug. 18, 1933, p. 482).

Two interesting research papers by Carroll and his co-workers, Hubbard and Kretschman, dealt respectively with the mechanism of hypersensitization and photographic reversal by desensitizing dyes. (*Bur. Stand. J. Res.* 10, February, 1933, p. 211; *ibid.* 10, April, 1933, p. 449).

PHOTOGRAPHIC THEORY. Experiments were continued by Bullock on the phenomenon of the continuing action of light in silver halide emulsions. With certain of these materials, over a considerable exposure-age range though not indefinitely, the rate of increase of the developable image varies inversely as the time of keeping in the dark after exposure. Upon this relation is based a view of the mechanism of latent image formation in which an essential feature is the assumption of spherical spreading of activation energy through the grain (*Sci. ind. phot.* 2nd Ser. 4, January-February, 1933, pp. 6 and 33).

An aggregate of silver atoms was believed by Reinders and Hamburger to act as a nucleus for development only when it attains or exceeds the critical size of 3 or 4 atoms (*Z. wiss. Phot.* 31, 1933, p. 265). The data, however, are neither compatible with the assumed necessity of larger germ sizes nor with Bullock's assumption that isolated silver atoms are developable.

Hilsch and Pohl have discussed further the photographic elementary processes in the salts of the alkali metals and of silver respectively. Based on the work of Stasiv who showed that the coloration of alkali metal crystals by alkali metal vapor could be caused to move in an electric field like negative charges, they give the following differentiation in alkali metal salts and silver salts. In the former the metal atoms remain individual and are only aggregated by heat. In the silver halides, in consequence of a freer movement of the electrons in the lattice, aggregation follows immediately on formation of the metal atoms by light absorption (*Z. Phys.* 77, 1932, p. 421).

Seyewetz tested three aromatic azimides and reported two of them to be useful anti-fogging agents although they also dyed a chloride emulsion image a blue color (*Phot. Korr.* 69, May, 1933, p. 67).

Gelatin on prolonged heating at sufficiently elevated temperatures was observed by Sheppard and Houck to lose its swelling power and its solubility in warm water. From the temperature coefficient of insolubilization, the "critical increment" of insolubilization was found to be 23,000 calories. The insolubilization effect of exposure to ultraviolet radiation was found to be similar

and to have a greater velocity (*J. Phys. Chem.* **36**, December, 1932, p. 2885).

The reduction potential of developing agents determined from the bromide depression has represented for many years a useful measure of their relative photographic characteristics. Recently Shiberstoff and Berkin, after a comparative study of a number of developing agents, concluded that reduction potential is not entirely satisfactory and advanced two new quantities, namely, "A," the practical activity of the developer derived from the inertia and fog value, and "W," the degree of perfection. The practical value of a developer was further defined by Shiberstoff as being directionally proportional to the degree of perfection and inversely to the optimum time of development (*Kinophoto Ind.* **1**, 1933, pp. 101 and 141).

BIBLIOGRAPHY. Accounts of photographic progress are published each year by the *British Journal of Photography* (London) and the Society of Chemical Industry (London). Cinematographic progress is reviewed annually by the Society of Motion Picture Engineers. New apparatus is described in the *British Journal Almanac* (London), *Deutscher Kamera Almanac* (Berlin), and *Photofreund Jahrbuch* (Berlin).

Four new photographic publications were initiated during 1933, namely, *The Miniature Camera* (New York), *Travel and Photography* (Sydney, Australia), *Photo Art Monthly* (San Francisco), and *The Gallery* (London). *Motion Picture Projectionist* (New York) was combined with *International Projectionist* (New York). *Personal Movies* (Canton, Ohio), which was initiated in June, 1932, was continued. Work was in progress to establish a national photographic association in the United States and Canada to be called the *Photographic Society of America*.

An index to volumes 1 to 10 was published for *Photographic Abstracts* by the Royal Photographic Society, London.

The more notable books of the year were: D. Charles, *Commercial Photography*, 2d ed. (Greenwood & Co., London); G. W. French, *Photography for the Amateur*, 2d ed. by L. I. Snodgrass (Falk Publishing Co., New York); W. Heering, *Das Rollicflex Buch* (Knappe, Halle); J. Price, *News Photography* (Industries Publishing Co., New York); R. C. Bayley, *The Complete Photographer*, 10th ed. (Methuen & Co., London); K. Wolter, *Photographieren mit Drei-Vier und Vier-Vier* (Knappe, Halle); A. Hammond, *Pictorial Composition in Photography* (American Photographic Publishing Co., Boston); B. T. J. Glover, *A Guide to Successful Portraiture* (British Periodicals, Ltd., London); *Photography Without Failures* (Routledge & Son, London); W. H. Daring, *Photo-fehler A bis Z* (Knappe, Halle); F. Loescher and K. Weiss, *Landschafts Photographie* (Union Deutsche Verlags, Berlin); Wm. Alexander, *Modern Photography with Modern Miniature Cameras* (Fountain Press, London); G. L. Hawkins, *Pigment Printing* (Greenwood & Co., London); P. E. Sabine, *Acoustics and Architecture* (McGraw-Hill Book Co., Inc., New York); J. S. A. Salt, *Surveying from Air Photographs* (H. M. Stationary Office, London); G. H. Sewell, *Commercial Cinematography* (Pitman & Sons, London); K. M. MacIlvain, *Sound Picture Recording and Projection* (International Text Book Co., Scranton, Pa.); J. Eggert and R. Schmidt, *Einführung in die Tonphotographie* (Hirzel, Leipzig); R. Dahlgren, *Tonfilmwiedergabe*

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A partial list of the handbooks and annuals appearing during the year is as follows: *Ausführliches Handbuch der Photographie*, edited by J. M. Eder and A. Hays, Knappe, Halle. Vol. ii, part 4 (3d ed.). *Die theoretischen und praktischen Grundlagen der Autotypie; Handbuch der wissenschaftlichen und angewandten Photographie*, edited by A. Hay and M. von Rohr, 9 vols., Springer, Vienna. Vol. vi, pt. 2, *Mikrophotographie* (edited by T. Peterfi); *Jahrbuch für Photographie, Kinetographie, und Reproduktionsverfahren für die Jahre, 1928-1929*, vol. xxxi, pt. 2, edited by J. M. Eder, E. Kuchinka, and C. Emmermann, Knappe, Halle; *American Annual of Photography-1934*, American Photographic Publishing Co., Boston; *Photofreund Jahrbuch, 1933-34*, Photokino Verlags, Berlin; *British Journal Almanac*, Greenwood, London; *Studies from the Emulsion and Colloid Laboratory*, vol. i, 1932, Kinophoto Institute, Moscow; *Veröffentlichungen des Wissenschaftlichen Zentral-Laboratoriums der Photographischen Abteilung-Agfa*, vol. iii, Hirzel, Leipzig; *Deutscher Kamera Almanac*, Berlin; *Kinematograph Year Book*, London; *Jahrbuch des Kino-Amateurs*, 1934, Photokino Verlags, Berlin; *Penrose's Annual*, London.

PHOTOPLAYS. See MOTION PICTURES.

PHOTRONIC CELL. See ELECTRICAL ILLUMINATION.

PHYSICAL ANTHROPOLOGY. See ANTHROPOLOGY.

PHYSICS. Advances in physics during 1933 were notable for variety, interest, and importance. Confirmation of the discovery of the positron (positive electron) alone would have made the year memorable. Transmutation became laboratory routine with gamma rays as by-products. Superpenetrating cosmic rays were reported. The neutron, proton, and deuteron became transmutation projectiles in the laboratory. The Van de Graaf 10,000,000 volt spheres were completed and used to produce relatively steady 20-kw direct current for experimental transmutation of atomic nuclei. Quite unexpectedly "heavy water" (made from the heavier isotope of hydrogen) was found fatal to various

forms of life. Nine forms of water appear possible, ranging in molecular weight from 18 to 22, i.e., from H^1 to H^2 and O^{16} and O^{18} . The interest in "heavy water" grows rapidly.

The Nobel prize (q.v.) for the year 1933 was awarded jointly to Paul A. M. Dirac, Lucasian professor of mathematics at the University of Cambridge, and to Erwin Schrödinger, until recently professor of theoretical physics at the Friedrich Wilhelm Universität, Berlin, for their work on atomic theory. Physicists were gratified at the appointment of Lyman J. Briggs as Director of the U. S. Bureau of Standards.

A notable new record of approach toward absolute zero was made. Bromine for photography was extracted from sea-water in tonnage lots. Long-range weather forecasting made marked progress based on rhythmic components of solar records. The discovery of a cosmic source of radio impulses opens a new chapter of interest. Ultra-short waves now used for quasi-optical purposes offer possibilities not fully realized even by experts. Television has notably advanced. Electronic music was active in new and successfully demonstrated devices.

Philosophy. A note of mysticism—when physical theory fails—is to be noted in current physics. The computation of mathematical forms of the universe continues, it being still uncertain whether the universe is expanding, contracting, or remaining constant in size, if that is a reasonable interpretation of the mathematics. Some think that to the positivist probability has become the keyword in place of certainty. This seems to confess that physics is inadequate even in its own field to account for cosmic phenomena. Rarely is the centennial of a curve celebrated. In 1933, however, occurred the notable centenary of the discovery of the normal probability curve by de Moivre—the place of which in modern science and technology has become almost supreme. The uncertainty principle still holds sway in atomic physics. Lemaitre points out that this principle gives as the only determined field the average field during a time in which the electron makes ten billion revolutions. Prunier, however, interprets Dirac's wave theory and finds a relationship between wave functions and electromagnetic field which, Prunier believes, suggests that the probability interpretation of quantum mechanics may be escapable. The impasse into which sub-atomic physics has fallen in recent years may yet be resolved.

Heat. One more step toward absolute zero was made when De Haas, Wiersma, and Kramers reached .27 degree Kelvin by the use of cerium fluoride placed in a magnetic field giving a negative potential energy. When the field was removed the substance cooled adiabatically to .27 degree in the earlier experiments and in the latter to the new record minimum temperature .085° C. above the absolute zero. Atkinson and Hautermans found that above a few million degrees temperature, penetrating collisions occur. The heat energy produced by atomic synthesis should account for stellar temperatures of 20,000,000 degrees.

Velocity of Light. A somewhat sensational press notice came late in 1933 that the velocity of light may not be constant. The velocity of light is held to be, perhaps, the most fundamental constant in all nature. The measurements were made in a one-mile vacuum tube, exhausted to 2 millimeters pressure. The presumption that the

velocity of light (in a vacuum) may be a variable was promptly disclaimed by the director of the Mt. Wilson Observatory. The unexplained apparent discrepancy amounts to 20 kilometers per second.

Gheury reported that he finds evidence that the velocity of light has been changing since the beginning of this century according to the analysis of determinations made during that period. Shapley regards the apparent change in the velocity of light as due merely to periodic fluctuations in the forces exerted on the earth by the sun and moon in certain positions. Pease believes that the variation is too regular and too large to be accounted for by the usual sources of error in the method, equipment, or operation. However, he is at present engaged in the reexamination of sources of error.

Variable Refractive Index of Air. An apparent variation in the refractive index of air is reported by Tilton. In a historical study of the various determinations of the refractive index of air he found that a curve connecting the averages year by year showed the same rhythm as the double sun-spot cycle—about 23 years—the so-called magnetic cycle. Sunspots are by habit bipolar, the polarity of the forward spot changing with each eleven-year period. Tilton suggests that during quiet parts of the cycle relatively more of the heavy (optically denser) gases settle to the earth's surface. The Pearson correlation coefficient was found by Tilton to be $-.52$. Abbot found a 22.6 year cycle in terrestrial weather, corresponding to Hale's solar magnetic cycle of the same period. Twenty-three year cycles are found from the clay deposits of ancient rivers which have dried, receding more each year, leaving clearly marked lines or varves, which mark the rainy years.

Short Radio Waves. The invasion of the short-wave end of the radio spectrum progressed notably during 1933. Special interest attaches to this trend because of the number of potential broadcast and experimental channels in this region. A thousand channels might be assigned between 5 and 8 meters, and 8000 channels between 1 and 5 meters. Already such waves have been applied to interesting experimental developments. Their quasi-optical properties and freedom from static forecast a brilliant future in their application. Extra-terrestrial echoes of radio still puzzle the physicist. A new mystery has just been reported by Jansky—atmospherics of very short wave lengths from a definite direction in space. The direction is determinable to within a half degree in the sky. The source seems to be right ascension, 18 hours, and declination, -20° .

Kintner using a new radio tube has produced a 9-cm wave with one-watt output. Such waves may be reflected like light and penetrate smoke and fog unimpeded. The detection of locations of thunder storms has been studied by Watt by means of cathode ray oscillograms. The atmospherics during thunder storms permit two stations working in cooperation to detect at times hundreds of storms within a radius of 3000 miles.

Schereschewsky reports lethal effects from high-frequency electromagnetic radiation, especially between 66,000 and 18,000 kilocycles.

The uses of short waves in cooking forms a novel application—for example, baking bread without crust by high-frequency short-wave electrical energy. Another application of short waves is in the control of air traffic between London and

Paris by means of 17-cm waves used in radio communication.

Television (q.v.). The two leading television journals of England and America agree that 1933 was a year of marked progress toward the television of our dreams. One editor says: "The men who know are talking television more optimistically than ever before." Outstanding in the year's achievements are the use of ultra-short waves and the success of the cathode ray tube and screen especially in the new iconoscope. Other advances include wide band transmission, more intense light, large screens, and pictures of outdoor news scenes. In screen portrayal a notable 1933 triumph of television was the ballet *Petrouchka*. Baird's full-size screen pictures were especially successful. The theory and practice of both electromagnetic and electrostatic electron focusing made substantial progress during the year. Nine-inch cathode ray screens with electromagnetic deflection are on the market.

The Zworykin iconoscope is in effect a television camera and makes practical outdoor television. Zworykin uses methods of electron quasi-optics, focusing beams of electrons much as a lens focuses a beam of light. Scanning with a stream of negative electrons nullifies the positive charge in each little condenser. It is reported that it permits practical outdoor television. The surface is made up of little eyes (3,000,000 in all), each being a globule of photosensitive matter deposited on a thin sheet of mica. Each globule is insulated from the other, and all are insulated from the metal backing by the mica. Each globule forms a condenser. Each condenser is positively charged in proportion to its emission, so the charge is stored until released. An editorial significantly remarks: "Television may have some surprises for the conservatists before another twelve months have rolled around,—so the television optimists insist."

Sound. Schutkowsky's new device spells audibly the letters on a printed page. With his principle of "optical congruence" if the "A" in the book covers the "A" in the machine, the loud speaker pronounces the letter "A" and only then. The device seems designed to be usable by the blind with little practice.

In the field of electronic music interesting developments are in progress. Karapetoff has designed an electronic musical device for producing a wide range of tonal qualities, permitting reproducible records of his own performance which may be superadded, making it possible for him to play duets with himself and "produce the music of an entire orchestra," he being the sole performer.

Taubman's electrone furnishes a superior kind of electronic music, using the beat notes from tube-driven high-frequency tuned circuits. The pitch is varied by moving the hand relative to a short metal rod—moving the playing hand toward the rod raises the pitch and withdrawing it lowers the pitch. A foot pedal controls the volume from pppp to ff instantly.

Radioactivity. A study of neutrons and the masses of nuclei by Swietoslowski showed that a uranium atom loses 0.033 of its initial mass by transmutation to lead, a result in accord with .0441 deduced from heat emissions. Wait reports that an air molecule may be ionized by reason of radioactive matter in the air, in the soil of the earth, or by the action of cosmic rays. Air ions thus formed by radioactive substances account

for 75 per cent of the air ions, 25 per cent being due to cosmic rays. Two thousand ions per cu. cm.—the theoretical expectation—are rarely found. The average over sea is 500 and over cities may be as low as 100. Wait is studying the factor responsible for this discrepancy.

Any Climate Anywhere. Another triumph of applied physics still in its infancy is air-conditioning. More than 36 separate aspects of environment which require control have been listed. The chief items at present are freedom from dust, and suitable temperature and humidity. The movement for the control of indoor air conditions is gaining headway. Noteworthy examples are Radio City Music Hall, New York, and Sears Roebuck Store in Chicago. Other examples include cafés, trains, theatres, hospitals, stores, and homes. The latest development is an experimental air-conditioned sedan being driven through crowded New York streets with air being delivered free from city dust, cooled to comfort temperature and properly humidified. If air delivered to the engine of our car needs to be purified, why should not the air taken into human lungs be made dust free and germ free?

That new factors—new and unexpected—are bound to arise in the complete physical control of indoor air conditions received additional confirmation during the year 1933. Hershey reports that nitrogen and oxygen appear not to be able to support life alone. In a mixture of nitrogen and oxygen in the ratio of 79 to 21 per cent (free from rare gases) all the test animals died. He also showed that rats, monkeys, pigeons, cats, and guinea pigs cannot live more than five days in an atmosphere of pure oxygen.

The remarkable uses of hydrogen ion control in specific researches at the Bureau of Standards add evidence that such control is essential in making permanent paper and that acidity is an active cause of deterioration in leather, textiles, and paper. The Folger Shakespeare Library in Washington is the first to avoid atmospheric acidity by a specification based upon research, which protects the books and other paper records in this valuable collection from its most serious enemy.

An interesting possibility suggested by Height is his electrode based upon the Lodge-Cottrell principle. The purpose is to keep airports clear of fog. McAdie, an expert in meteorology, believes that the early morning fogs of New York harbor can be dissipated by electrified sprays.

Electrodeposition of Rubber Latex. The electrodeposition of rubber by scientifically controlled measured conditions is developing a whole group of industries. Tank vessels are now carrying the liquid latex direct from plantations to the point of manufacture. The coloring matter and vulcanizer are mixed directly with the latex and the mixture electrodeposited on metal forms. An excellent example is the production of seamless gloves of high quality for surgical and laboratory use. At the opening of this century Crookes pointed out the real prospect of a wheat famine through the exhaustion of natural nitrate deposits. The danger has been made forever impossible by research on synthetic nitrates mined from the atmosphere. In somewhat similar manner the study of new sources of rubber, natural and synthetic, have made impossible a rubber famine, modern plants producing high-grade rubber at five or six cents a pound.

Cosmic Physics. Isostasy was challenged after

a study by Glennie of the undulations in the compensated geoid. It was agreed that the real test will be the correlation of further geological facts. Interesting records were obtained from the Long Beach earthquake. Record analysis at the Coast Survey located a severe earthquake in China long before cable and news service announced the news. Radio proved a new and useful resource in speeding up the study of the variation of longitude through the movement of the pole of rotation about the pole of figure of the earth (about a meter a year).

Takeuchi discussed the red shift as involving Einstein's cosmological term. Eddington's theoretical value, 137, was closely confirmed by Shiba, who obtained the equation $hc/2\pi e^2 = 136.94 \pm .5$. De Sitter supposes minimum value 5×10^9 years ago when the galaxies were comparatively close together.

Eddington and Regener stated that a body in space acquires radiant energy giving a temperature of 3.18 degrees Kelvin from the light of all stars and cosmic rays. Belot reported densities: of Antares 10^{-8} , dark nebulae 10^{-10} , luminous nebulae 10^{-15} .

Menzel and Shapley find oxygen in excited state the cause of the green light in the corona of the sun. Slifer found that the earthshine reflected from the dark of the moon is distinctly blue. Wildt confirms Durham's announcement that Jupiter and Saturn have atmospheres containing ammonia. Slifer also reports oxygen on Mars and dioxide on Venus.

A new correlation was reported by Archenhold—the 27-day solar halo frequency and the 27.3-day rotation of the sun. The Century of Progress literally hitched its wagon to a star when light from Arcturus was made to open the Chicago Exposition by a photo-cell device ingeniously set up.

Abbot from his studies of the rhythmic components of the solar radiation curve predicted the 1933 and 1934 curve after announcing the close parallel between predicted and actual values for 1931 and 1932. Abbot's periodometer was applied to detecting rhythms in solar radiation.

The stratosphere has now been reached for a third time. The highest flight was made by the Russians and the next by the Americans (11.5 miles). Recording instruments for cosmic rays were used and quartz windows permitted ultraviolet studies. The last flight showed a fifty-mile-an-hour drift in the stratosphere. The sky was deep blue (not black) and at 90° from the sun skylight was plane polarized to within 5 per cent.

Bromine Mined from the Sea. Bromine is a key material in photography. During the year the feared shortage of bromine was made forever impossible through the commercial recovery of this valued gas from sea water. A cubic mile of sea water contains 300,000 tons of bromine. The Kure Beach plant has a capacity of 250 tons a month; 26,000 gallons of sea water being handled per minute day and night, the water remaining in the plant less than one minute.

Great interest was shown in the prediction and discovery of "heavy water" (formed by the heavier hydrogen isotope). A literature of more than a hundred articles appeared in the journals on this subject, touching upon such topics as electrolytic isotopic fractionation, mobility of ions in H_2 , the lethal effects of "heavy water" on organisms. The latter came as a surprise.

This unexpected discovery adds new interest

to the subject. Washburn and Smith found "heavy water" in the Salton Sea and in rasorite. Lewis and Ashley found the nuclear spin of H^2 to be twice H^1 , from a study of the alpha bands of H^2H^2 .

Disintegration Products. Curie and Joliot showed that high-energy photons produced positive electrons by impact with atomic nuclei and also that positive electrons result from the artificial disintegration of aluminum and boron, and that neutrons and gamma rays are emitted by F, Na, and Al on bombardment by alpha particles from polonium. Dirac holds that photons should become positrons and electrons. Millikan secured 1400 photographs of tracks indicating that photons of cosmic or gamma rays eject positrons and electrons from the nucleus of an atom. Neddermyer and Millikan studied these 1400 tracks caused by the impact of gamma rays from thorium upon lead nuclei. Ten per cent were direct hits on the nucleus and of these 40 per cent ejected both positrons and electrons and the remainder positrons only. Gamma rays, by-products of transmutation experiments, are an important means of checking the energy equivalents in such transformations.

Ultra-High Energy Cosmic Rays. Kolhörster reported cosmic rays of minimum energy exceeding one hundred thousand million electron volts. In the salt mines of Strassfurt he found that they penetrated a half mile of water or its equivalent, hence they are four times more penetrating than any cosmic rays reported by Regener. The rays reach the earth vertically. Kolhörster believes these to be "primary cosmic radiation" with properties "capable of maintaining the electric charge of the earth."

The Neutron. Rabi studied 10 elements as sources of neutrons and found the radius of the neutron to be $1.32 \times 10^{-13} \pm 0.2$. Pollard determined the specific polarizability of the neutron. Crane and Soltan designed and used a "neutron mill" to "blast neutrons" from beryllium nuclei. Neutrons rate second to cosmic rays for penetrating power. Lacking a charge they slip through all forms of matter. Impact seems to be their only discernible aspect. Harkins considers that the neutron is a unit of matter which should head the periodic table. It penetrates 4 inches of lead whereas a million-volt X-ray is unable to penetrate 1 inch of lead.

Electronic Phenomena. DuMond reports that the atom behaves toward radiation as though it contained electron momenta, which impresses Doppler broadening on an initially sharp X-ray line. Kappitza and Dirac report the reflection of electrons from standing light waves. The pencil falls obliquely on the nodal surface of the standing waves, producing a reflected electron pencil for the angle of incidence given by the Bragg law for crystals, with a constant equal to half the wave length. Franzini found that the cooling of a tungsten filament by thermionic emission is in harmony with the theory of a Maxwellian distribution of the initial velocities of emitted electrons except that at higher temperatures electrons of greater velocities are picked up from the field.

In contrast to the speculative atom of hydrogen of a mass comparable to that of the electron comes a new interest in hydrogen atoms of double mass. Their nuclei form a heavier bullet than the proton for atom smashing. Lamar and Duhr have devised an apparatus for this purpose.

High-Voltage Sources. High-voltage devices for

transmutation experiments are being installed at various places. The largest are the Van de Graff spheres at Round Hill, Mass., 15 feet in diameter. These are large enough to serve as a working laboratory and they generate a relatively steady direct current potential of ten million volts with a power of twenty kilowatts capable of giving 40-foot sparks at 7,000,000 volts. It is reported that similar spheres will be installed by the Tennessee Valley Authority for experimental nitrate production and research.

Discovery of Positive Electron Confirmed. The discovery of the negative electron nearly forty years ago was matched by the confirmation of the reported discovery of the positive electron (positron) having the same mass (but opposite charge) as the negative electron. Anderson's now famous photograph of Aug. 2, 1932, was in question and is now confirmed as the first proof of the existence of a positive electron. The two ultimate particles of equal mass and of equal (but opposite) charge now give us for the first time the means for constructing a hydrogen atom of one one-thousandth the mass of the H atom as hitherto known. If this is possible (in the opinion of this reviewer) a whole series of the chemical elements having one-thousandth the mass of the elements as hitherto known may conceivably be created. It remains to be seen whether such a synthesis is experimentally possible and what would be the physical and chemical properties of such ultra-light elements in view of the vastly reduced mass of their atoms. The way is open for a new field of experiment and speculation.

Sources of Positrons The Joliot's report that Po-Be 5-million electron volt photons eject 40 positive electrons for each 100 negative electrons from uranium, 30 from lead, 18 from copper, and 5 from aluminum. They reported obtaining 8 positives for each 100 negatives from lead with 2.6-million volt photons from Th C'. Chadwick obtained 35 positive electrons per 100 negatives from lead using 5 million electron volt photons from Po-Be. These and other sources seem to be ample for present experimental purposes. An interesting comment anent "atom smashing" is Eddington's remark "No experiment is worthy of acceptance until it is supported by a good theory."

Oppenheimer stirred great interest by his theory of the transformation of "intangible radiation" into "tangible matter."

Formulas. To the familiar formulas of ordinary chemical reactions the literature of experimental transmutation is adding such formulas of nuclear chemistry as $\text{Li}^7 + p = 2 \text{He}^4$; $\text{F}^{15} + p = \text{O}^{16} + \alpha$; $\text{Be} + p = \text{Li} + \alpha$. These transmutation formulas are made specific by indicating the particular isotopes involved, the proton and alpha particles sharing in the process.

Some Disintegration Results. Boron disintegration particles resulted in 60,000 electron-volts for boron and 30,000 for lithium. Theory predicted a 9×10^6 energy emission in the disintegration of B^{11} . The disintegration of boron indicated a value of 1.011 as the mass of the neutron. Henderson found that the alpha particle yield of lithium disintegrated by protons increased linearly above 400,000 volts. The result fitted theory. The diameter of the lithium nucleus (the distance at which the inverse-square law breaks down) is calculated to be 4×10^{-13} cm. 109 protons and 10⁶ volts produced forty disintegrations.

Russell pointed out that protons and nuclei repel each other (both being positive), at distances

over one one-thousandth of the atom diameter. Neutrons penetrate the barrier especially of light nuclei of low charge. Pollard reported that the alpha particle enters the nitrogen nucleus over a barrier of 4.1 and 4.4×10^6 electron volts.

LITERATURE. The number of titles on physical subjects is increasing. The American physical Society is coöperating in a policy of shorter papers giving essentials only. The importance of physics to chemistry is evidenced by the completeness and promptness with which *Chemical Abstracts* is listing articles on physical subjects. In sub-atomic physics alone these number about ten a day; for astronomy and biology new physical devices, methods, and principles are in increasing application. Notable researches on the acceleration of plant growth and the control of vital processes by physical methods are outstanding.

Dependable and interesting is a popular series of books edited by Crew and published by Williams and Wilkins Co. for the Century of Progress: Sheard's *Life-Giving Light*; Baker's *The Universe Unfolding*; Cox's *Time, Space, and Atoms*; Bell's *The Queen of the Sciences*; Mantell's *Sparks from the Electrode*; Redman's *The Romance of Research*.

Notable in the year's literature is the 1933 revised and enlarged edition of the Smithsonian Tables, an important reference work for physicists. High spots of physical interest are Rutherford's review of *The Transmutation of the Atom*, Darrow's illuminating account of the *Discovery and Early History of the Positive Electron*, and Loeb and Adam's *The Development of Physical Thought*.

Among the quotable comments of the year is one by the editor of *Nature*: "To no one more than the man of science is society entitled to look for the courage, confidence, and vision which are adequate, not merely to prevent us from slipping back into destructive individualism, but also to lead humanity forward to the full enjoyment of those rich resources with which science has endowed us."

PHYSIOLOGY. See BOTANY.

PICHON, pè'shòn, STÉPHEN (JEAN MARIE). A French statesman, died at Vers-en-Montagne, Sept. 18, 1933. Born at Arnay-le-Duc, Aug. 10, 1857, he was educated at the University of Paris, but abandoned a medical career in 1880 to join the staff of Clémenceau's journal *La Justice*. About the same time he entered Paris politics, becoming a member of the municipal council in 1882 and serving several times as secretary of that body. In 1885 he was elected to the Chamber of Deputies and during 1889-90 was its secretary. His diplomatic career began in 1894 and during the next 10 years he was successively chargé d'affaires in Haiti, Minister to Brazil and China (being stationed in the latter country during the Boxer rebellion), and resident-general in Tunis with virtually the rank of governor.

Pichon was elected Senator from Jura in 1906. The next year he received the portfolio of Foreign Affairs in Clémenceau's cabinet, and held the same post under Briand during 1910-11 and under Barthou in 1913. He then resumed his journalistic duties as editor of *Le Petit Journal*, but in 1917 was requested by Clémenceau to be Minister of Foreign Affairs in the cabinet whose courage carried France victoriously through the last years of the War. At the Paris Peace Conference Pichon firmly demanded, like his chief, adequate reparations from Germany and permanent military

security for France and, when obliged to retire from public life in 1920 on account of a nervous breakdown, continually lamented his failure to achieve these aims. He wrote *La Diplomatie d'église sous la troisième république* (1892).

PIERS. See BRIDGES; PORTS AND HARBORS; FOUNDATIONS.

"PILOTEL." See ELECTRIC TRANSMISSION AND DISTRIBUTION.

PINE CANYON DAM. See DAMS.

PINEDO, FRANCESCO, MARCHESE DE. An Italian aviator, died suddenly in New York City Sept. 2, 1933. Born in Naples in 1890, he attended the Royal Naval College and on the entry of Italy into the World War in 1915 joined the destroyer section of the Navy. His interest in aviation dated from 1917 when he was attached to the Navy's aviation section, and upon the formation of the Royal Air Force in 1923 he became a squadron commander. Advanced to the rank of colonel in 1925, he made that year one of the most important flights demonstrating that a well-built seaplane with a trustworthy engine was capable of going almost anywhere and at all seasons. Leaving Rome on April 21, he traveled in the course of 6½ months 35,000 miles, crossing Iraq, India, the Malay Peninsula, Australia, and the Philippines to Japan. The return trip from Tokyo on October 27 was via Rangoon, Bangkok, and Calcutta and thence by the straightest line to Rome, the return distance of 15,000 miles being accomplished in 21 days.

De Pinedo made his most famous flight in 1927 when, completing a 25,000-mile aerial journey, he twice flew the Atlantic and crossed some of the wildest, unexplored regions of South America. Accompanied by his navigating officer, Capt. Carlo Delprete, and a mechanic, Vitalo Zacchetti, he left Ostia February 13 in the seaplane *Santa Maria II* and after a stop at the Cape Verde Islands flew the distance of 1432 miles to the Island of Fernando de Noronha, Brazil, in 12 hours. From Rio de Janeiro, which he reached on February 26, he flew to Asunción, Paraguay. He then turned northward, flying by way of Havana to New Orleans where he arrived on March 29. While continuing to Los Angeles, however, his plane was destroyed by fire after lighting on the Roosevelt Dam in Arizona April 6. After a new plane had been sent to him from Italy De Pinedo completed his tour of the United States, and on May 23 again crossed the Atlantic from Trepassy, Newfoundland, his route being via the Azores, Lisbon, and Barcelona to Ostia where he landed on June 16. In recognition of this achievement he was made chief of staff of the Royal Air Force with the rank of general.

In 1929 De Pinedo led 24 monoplanes in flight formation to Asia Minor, but later in that year was assigned to the Italian embassy in Buenos Aires as air attaché an account of an alleged quarrel with the Minister of Air, Gen. Italo Balbo. According to some accounts also, he had incurred the King's displeasure by his friendship with Princess Giovanna, who was later married to King Boris of Bulgaria. Although he had retired from the service in December, 1932, he made another attempt to add to Italy's aviation glory on a non-stop flight from New York to Bagdad, hoping thereby to win back past favor. His death resulted in the ensuing crash when he lost control of his monoplane *Santa Lucia*, as it took off from Floyd Bennett Field, New York City.

PISTOL SHOOTING. See SHOOTING.

PITTSBURGH, UNIVERSITY OF. A nonsectarian institution of higher education for men and women, comprising 17 schools and divisions, in Pittsburgh, Pa., founded in 1787. The total autumn enrollment for 1933 was 8328, distributed as follows: College, 2108; engineering, 438; mines, 85; business administration, 508; education, 715; Johnstown Junior College, 292; Erie Center, 223; graduate school 1131; downtown division, 1890; medicine, 259; law, 289; pharmacy, 185; dentistry, 192; retail training, 7; extension division, 842. The 1933 summer session enrollment was 2651. There were 930 members on the faculty for the year ending June 30, 1933. The amount of endowment was \$2,175,986 and the income from endowment during 1932-33 was \$90,690. The library contained 160,000 volumes. There was under construction during 1933 the Heinz Memorial Chapel, erected at a cost of \$800,000 by the children of H. J. Heinz. Chancellor, John G. Bowman, LL.D.

PIUS XI. See ROMAN CATHOLIC CHURCH.

PLANETS. See ASTRONOMY.

PLANT DISEASES, PLANT QUARANTINE. See ENTOMOLOGY, ECONOMIC; HORTICULTURE.

PLASTICS. See CHEMISTRY, INDUSTRIAL OR APPLIED.

PLATT, CHARLES ADAMS. An American architect, painter, and etcher, died at Cornish, N. H., Sept. 12, 1933. He was born in New York City, Oct. 16, 1861, and studied at the schools of the National Academy of Design and the Art Students League and in Paris under Boulanger and Lefebvre during 1882-86. His paintings, largely views of New England, were truthful in color and sympathetically handled. Among the best were "Clouds," which was awarded the Webb prize offered by the Society of American Artists (1894), and "Snow," which won a bronze medal at the Paris Exposition of 1900. As an etcher he produced some excellent work, especially in his treatment of water, selecting his subjects principally from the life of Dutch fishermen and from scenes in Holland. Later Mr. Platt turned to landscape gardening and architecture, designing the Freer Art Gallery in Washington, some of the buildings at the University of Illinois, Phillips Andover Academy, and Deerfield Academy, and more than 100 country homes. He was elected an associate of the National Academy of Design in 1897 and an academician in 1911, and after 1928 was president of the American Academy in Rome. He was also a member of the American Academy of Arts and Letters and wrote *Italian Gardens* (1892).

PLAYS. See DRAMA; LITERATURE, ENGLISH AND AMERICAN; FRENCH LITERATURE; ITALIAN LITERATURE, ETC.

POETRY. See GERMAN LITERATURE; LITERATURE, ENGLISH AND AMERICAN; SCANDINAVIAN LITERATURE, ETC.

POLAND. A central European republic, established Nov. 9, 1918. Capital, Warsaw (Warszawa).

AREA AND POPULATION. Poland in 1933 had an area of 149,960 square miles and a population estimated at 32,600,000 (32,120,020 at the census of Dec. 9, 1931). At the 1931 census, 27.2 per cent of the population resided in urban communities. Populations of the chief cities (1931) were: Warszawa, 1,178,211; Łódź, 605,287; Lwów, 316,177; Poznań; 246,578; Kraków, 221,260; Wilno (Vilna), 197,049; Katowice, 127,841. Living births in 1932 numbered 932,116; deaths, 487,125; marriages, 270,277. The birth rate per

1000 inhabitants in 1932 averaged 28.7, compared with a yearly average for 1927-31 of 31.6; death rate, 15.0 (16.3 in 1927-31). Emigrants in 1932 numbered 21,400 (76,006 in 1931); immigrants, 38,800 (87,700 in 1931). In 1931, 69 per cent of the population spoke Polish and 31 per cent other languages. Of the total population, Jan. 1, 1932, 74.9 per cent were Roman Catholics, 12.5 per cent Russian Orthodox, 9.6 per cent Jews, and 2.7 per cent Protestants.

EDUCATION. All education is free and elementary education is compulsory. In the school year 1931-32 there were 26,939 elementary schools, with 4,245,626 pupils; 742 secondary schools, with 201,548 pupils; 224 teachers' colleges, with 32,736 pupils; and 754 professional schools, with 70,035 pupils. There were 22 universities and high schools, with 1699 teachers and 49,770 students (14,210 women).

PRODUCTION. The 1931 census showed 63.8 per cent of the population engaged in agriculture, forestry, and fishing; 15.4 per cent in industry and mining; 9.5 per cent in trade and transport; and 11.3 per cent in other occupations. During the period 1927-31, Poland stood second among the countries of the world (excluding the Soviet Union) in the production of rye and potatoes, fifth in oats and sugar beets, seventh in barley, and fourteenth in wheat. The output of the chief crops in 1932 was (in metric tons): Wheat, 1,346,428; rye, 6,110,461; barley, 1,400,837; oats, 2,390,831; potatoes, 29,974,529; sugar beets, 2,378,389. Livestock in 1932 included 3,938,455 horses, 9,457,265 cattle, 2,784,820 sheep, and 5,830,655 swine. Forests covered 20,563,853 acres, of which 7,494,973 acres were state owned.

The production of mines and foundries (1933) in metric tons was: Petroleum, 550,945; pit coal, 27,339,000; potassium salts, 299,800; salt, 449,900; iron ores, 161,500; zinc and lead ores, 351,400; pig iron, 305,625; steel, 817,077; rolled steel, 504,432.

Mineral and metallurgical production in 1932, with 1931 figures in parentheses, was (in metric tons): Bituminous coal, 28,835,000 (38,265,010); lignite, 33,400 (41,100); petroleum, 557,000 (630,484); natural gas, 437,000,000 cubic meters (473,820,000); salt, 472,000 (561,288); potassium salts, 299,000 (261,320); iron ore, 77,000 (284,653); zinc, 82,600 (130,756); pig iron, 190,000 (347,000); raw steel, 530,000 (1,037,000); rolled steel, 370,000 (753,000). Textiles, chemicals, timber, iron, and refined petroleum are the chief manufactured products. In 1932, some 30 refineries produced 541,140 metric tons of petroleum products and 69 sugar refineries 775,600 tons of sugar. The index for yearly average industrial production (Base: 1928 = 100) stood at 69.3 for 1931 and 53.7 for 1932. Employees in industrial establishments of 20 or more workers numbered 622,655 in August, 1933 (507,358 in February, 1933).

FOREIGN TRADE. Polish imports in 1932 were valued at 861,983,000 zlotys (1,468,242,000 zlotys in 1931) and exports at 1,083,802,000 zlotys (1,878,597,000 in 1931), excluding bullion and specie. The surplus of exports over imports was 221,819,000 zlotys in 1932 (410,355,000 in 1931). The United Kingdom and the Irish Free State took 16.4 per cent of the value of all exports in 1932 (16.9 per cent in 1931); Germany, 16.2 per cent (16.8 per cent in 1931); Austria, 8.0 per cent (9.3); Sweden, 5.9 per cent (4.8); and France, 5.7 per cent (5.5). Germany was the chief

source of Polish imports, supplying 20.1 per cent of the total in 1932 (16.8 per cent in 1931), followed by the United States, 12.1 per cent (10.6); United Kingdom, 8.7 (16.9); France, 6.9 per cent (5.5). The chief import items in 1932 were (in 100,000 zlotys, worth \$0.1122 at par): Raw and waste cotton, 86.2; raw wool, 66.0; chemical products, 51.4; foodstuffs and beverages, machinery, tobacco, paper, and manufactures. Leading export items were (in 100,000 zlotys): Coal, coke, and briquets, 218.5; meat and game, 98.3; cereals and flour, 83.6; semi-manufactured wood, 77.3; eggs, 56.6.

Imports for 1933 amounted to 826,994,000 zlotys and exports to 959,643,000 zlotys, leaving a favorable balance of 132,649,000 zlotys. Imports of Poland and Danzig from the United States (1933) were valued at \$15,113,975 (\$7,108,136 in 1932); exports to the United States were \$2,685,564 (\$1,255,848 in 1932).

FINANCE. The Polish fiscal year extends from April 1 to March 31. State revenues and expenditures during the period 1929-30 to 1933-34 are shown in the accompanying table. The figures are final unless otherwise indicated.

POLISH NATIONAL ACCOUNTS

[In millions of zlotys]

	Revenues	Expenditures	Surplus (+) or deficit (-)
1929-30	3,030.7	2,992.7	+ 38.0
1930-31	2,750.4	2,813.9	- 63.5
1931-32 *	2,262.1	2,466.1	- 204.0
1932-33 *	2,001.7	2,243.0	- 242.2
1933-34 *	2,058.9	2,458.0	- 399.1

* Provisional returns. * Estimates.

Excluding a new Polish national loan, the national debt on Oct. 1, 1933, totaled 4,253,100,000 zlotys (3,823,500,000 zlotys of foreign and 429,600,000 zlotys of internal indebtedness). On Dec. 31, 1931, the external debt was 4,569,838,000 zlotys; internal debt, 458,646,000 zlotys. The unit of currency is the zloty (par value, 11.22 cents gold), which exchanged at an average of 11.20 cents in 1931 and 11.18 cents in 1932.

COMMUNICATIONS. On Dec. 31, 1932, Poland had 12,417 miles of railway line (10,976 miles of main line), which during the year 1932 carried 113,521,533 passengers and 48,905,224 metric tons of freight. The new railway line extending 297 miles from Herby-Nowe in Upper Silesia to Gdynia on the Baltic was opened to traffic Mar. 2, 1933. In November, 1933, 250 miles of additional line were under construction. There were some 28,520 miles of highways and 1700 miles of navigable waterways.

The Polish mercantile marine on Jan. 1, 1932 comprised 33 ships of 67,834 gross tons, compared with 51 vessels of 212,890 gross tons registered in Danzig (q.v.). The Polish lines in 1932 carried 1,086,000 metric tons of cargo and 11,795 passengers (exclusive of cruise passengers). In the same year 3610 vessels of 2,831,600 net registered tons entered Gdynia and 3604 vessels of 2,838,600 tons cleared.

GOVERNMENT. The Constitution of Mar. 17, 1921, amended in July, 1926, vested executive power in a president chosen by both houses of the National Assembly for seven years. Legislative power rests in the National Assembly, consisting of the Senate of 111 members and the Lower Chamber (Sejm) of 444 members. Both bodies were elected for five years by general suffrage. The President was authorized to dissolve

the Sejm on advice of the Cabinet, issue decrees with the force of law during dissolution, and to exercise other extensive powers. President in 1933, Ignace Moscicki. The Cabinet at the beginning of 1933 was headed by Alexander Prystor. For changes in 1933, see *History*. The Non-Party Union, or government bloc, which controlled 247 seats in the Sejm and 74 in the Senate, was in turn controlled by Marshal Joseph Pilsudski.

HISTORY

DOMESTIC AFFAIRS. Marshal Pilsudski's dictatorship strengthened its internal position during 1933, despite Opposition hopes that the world economic depression would pave the way for its collapse. The government recognized early in the depression that the major threat to its security was the plight of Polish agriculture, which in 1933 was suffering from a 55 per cent drop in prices since 1929. Accordingly the government's internal policy during the year was concerned mainly with the continuation of its measures to restore the balance between agricultural and industrial prices. Under the laws of Dec. 20, 1932, and Mar. 24, 1933, a series of decrees were issued (on Feb. 6 and June 26, 1933) providing for the reduction of interest or the prolongation of redemption periods of agricultural loans. Extensive government aid and other facilities for lightening the burden of these loans were provided. The government established control of industrial cartels by the law of Mar. 28, 1933, which authorized it to regulate production, prices, and the general conditions of commodity exchange. These powers were used to force reductions in prices of industrial products when they appeared excessive. The Cartel of Cement Industries was dissolved by the Minister of Commerce and Industry during the third quarter of the year on the ground that its prices were out of proportion to the prices of other industrial and agricultural products.

While granting agriculture additional tariff protection in the new customs tariff effective Oct. 11, 1933, the government pursued a resolute deflationary policy with regard to finances and maintained the zloty on a stable gold basis throughout the year. The effort to bring agricultural and industrial prices into closer balance met with some success. The index of retail prices of foodstuffs (Base: 1927 = 100) was 59.5 for December, 1932, 62.4 for June, 1933, and 57.6 for September. The index of retail prices of industrial articles (Base: 1927 = 100) was 83.3 for December, 1932, 75.6 for June, 1933, and 74.4 for September. The state's financial situation was stabilized by the successful internal 120,000,000-zloty 6 per cent loan of September 6, the subscriptions to which totaled more than 327,600,000 zlotys. This loan not only insured budgetary equilibrium for the 1933-34 fiscal year, but enabled the government to close the estimated budget for the ensuing year with but a small deficit. Moreover the general index of national production (Base: 1928 = 100) increased from 49.2 in December, 1932, to 58.8 for September, 1933.

Undeclared in the economic field, the government on December 15 introduced its proposed amendments to the Constitution designed to greatly strengthen the executive powers at the expense of Poland's already badly crippled parliamentary democracy. Marshal Pilsudski's adherents had been at work on the proposals for

constitutional revision for several years. The amendments empowered the President, without the government's consent, to appoint the Premier, the President of the Supreme Court, and the Commander-in-Chief of the Army, to dissolve Parliament, veto legislation passed by Parliament, impeach Cabinet ministers, and to designate his own successor. The Premier was to be responsible only to the President. The lower chamber (Sejm) was to continue as an elective body, chosen by popular vote for five years. But the Senate was to be given equal rights with the Sejm, except in initiating bills; one-third of the 120 members were to be appointed by the President, the remainder being chosen by the holders of military decorations won in Poland's struggle for independence.

These proposals were being considered by Parliament at the end of 1933. They required a two-thirds majority to pass, whereas the government bloc controlled only a bare majority in the Sejm.

Meanwhile, Marshal Pilsudski's candidate, President Ignace Moscicki, had been reelected at the presidential election held in Parliament May 8. He received 333 votes against three votes for a Communist candidate. The bulk of the Opposition refrained from voting. The Cabinet was reorganized on May 10 when Col. Alexander Prystor retired for reasons of health. He was succeeded by Maj. Janusz Jedrzejewicz, who retained practically all of the former Ministers.

The University of Warsaw was closed indefinitely by order of the Ministry of Education on Oct. 27, 1933, following severe rioting between the Nationalist students, who controlled the Students' Brotherhood, and the pro-Pilsudski League of Youth. For the first time firearms were used in the student clashes and five students were seriously injured. On November 10, the Warsaw Agricultural and Technical Schools and the Commercial Academy were closed due to Nationalist attacks upon Jewish students.

FOREIGN RELATIONS. Poland at the beginning of 1933 exhibited a markedly independent attitude toward France, with which it had hitherto maintained close cooperation in foreign policy. The Polish representative, for instance, openly opposed the French plan introduced in the Disarmament Conference. This attitude was inspired by distrust of the Radical Socialist governments in France and fear that the Quai d'Orsay was preparing to abandon Poland in order to reach a settlement with Germany.

The accession of Hitler to the Chancellorship of the Reich, however, increased the tension which long had marked German-Polish relations and threw Poland back into the arms of France. For more than a decade Hitler had been demanding the recovery of the Polish Corridor. On the eve of the Reichstag election of March 5, the Nazis lighted bonfires on the German side of the boundary to symbolize the "burning frontier" to the German electorate. The Poles responded by strengthening their border defenses and landing 100 additional guards at the Polish munitions base in Danzig harbor.

Shortly afterward, on March 19, Premier Mussolini's proposal for a Four-Power pact (see *ITALY* under *History*) aroused new and graver apprehensions in Warsaw. The Poles believed the plan masked an effort to establish Italo-German hegemony of Europe, with British approval, and that the spoliation of Poland would be one of the first results. Foreign Minister Beck of Poland

joined with the Foreign Ministers of the Little Entente in protesting vigorously against the Four-Power pact, while the military authorities of the four powers made arrangements to co-ordinate their activities in anticipation of a possible German attack. Under pressure of its Eastern allies, France insisted on modifications of the pact which satisfied the Little Entente. But two days after the signing of the pact on June 7, Foreign Minister Beck declared that Poland would not acknowledge any decision affecting its interests which was arrived at on the basis of the pact.

That Poland resisted the invitation to join the Little Entente was due largely to the conciliatory policy which Herr Hitler adopted following the Reichstag election. He maintained a reserved attitude toward the crisis in Danzig caused by the introduction of additional Polish troops, in violation of Poland's treaty commitments. Foreign Minister Beck admitted before a special meeting of the League Council on March 14 that Poland's action was illegal. He agreed to the immediate withdrawal of the extra troops, while the Danzig authorities guaranteed the protection of the Polish munitions depot in the Free City. Under instruction from Berlin, Polish-Danzig relations became more cordial following the victory of the Nazis in the Danzig election of May 28.

The Nazi President of the Danzig Senate visited Warsaw in July. He inaugurated negotiations which resulted in the signature on August 5 and September 18 of agreements settling most of the serious disputes between Danzig and Poland. The agreements regulated the use of the port of Danzig by Poles, the rights of Polish citizens in Danzig, and the rivalry between Danzig and the new Polish port of Gdynia. Poland agreed that thereafter 45 per cent of her foreign trade via the Baltic would pass through Danzig and 55 per cent through Gdynia. See DANZIG.

Meanwhile, Hitler had given further evidence in direct negotiations with Poland that he desired friendly relations, temporarily at least. Hitler and the Polish Minister in Berlin conferred on May 3, after which it was announced that both countries intended to act strictly within the framework of existing treaties. A temporary agreement to end the Polish-German tariff war was reached in the middle of October. A month later, following another conference between Chancellor Hitler and the Polish Minister, a communiqué was issued stating that the two countries "in the interest of consolidating peace in Europe, . . . renounce any use of force in their mutual relations." This declaration, regarded as equivalent to an unwritten non-aggression pact, was reiterated by Marshal Pilsudski to the German Minister in Warsaw.

These developments led sections of Polish opinion to hope that Hitler would permanently abandon his demand for revision of the Polish boundary. But these hopes were dimmed toward the end of 1933 by Germany's withdrawal from the League and the Disarmament Conference and by Hitler's demand for an increase in the German army to 300,000.

The rapprochement between the Polish and Soviet governments, inaugurated with the signing of a non-aggression pact in 1932, appeared to have a more substantial basis. There were numerous gestures of friendship during 1933. On September 15, Warsaw and Moscow simultaneously ratified the new non-aggression pact

signed by Poland, the Soviet Union, and six other nations in London on July 3. This pact went beyond the Polish-Soviet pact of 1932 in specifically defining an aggressor. Subsequent developments lent color to the rumor that a Polish-Soviet military understanding in anticipation of a possible war with Germany was in process of negotiation. Poland's military agreement with Rumania, formerly directed mainly at the Soviet Union, was reported to have been revised with a view to the preservation of the territorial status quo as against the anti-treaty powers.

Poland defaulted on the June 15 and December 15 war-debt installments due the United States government during 1933 (see REPARATIONS AND WAR DEBTS). A new Polish-American commercial treaty went into effect June 9, 1933. John F. Cudahy of Wisconsin was appointed Ambassador to Poland by President Roosevelt.

See FRANCE, GERMANY, ITALY, DANZIG, UNION OF SOVIET SOCIALIST REPUBLICS, under *History*; LITTLE ENTENTE. Consult Shepard Stone, "German-Polish Disputes," *Foreign Policy Reports*, July 5, 1933; "The Polish-German Dispute," *Current History*, June, 1933.

POLAR METEOROLOGY. See METEOROLOGY.

POLAR RESEARCH. ANTARCTIC. Interest in polar exploration during 1933 focused chiefly on two expeditions from the United States, headed by Rear-Admiral Richard E. Byrd and Lincoln Ellsworth, respectively, both of which were threading their way through the ice fields fringing the Antarctic continent at the close of the year. The ships of both expeditions were heading for the Bay of Whales on the Ross Sea, from which both leaders planned to explore unknown areas of the continent by airplane. Lincoln Ellsworth, with Bernt Balchen as pilot, planned to make a 3000-mile non-stop flight from the Bay of Whales to the Weddell Sea and return. Many explorers, beginning with Shackleton, had previously attempted to explore this territory because of its scientific interest.

Admiral Byrd's expedition—his second to the Antarctic—consisted of 70 men, including the crews of his two vessels, the *Bear* and the *Jacob Ruppert*. He carried a new twin-engined airplane and hoped to use also the two airplanes which he left behind him at Little America in 1930. The aims of his expedition were to explore, claim and map previously unexplored land areas, particularly the unknown sector east and south of the Edsel Ford Mountains. Scientists of his party were to determine what natural resources were available to man and to study weather and geological formations. The National Geographic Society contributed \$10,000 toward the cost of the expedition, which planned to remain two years in the Antarctic.

The Norwegian explorer, Capt. H. J. Riiser-Larsen, landed on the ice east of Princess Ragnhild Land on Mar. 5, 1933. Equipped with dogs and supplies, he planned to explore by sledge part of the territory included in Ellsworth's objectives. However, he lost his dogs and supplies when the ice broke up unexpectedly. Riiser-Larsen and his two associates, Hallvard Devold and Olav Kjelbotn, were rescued by the whaler *Globe Five* but were forced to abandon their trip. The British research ship *Discovery II*, especially built for scientific observations in the Antarctic, sailed from London in October, 1933, to study habits of the whales and to continue the exploration of the southern oceans.

ARCTIC. The most intensive exploration work in the Arctic in 1933 occurred in Greenland, where studies had been under way for several years as to the feasibility of establishing an air route from Europe to North America via Greenland. The University of Michigan-Pan-American Airways Greenland Expedition, headed by Dr. Ralph L. Belknap, and including Evans Schmeling and Max Demorest, continued its work until November, before returning to the United States via Copenhagen. Headquarters were maintained at Peary Lodge, from which systematic meteorological and aerological observations were made throughout most of the year. The surrounding area was examined geologically and considerable portions of it were mapped. Radio reception was studied and a botanical collection made. About June 11 a station was established at Lat. 74°, 39' N. and Long. 47°, 28' W., near the top of the northern summit of the Greenland ice cap. Dr. Belknap remained at the camp alone until August 19, making meteorological and other observations. Meanwhile similar activities were carried on at Lake Fjord, on the East Coast, 100 miles north of Angmagssalik by members of the British Arctic Air Route Expedition, headed by J. R. Rymil. Meteorological and other observations were made to determine if a large lake at the head of the fjord could be used as an alternative airplane base for the Europe-America route. This work was carried on from the middle of January to the end of August, 1933.

A British and a French scientific expedition reached Greenland on the *Pourquoi Pas?* August 1. The British group, known as the Cambridge Zoological Expedition, included G. C. L. Bertram, D. L. Lack and B. B. Roberts. They left the ship at Jameson Land, East Greenland, and spent the remainder of the summer studying the land and fresh-water animals in the country around Hurry Inlet. The French scientists sailed on to Milne Land at the head of Scoresby Sound, where important geological studies were made, and then evacuated the Polar Year Expedition which had been working at Rosenvinge Bay since August, 1932.

During the winter of 1932-33 scientists of many nations maintained observation posts in polar regions for the study of magnetic, meteorological and geophysical phenomena (see 1932 YEAR BOOK). Several such stations on Greenland were evacuated during the summer of 1933. Dr. Lauge Koch, the Danish explorer, spent another summer exploring the East Greenland coast from Scoresby Sound north, using the steamer *Godthaab* and an airplane. Returning to Copenhagen September 25, he reported the discovery of the longest and deepest fjord in the world, with a length of nearly 200 miles and a depth of more than 4500 feet. From the air Dr. Koch saw what appeared to be new land between Greenland and Svalbard (Spitzbergen). He collected some 2000 fossilized specimens of fish and four-legged stegoccephali.

Eighteen members of the Oxford University Arctic Expedition, divided into four groups, spent 11 weeks in Svalbard (Spitzbergen) during the summer of 1933. They surveyed the Treurenberg and Wijde Bay regions, the main peak of the Chydenius Mountains, and the interior and east of northern New Friesland, besides making a topographical and geological survey of about 400 square miles of Dickson Land. Data on marine biology and ornithology were collected. Capt.

Robert Bartlett and Arthur J. Norcross made another trip to the Canadian Arctic on the schooner *Morrissey*. Sailing north through Hudson Strait and Fox Channel they attempted to pass through Fury-and-Hecla Strait but were balked by pack ice.

The Soviet government continued its vigorous efforts to open up the northern regions of the Union and a number of expeditions were in the field. The commercial ship *Chelyuskin* completed during the 1933 season the trip from Archangel to Vladivostok. The first vessel to make this trip in one season was the icebreaker *Sibirskov*, in 1932. Several other freighters were conveyed by icebreakers as far east as the mouth of the Lena River, carrying provisions for newly established settlements in Northern Siberia. A number of Soviet geological and meteorological expeditions were in the field. See EXPLORATION.

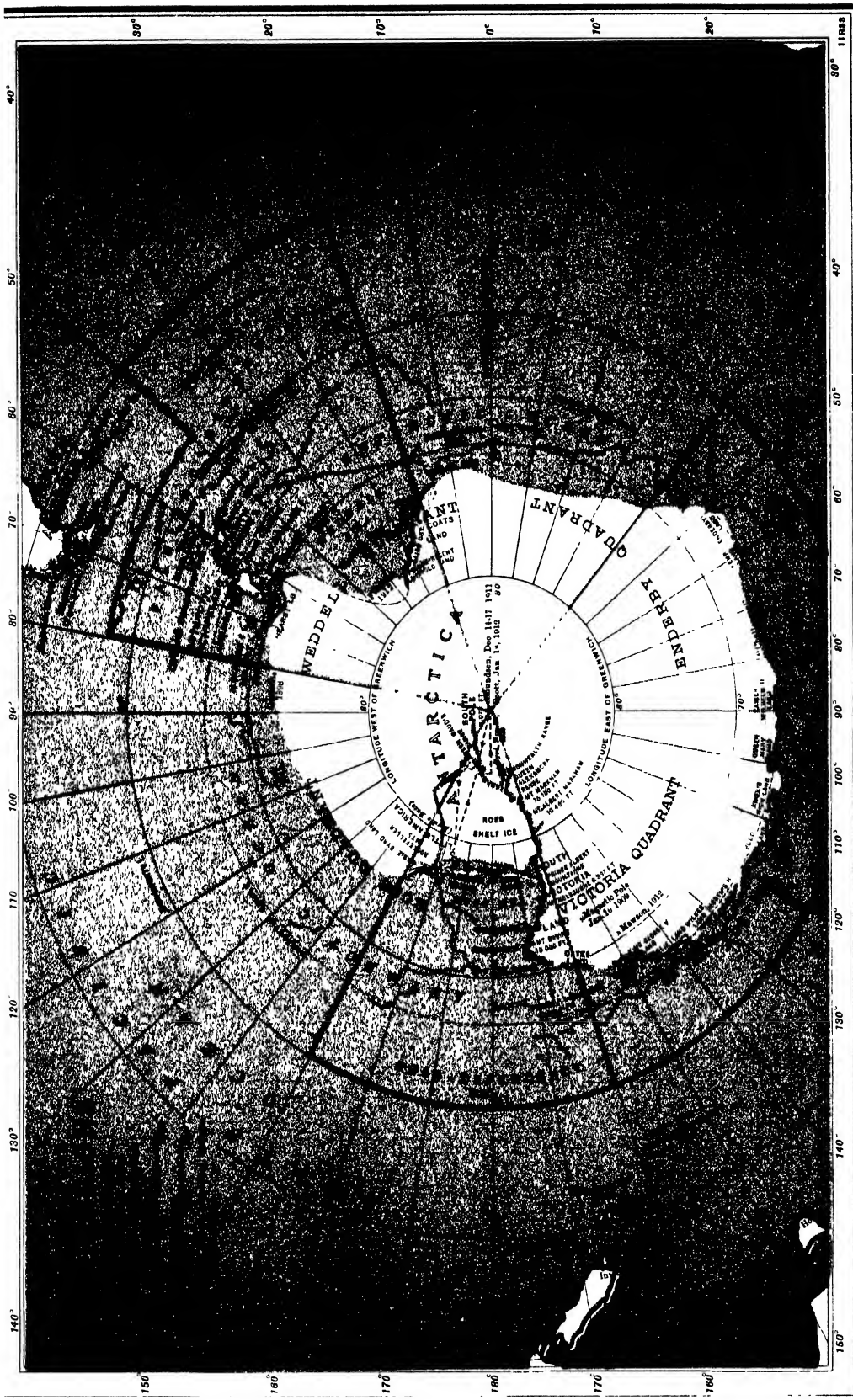
POLISH CORRIDOR. See DANZIG, POLAND, and GERMANY under *History*.

POLITICAL AND SOCIAL SCIENCE, THE AMERICAN ACADEMY OF. A national forum for the discussion of political and social questions, founded in Philadelphia in 1889 and incorporated in 1891. The organization does not take sides upon controverted questions, but seeks to secure and present reliable information to assist the public in forming an intelligent and accurate opinion. The thirty-seventh annual meeting, held Apr. 7-8, 1933, considered the general subject "American Policy in the Pacific." A meeting held on Nov. 22, 1933, dealt with the general topic "The Monetary Policy of the United States." The *Annals* is issued bimonthly as the official organ of the Academy, each publication being devoted to a study of a particular topic of economic, political, or social importance. In 1933, the following topics were considered: Essentials for Prosperity; The International Labor Organization; The Administration of Justice; American Policy in the Pacific; The Crisis of Democracy; and Social Insurance. The Academy has established a monograph series, the first of which was a study on Private Police, with special reference to Pennsylvania, prepared by J. P. Shalloo and published in November, 1933. The officers in 1933 were: president, Ernest Minor Patterson; secretary, J. P. Lichtenberger; treasurer, Charles J. Rhoads; and vice-presidents, the Hon. Herbert Hoover, Carl Kelsey, and Charles G. Haines. Headquarters are at 3457 Walnut Street, Philadelphia, Pa.

POLITICAL ECONOMY. Subjects in the field of applied economics are treated in this volume under the following heads: BANKS AND BANKING; BUSINESS REVIEW; FINANCIAL REVIEW; CHILD LABOR; COÖPERATION; LABOR ARBITRATION AND CONCILIATION; LABOR LEGISLATION; MATERNITY PROTECTION; MINIMUM WAGE; OLD AGE PENSIONS; STRIKES AND LOCKOUTS; UNEMPLOYMENT; WOMEN IN INDUSTRY; WORKMEN'S COMPENSATION. See also such articles as: CHILD WELFARE; LABOR, AMERICAN FEDERATION OF; STATISTICS; SOCIALISM; TRADE UNIONS; WELFARE WORK. See also the article on AGRICULTURE and the various crops. Further discussions are to be found in articles on the several industries, minerals, public utilities, etc. Books on political science and economics for the general reader are to be found listed in the article LITERATURE, ENGLISH AND AMERICAN, under *Economics and Politics*.

POLITICAL SCIENCE, ACADEMY OF. An international learned society for advancing the political sciences and their application to political,





economic, and social problems, founded in 1880 in New York City and incorporated in 1910. Its membership on Dec. 31, 1933, numbered 6340, of whom eight were honorary members, 224 life members, 4932 individual members, and 1176 subscribing members, chiefly libraries and organizations. At the semi-annual meeting on April 28 in New York City "Tariffs and Trade Barriers" was discussed. At the fifty-third annual meeting on November 8 the topic under discussion was "Current Problems of Unemployment and Recovery Measures in Operation." A special meeting in honor of George Bernard Shaw was held at the Metropolitan Opera House, New York City, April 11. The officers for 1933 were: Alanson B. Houghton, president; Albert Shaw, Jackson E. Reynolds, and R. C. McCrea, vice-presidents; Parker T. Moon, secretary and editor of publications; George A. Plimpton, treasurer; and Miss Ethel Warner, director and assistant treasurer. Headquarters are in Fayerweather Hall, Columbia University, New York City.

POLITICS, INSTITUTE OF. See PUBLIC AFFAIRS, INSTITUTE OF.

POLO. In the absence of an international series with England, usually held every three years, but not held in 1933 because of financial reasons, 1933 instituted a new event, the most important occurrence in polo in modern years, the East-West matches. At a fiercely fought series at the Onwentsia Club in Chicago, Western polo usurped national supremacy by outriding the Eastern representatives in two of the three games. The three games, rough and sparkling, have not been excelled for excitement and hard, fast playing in this country since the close of the war. The significance of the Western victory was to prove that the sport has become truly nationalized and to foster the recognition of the American-bred polo mounts as the equal of the foreign bred horses. The winning Western team was composed of Cecil Smith, Elmer Boeseke, Eric Pedley, H. W. (Rube) Williams and Aidan Roark. The losing Easterners were Thomas Hitchcock, Jr., Winston Guest, Michael Phipps, Earl A. S. Hopping, and Raymond Guest. The West took the first game, 15 to 11; the East the second, 12 to 8; and the West the rubber game, 12 to 6. In the first and third games the American-bred mounts of the Westerners showed marked supremacy over the South American and English-bred mounts of the Eastern players.

Pedley, No. 1 on the United States international four in 1930, flew from Los Angeles to Chicago to take his place in the Western line-up for the third game, after Williams's leg had been broken in the second game. Hopping replaced Phipps in the Eastern line-up after the first game. The series developed an unusual amount of rough play, twenty-five fouls being called against the East in the three games and fifteen against the West. Williams, Hitchcock, Smith, and Boeseke all had bad falls and Williams and Hitchcock were seriously injured, Hitchcock's injury keeping him out of the game for the rest of the season. All of the Western players showed remarkable ability but the play of Smith and Boeseke was outstanding, Smith at times reaching heights which no player has gone beyond. It was almost a certainty that these two players would be placed on a par with Hitchcock as the ten-goal players of the world when the United States Polo Association handicap committee met in January.

Boeseke also dominated the season after the

Chicago series, riding on the Aurora team, winner of both the open championship and the Monty Waterbury Memorial Cup, leading handicap event. Playing with Boeseke were Seymour Knox, Elbridge T. Gerry, and James P. Mills. Gerry and Mills also were on the winning team in the junior championship tournament, riding with W. Averell Harriman and Robert Gerry on the winning Aknusti four. Princeton's team of J. L. Kemmerer, M. S. Kemmerer, W. H. Sullivan, and Raymond Firestone captured the intercollegiate title in June at the Westchester Country Club, defeating Harvard in the final, 10 to 9.

The sensation of polo abroad was the victorious invasion of England by the team from India led by the Maharajah of Jaipur. This splendidly mounted team carried off all six of England's major trophies.

In view of the Western conquest at Chicago, the National Polo Pony Society show in the fall had a special class for American-breds, won by Applesauce, bred by W. Averell Harriman at his Arden, N. Y. farm. Fairy Story, Stephen Sanford's English-bred, won top honors in the show, with Boeseke's American-bred Red Ace as reserve winner.

The national indoor polo championships were contested in Chicago, the opening sports event of the crowded Chicago season. The Optimists, with Winston Guest, Stewart Iglehart, and Michael Phipps, won the open championship, and with Harvey Shaffer riding in Iglehart's place took Class A honors. The Class B title went to the Chicago Riding Club team of J. H. Hannah, Arthur Lorber, and Frank Bering. The 112th Field Artillery team of Orange, N. J., took the Class C laurels with Captain Frank McGowan, Lt. J. T. Wilson, and Captain A. P. Moore in the line-up. The Cleveland Riding Club with J. P. Graham, A. J. O'Neill, and J. Evinger won in Class D. Harvard's riders defeated West Point, 10½ to 1 in the intercollegiate final and Culver Military Academy won in the interscholastic ranks.

PONAPÉ. See CAROLINE ISLANDS.

PONDICHÉRY. See FRENCH INDIA.

PONS, LILY. See MUSIC.

PONTINE MARSHES. See RECLAMATION.

POPULATION. See each country under *Area and Population*.

PORTER, HOLBROOK FITZ-JOHN. An American mechanical engineer, died Jan. 25, 1933, in New York City where he was born Feb. 28, 1858. On his graduation from Lehigh University in 1878 he began his career as draftsman with the Delamater Iron Works in New York City. Four years later he entered the employ of the New Jersey Steel and Iron Co. in Trenton as an assistant engineer. In connection with the construction of Columbia University's new buildings on Morningside Heights in New York City he held the posts of engineer from 1884 to 1886 and superintendent of buildings and grounds from 1886 to 1890. In 1891 he was appointed assistant mechanical engineer in preparation for the World's Columbian Exposition in Chicago and while the fair was in progress during 1893-94 acted as assistant chief of the machinery department.

On becoming connected with the Bethlehem Steel Co. in 1894 Mr. Porter served successively during the next seven years as its Western representative in Chicago and as its Eastern representative in New York City. He was vice-president and general manager for the Westinghouse Nernst

Lamp Co. in Pittsburgh during 1902-05, and then entered on a consulting practice as industrial engineer in New York City, specializing in installing safety and hygienic measures in industrial establishments and in introducing scientific management based on better coöperation between employer and employees. In 1912 he was commissioned by the Russell Sage Foundation to make a survey of industrial hygienic conditions in Pittsburgh. After the tragic Triangle factory fire in New York City he served as an expert during 1912-14 to the New York State Factory Investigating Commission on Fire Hazards and was said to have devised the "fire wall," the first practical means of aiding bedridden hospital patients to escape. He installed fire prevention measures in city hospitals in New York City. During the World War he was retained by the Hercules Powder Co. of Wilmington, Del., as consulting engineer on employment management at its several plants.

Mr. Porter founded the Efficiency Society in 1911 and served as its first secretary. After 1918 he was secretary of the National Museum of Engineering and Industry, whose plans at the time of his death envisaged the construction in Washington, under the direction of the Smithsonian Institution, of a museum similar to the German Museum of Natural and Technical Sciences in Munich, tracing the progress of practical science. Such institutions as the Museums of Science and Industry of New York and Chicago and the Franklin Institute Museum in Philadelphia were to serve as branch museums.

PORTS AND HARBORS. Probably the outstanding American work of this type undertaken during the year was the great pier construction on the North River at New York City. These piers are sufficient in size to accommodate the largest ocean liners, as they are 1200 feet long and have a depth of 46 feet in the slips. While there is nothing unusual in their design, their construction involved a difficult piece of rock excavation and cofferdam work which is described under FOUNDATIONS.

During the year U. S. Army engineers, who are responsible for most of the river and harbor work in the United States, continued dredging operations in the channels maintained through the shoal water at the outside entrance to New York Harbor. The Ambrose Channel will, of course, have to be extended in order to accommodate such great vessels as the new French liner *Normandie* of 75,000 tons and the new British Cunarder of 73,000 tons.

Several interesting port developments were under way abroad, particularly in England and France.

SOUTHAMPTON DOCKS. King George opened the great dry dock at Southampton (see previous YEAR BOOKS) on July 26. At that time the work was not fully completed and it was not until August that the great sliding caisson gate, which closes the dock entrance, was put in position.

This construction, which was begun in May, 1931, was planned primarily to accommodate the Cunard liner *Princess Elizabeth* of 73,000 tons, then building at Clydebank. The French liner *Normandie* of 75,000 tons was rapidly nearing completion and another great dry dock, built to accommodate this vessel, was opened at St. Nazaire in 1932. The Southampton Dock, however, is the longest dry dock in the world (1200 feet) while that at St. Nazaire has the greatest entrance width and the great dock at Le Havre, opened in

1927, due to the high tidal range, can afford the greatest depth over its sill and blocks.

The other great work at Southampton—the new 1½ mile long deep-water quay—was also nearing completion. The last great monolith for the wall was sunk in July and the last section of the quay wall was under construction. In fact the great German liner *Bremen* docked at this new quay on May 14; the first great ship to make use of the new structure.

ELDERSLIE DOCK. While the new graving dock at Elderslie on the Clyde, opened in January, is not of outstanding size (length 620 ft., width at entrance 85 ft., depth over sill, 28 ft.) the type of entrance gate adopted is of unusual interest. It is a "box" flap gate turning about a hinge at sill level and was the subject of a special article in the February 17 issue of *The Engineer* (London).

DUNKIRK. Among the many French harbor and port improvements of recent years the jetty construction at Dunkirk stirs up memories of the great French engineer of Louis XIV, the famous Vauban. Vauban made this unpromising site into a great naval base by the construction of jetties, probably the first great work of this kind in the world, which, however, were destroyed under the treaty with the British in 1712. To-day, Dunkirk has become the third great port of France, exceeded only by Rouen and Marseilles, and French engineers have been adding to and improving the jetty system which now maintains an entrance through the shallow sandy shore.

MARSEILLES. Progress on the great deep-water basin, the Bassin du Pharo, is proceeding slowly but steadily. The great breakwater, over a mile in length, which protects the basin has been constructed in part up to sea level. The more northerly Bassin Mirabeau, with the extension of its breakwater into water about 100 feet deep, is also under way. Finally, the development of the Etang de Berre, the great inland deep-water lake northwest of Marseilles, into another basin is also under way. A large connection now exists with the lake by means of the Rove tunnel, but a navigable entrance from the Gulf of Fos is proposed.

PORTUGAL. A republic in southwestern Europe. Capital, Lisbon.

AREA AND POPULATION. Portugal has an area of 35,880 square miles (34,604 on the continent and 1276 in the Azores and Madeira). The population, estimated at 6,760,000 in 1932, totaled 6,660,852 at the census of 1930. In 1932 living births numbered 208,062; deaths, 118,895; marriages, 45,388. Birth and death rates per 1000 of population were 30.8 and 17.6, respectively. The chief cities, with 1930 populations, were: Lisbon (Lisboa), 594,390; Oporto (Pôrto), 232,280; Coimbra, 27,313; Braga, 26,962. School attendance in 1930-31 was: Primary, 422,624; secondary, 15,847; university, 5641. There were 4,277,341 persons unable to read or write in 1920.

PRODUCTION. Agriculture is the primary and mining and manufacturing the secondary industries. Of continental Portugal about 59 per cent was under cultivation in 1933, 20 per cent under meadows, 16 per cent uncultivated but cultivable land, and 5 per cent waste. The chief crops in 1932 (thousands of bushels, except as specified), with 1931 figures in parentheses, were: Wheat, 18,138 (12,999); rye, 6411 (5070); barley, 2398 (2025); oats, 7355 (5331); corn, 15,976 (17,543); potatoes (1931), 22,216; wine (seasons of 1932-33 and 1931-32, in gallons), 158,502 (198,341); olive oil (in 1932-33 and 1931-32, gal-

lons), 9549 (19,763). Cork production was 80,000 metric tons in 1932 (74,288 in 1931).

The 1932 mineral production, in metric tons (1931 figures in parentheses), was: Coal, 257,930 (227,000); iron pyrites, 237,846 (280,176); wolframite (tungsten ore), 258 (249); cement, 120,920 (94,829). Industrial production in 1932 (1931 figures in parentheses) was: Paper, 12,364 tons (8769); cotton (net imports), 47,139,000 pounds (32,597,000); pairs of shoes, 146,543 (143,345). About 5 per cent of the population was engaged in manufacturing industries.

COMMERCE. Portuguese imports in 1932 were valued at 1,759,667,000 escudos (\$56,309,000), against 1,727,956,000 escudos (\$73,265,000) in 1931. Exports amounted to 788,113,000 escudos (\$25,220,000), as compared with 811,730,000 escudos (\$34,417,000) in 1931. (Conversions were made at average gold exchange rates—\$0.0424 in 1931 and \$0.0320 in 1932; the 1933 average was \$0.0305.) Leading 1932 imports were machinery, instruments, tools, \$4,020,000; raw cotton, \$3,994,000; coal, coke, and briquets, \$3,543,000; codfish, \$3,505,000; and heavy iron and steel, \$3,412,000. The chief export items were: Port wine, \$5,387,000; canned sardines, \$4,903,000; cork, \$2,936,000; and cotton fabrics, \$1,201,000. The United Kingdom supplied 24.5 per cent of the 1932 imports; United States, 14.4; Germany, 12.7; and Portuguese colonies, 10.8. The percentage distribution of exports was: United Kingdom, 20.7; France, 15.9; Portuguese colonies, 13.9; Germany, 0.6.

Trade with the United States (1933) was: Imports, \$5,808,699; exports, \$3,368,013.

FINANCE. Revenues of the Portuguese government for the fiscal year ended June 30, 1933, totaled 2,031,000,000 escudos and expenditures were 1,948,000,000 escudos.

The revenues included about 87,000,000 escudos derived from loans, leaving a deficit of about 6,000,000 escudos. For 1931-32 the results were: Revenue, 2,007,000,000 escudos; expenditures, 1,857,000,000 escudos; surplus, 150,000,000 escudos. The 1931-32 receipts included loan funds of about 107,000,000 escudos, the actual surplus being 43,000,000 escudos.

The total public debt on June 30, 1931, was equivalent to \$462,799,000. During the five years ended June 30, 1933, the total net debt was reduced by over 250,000,000 escudos. The consolidated debt during this period increased by 1,637,000,000 escudos, but the net floating debt was reduced from 2,046,000,000 escudos to 157,000,000 escudos.

COMMUNICATIONS. Portugal in 1931 had 2128 miles of railway line (824 miles state-owned), all operated by a private company. In 1931 the lines carried 23,577,990 passengers and 3,864,722 tons of freight. Highways extended about 9940 miles. The merchant marine (1931) consisted of 261 vessels of 276,357 tons (excluding vessels under 100 tons). In 1932, 5141 vessels of 15,582,000 gross tons entered the ports in the coastal and international trade; clearances, 5059 vessels of 15,528,000 tons.

GOVERNMENT. A dictatorship was established by Gen. Antonio O. de Fragoao Carmona in 1926. Parliament was closed indefinitely and the government was administered by a military-civilian directorate. General Carmona was elected President Nov. 29, 1926, was reelected without opposition Mar. 25, 1928, and in 1932 his term of office was extended by decree for two more years. A new Constitution was adopted Mar. 19, 1933 (see *History*). Prime Minister and Minister of Finance

in the Cabinet formed July 5, 1932, Dr. Antonio de Oliveira Salazar.

HISTORY

The new constitution designed to replace the dictatorship, which had been published in draft form May 28, 1932, was adopted at a popular referendum held Mar. 19, 1933. The government announced that some 60 per cent of the eligible electorate favored the new constitution, while only 5 per cent opposed it. Thus 35 per cent failed to vote. The Opposition forces had previously announced that they would boycott the polls, but the President decreed that all persons on the eligible list who failed to vote would be recorded as voting for the Constitution.

The Constitution provided for the election by the voters of a President, authorized to select and dismiss the Cabinet, which was not responsible to the Legislature. It gave the Prime Minister powers inferior only to those of the President. The Legislature consisted of a single Chamber of 90 Deputies, half elected and half appointed by local bodies. The Chamber was to meet three months each year and its acts were subject to executive review. The franchise was restricted to "educated heads of families" (male or female). Strikes and lockouts were forbidden and arbitration was recognized as the orthodox method for settling international disputes.

When the new Constitution went into effect Apr. 12, 1933, the Cabinet was reorganized, with but few changes. Oliveira Salazar retained the Premiership and Finance portfolio. On October 20, the government announced that it had elaborated machinery for the establishment of a corporative state. The system outlined was a combination of the Italian Fascist and British parliamentary systems. Besides the President, Cabinet and National Assembly, it called for an advisory Council of State, a Corporative Chamber, and corporative courts of justice. In November six decrees were issued, putting the corporative system into effect in both the economic and political fields (*New York Times*, Dec. 3, 1933).

Behind these constitutional forms, the dictatorship remained all-powerful. Criticism of the proposed Constitution led to the removal of Gen. Vicente Treitas, former Prime Minister, as president of the Municipal Chamber of Lisbon in February. A revolutionary outbreak, scheduled for November 20, was frustrated by the arrest of Col. Sarmento Beires and other officers.

The bulk of the Portuguese people were reported to be content with the material results achieved by the dictatorship. The country was relatively prosperous, with but 18,000 unemployed reported in November, 1933. Despite an extensive programme of public works, the budget had shown repeated surpluses and the floating debt had been reduced. The government announced in 1933 that after July 1 all Treasury bills would be redeemed as they fell due and no new ones would be issued.

The Portuguese were excited during the year by repeated rumors that the powers were discussing the distribution of their colonial empire, which was the third largest in the world, in order to appease German and Italian demands for colonial outlets. British officials denied that they had discussed the matter. Nevertheless the Portuguese took steps to consolidate their hold on the colonies. A conference of all colonial governors and high commissioners was held in Lisbon early in the summer, with this end in view.

PORTUGUESE EAST AFRICA. See MOZAMBIQUE.

PORTUGUESE GUINEA, gin'1. A colony of Portugal on the west coast of Africa, entirely surrounded on the land side by French territory. It includes the archipelago of Bijagoz, together with the island Bolama in which is situated the capital Bolama (4000 inhabitants). Area, 13,944 square miles; population (1930), 364,929. For 1932-33 revenue was estimated at 21,583,863 escudos; expenditure at 21,417,962. The chief port is Bissac, with 1000 inhabitants. Governor in 1933, J. F. Vellez Caroco.

PORTUGUESE WEST AFRICA. See ANGOLA.

POSITRON. See PHYSICS; CHEMISTRY.

POST, WILEY. See AERONAUTICS.

POTASH. See FERTILIZERS.

POTATOES. The 1933 potato production of 26 countries reporting to the International Institute of Agriculture, not including the crop in the Soviet Republics, was estimated at 5,011,149,000 bushels, a decrease of 7.7 per cent from the preceding year's production and .6 per cent below the annual average yield for the five years 1927-1931. The area devoted to the crop by these countries, 29,361,000 acres, was only .8 per cent below the acreage of the preceding year and 3 per cent above the five-year average. The production of the leading European potato-growing countries was reported as follows: Germany 1,602,937,000 bushels, Poland 1,036,155,000 bushels, France 552,040,000 bushels, Czechoslovakia 294,024,000 bushels, and Spain 152,348,000 bushels. The Soviet Republics reported an average annual yield of over 1,650,000,000 bushels and an average annual area of more than 13,650,000 acres for the five years 1926-1930. The production of Canada in 1933 was estimated at 69,237,000 bushels which was 12.4 per cent below the average annual production for the five years 1927-1931.

The potato crop of the United States in 1933 was estimated by the Department of Agriculture at 317,143,000 bushels produced on 3,184,000 acres at an average yield of 99.6 bushels per acre. The production in 1933 was 40,866,000 bushels less and the acreage 197,000 acres smaller than in 1932. The average farm price per bushel on Dec. 1, 1933, was 70.2 cents per bushel making the total farm value of the crop \$222,667,000 as compared with \$126,264,000 the year before when the crop amounted to 358,009,000 bushels and the corresponding price per bushel was only 35.3 cents. The production of the 30 States producing the late maturing crop was placed at 258,491,000 bushels and of these the 18 States producing a surplus was assigned a yield of 229,175,000 bushels. The intermediate crop produced in 7 States was estimated at 28,345,000 and the early crop of 11 States at 30,307,000 bushels. The late potato crop was about 21,000,000 bushels and the intermediate crop about 7,000,000 bushels smaller than in 1932 while the early crop was slightly larger. The States ranking first in production and their yields were reported as follows: Maine 42,000,000 bushels, New York 24,600,000 bushels, Michigan 20,670,000 bushels, Idaho 19,504,000 bushels, and Wisconsin 16,730,000 bushels. These States, all growing late potatoes, produced over 52 per cent of the country's total yield.

The certified seed potato production was estimated at 8,737,297 bushels, larger by 1,816,500 bushels than the preceding crop and the largest production since 1928. The production in Maine

of 3,852,796 bushels was 32 per cent above the yield in 1932 and constituted about 44 per cent of the total certified seed potato production of the country. North Dakota, Minnesota, Nebraska, and Colorado ranked next to Maine in yield.

During the fiscal year ended June 30, 1933, the United States exported 973,000 bushels and imported 26,408,000 pounds of potatoes, comparing respectively with 816,000 bushels and 89,577,000 pounds in the preceding fiscal year. A study conducted at Greeley, Colorado, by the Colorado Experiment Station in conjunction with the Department of Agriculture showed that tubers going into storage uninjured had a much better keeping quality than bruised tubers.

POULTRY. See LIVESTOCK.

POWER DEVELOPMENT. See POWER PLANTS; STEAM TURBINES; WATER POWER.

POWER PLANTS. According to the five-year census of the Electric Light and Power Industry, the compilation of which was recently released by the United States Census Bureau, the total number of private power companies reporting declined from 2137 in 1927 to 1627 in 1932, a reduction of 23.9 per cent. During the same period the number of municipal plants decreased from 2198 to 1802. This decline was due largely to consolidations of private companies and to municipal plants acquired by private systems.

During these five years the total generating capacity, according to Census figures,* increased from 25,811,305 kilowatts to 34,624,068 kilowatts, an increase of 34.1 per cent. The corresponding outputs of electricity were 74,686,378,919 kilowatt-hours in 1927 and 79,657,431,657 kilowatt-hours in 1932. The latter figure represents a marked recession from the peak year of 1929 in which the output was over 92 billion kilowatt-hours.

Statistics compiled by the Edison Electric Institute (which is the successor to the National Electric Light Association), indicate the capacity of private utility generating stations in the United States to be 33,517,300 kilowatts,* divided into steam, 24,053,000 kilowatts, water power, 9,002,800 kilowatts and internal combustion engines, 460,600 kilowatts. The total kilowatt-hours produced by central stations in 1933 was approximately 79 billion kilowatt-hours.

The central-station load reached a low level in the spring of 1933, took a decided spurt during the summer months, and receded to some extent during the fall. The large decline of industrial load that occurred in 1932 was partly recovered and there was a substantial increase in domestic load, despite a reduction in electric rates in many localities. The gross revenue of the central-station industry was approximately \$1,917,000,000, or about 3.2 per cent under that of 1932.

Lack of activity in new power-plant construction during the past two years has afforded central-station engineers an opportunity to study design and operation with a view toward the attainment of still better efficiency, refinements in layout and reduced construction costs; all of which are likely to be embodied in such plants as are built in the near future. Due to increased reliability of equipment, the unit arrangement of one boiler per turbine is gaining favor and one large station now under construction, the

* The Census figures and those of the Edison Electric Institute are not in full agreement as the former includes some large industrials that sell power for public use. Also the reports are not strictly coincident.

Port Washington Station of the Milwaukee Electric Railway, Light & Power Company, will employ this idea. While 1200 to 1400 pounds steam pressure for base-load stations, employing reheat between the high- and the low-pressure elements of the turbine, still has many adherents, there is a noticeable trend toward medium pressures, 600 to 750 pounds, and high steam temperatures, without incurring the expense and complication of reheat equipment. The average pounds of coal per kilowatt-hour for 1933 was 1.45 which, compared with 3.2 pounds for 1919, reflects the steady improvement in power-plant efficiency during the past fourteen years. It is estimated that the utmost possibilities of the steam cycle are between 10 and 15 per cent better than is now being obtained in the most efficient stations.

Inasmuch as the Census of Manufacturers is not coincident with the Census of the Electric Light and Power Industry, no late figures are available concerning industrial power. The last published statistics showed over 19 million horsepower of generating capacity installed in industrial plants in the United States. There is a trend toward private generation of power in those large industrial plants that have considerable need for process steam. Such plants are employing higher steam pressures, 400 to 600 pounds, and generating power as a by-product in turbines exhausting to process. While the exchange of surplus power between large industrials and central stations has found relatively few such applications, the plan appears to have received new impetus in recent discussions among engineers. So many factors are involved, however, that each case presents an individual problem and no generalizations can be applied.

During the past year there has been some reaction toward the private generation of power in hotels, department stores, and office buildings. Also, loans to municipalities by the Public Works Administration will probably lead to a small increase in the number of municipal power plants, chiefly in small towns. Several of the large projects to be undertaken with Federal funds are water-power developments in the West in localities where it may require a number of years to absorb the available power.

An important project in the field of power supply was the formation of the Tennessee Valley Authority (see section on WATER POWER) which, as a part of its plan for developing that section of the South, proposes to make Muscle Shoals power available over a large area at low rates. To this end it has already started construction on the Norris Dam and the Joe Wheeler Dam, which will supplement the power already available at Wilson Dam to a total of over 600,000 horsepower. This venture of the government into the power business is arousing widespread attention and the results are likely to have a dominant effect on the much-discussed question of private versus public supply of power.

Only one important central station went into service during the year. This was the Buzzard Point Station of the Potomac Electric Power Company at Washington, D. C. This station has an initial capacity of 35,000 kilowatts, uses steam at 650 pounds and 825° F., and embodies many refinements such as slag-tap furnaces, fly-ash recovery and special provision against oil fires in the turbine room. From the start this station has shown exceptionally high economy with an overall performance of 12,200 B.t.u. per kilowatt-

hour. As the equipment becomes tuned up, it is anticipated that this figure will be bettered.

Some new units were added to existing stations during 1933 and the Detroit Edison Company is engaged in rebuilding its Connors Creek Station to incorporate higher steam pressures, larger boilers and larger turbines. While present capacity of the central-station industry appears ample for the immediate future, a return to normalcy will necessitate the modernization of many present plants and the construction of some new ones. The collapse of the financial structures of many holding companies has retarded the financing of new construction.

Several new central heating plants were put into service, notably, that supplying the group of new government buildings in Washington, and others in Chicago, Cincinnati, and Duluth.

The mercury-steam plants at the Schenectady Works of the General Electric Company and at the Kearny Station of the Public Service Electric and Gas Company of New Jersey, both went into operation during the year. Heat rates of around 10,000 B.t.u. per kilowatt-hour are anticipated. One advantage of the mercury-steam combination is that it can produce about twice the quantity of by-product steam for the same power output as a high-pressure turbine operating on the steam cycle alone.

In a paper presented at the Annual Meeting of the American Society of Mechanical Engineers, P. W. Thompson and C. T. VanDuzen reported on experiences with the 1000° F. steam installation at the Delray station of the Detroit Edison Company. Aside from a few minor troubles, all of which have been overcome, this high-temperature unit presents no greater operating problem than would a unit employing the usual temperatures of 750 to 825° F. In fact, this unit has operated for long periods at 1100°. The alloy steels necessary in the construction of the turbine and the piping and fittings make it considerably more expensive in first cost than a unit designed to operate at a lower steam temperature. Because of this it was the authors' conclusion that such high-temperature units would hardly be justified until advances in production practice brought down the cost of such alloy steels.

In the industrial field a small number of new plants were installed and a larger number modernized. Toward the end of the year several large industrials placed orders for new power equipment, which may be taken as indicative of renewed activity in the field for 1934.

A considerable number of plants, both industrial and central-station, changed from coal to oil as fuel to take advantage of the low fuel-oil prices prevailing early in the year. With prospects of increased prices for both oil and coal as a result of the NRA Codes, it is likely the new year will see greater attention given to the efficient generation of steam and power, which will probably result in considerable modernization of fuel-burning equipment.

Lack of funds somewhat restricted research in various branches of the field, although investigations of alloy steels, feedwater studies and certain phases of pulverized-coal burning were carried forward. Experiments were also carried on, at West Burlington, N. J., with wind power employing the now well-known "Fletner Effect" by which Fletner, a few years back, propelled a ship across the Atlantic. Credit for application of the

idea to the generation of stationary power is due Doctor Madaras who, with the backing of several utility companies, has erected a 90-foot, 28-foot diameter experimental tower of duraluminum rotated by an electric motor, for the purpose of studying wind effects. The idea calls for a number of such towers, each mounted on a truck, and all of which would travel on a circular track. They would be connected electrically and the varying power generated by each tower in its travel around the track would feed into a central point. The experiments are said to be progressing favorably, although no results in the form of data have yet been given out.

In England two or three stations neared completion and in May construction was started on the new Sir John North Power Station of the Swansea Corporation. This will contain four 625-pound, 850° boilers, burning pulverized coal, and supplying 60,000 kilowatts in generating capacity. Like most new British stations, it will be provided with a complete dust-recovery system. The ultimate capacity will be 240,000 kilowatts.

An event of international importance to the field was the Sectional Meeting of the World Power Conference, held at Stockholm, Sweden, in June at which 170 papers were presented by delegates and engineers from all over the world. Another notable gathering was the joint Engineering Congress held the same month in Chicago.

PRAIRIE PROVINCES. The name applied to the three Canadian Provinces of Manitoba, Saskatchewan, and Alberta. Population (1931 census), 2,353,529. See CANADA.

PRATT INSTITUTE. A nonsectarian educational institution in Brooklyn, N. Y., founded in 1887 and composed of four schools: Fine and applied arts, household science and arts, science and technology, and library science. The 1933 autumn enrollment amounted to a total of 4126. There were 181 members on the faculty and 12 special lecturers. The library contained 145,000 volumes. President, Frederic B. Pratt, A.M., LL.D.

PRESBYTERIAN CHURCH. The Presbyterian Church, with the Reformed churches, rests on features of the Reformation brought forward by Zwingli and Calvin. It consists of bodies in the United States, the British Isles, and elsewhere, following the doctrinal and ecclesiastical system developed in Holland and France and more fully in Scotland under John Knox. Organizations in the United States bearing the Presbyterian name are: The Presbyterian Church in the United States of America; Presbyterian Church in the United States (South); United Presbyterian Church of North America; Cumberland Presbyterian Church; Cumberland Presbyterian Church, Colored; Reformed Presbyterian Church; Reformed Presbyterian Church, General Synod; Associate Synod of North America, also known as the Associate Presbyterian Church; and the Associated Reformed Presbyterian Synod. The Presbyterian churches of the United States have official affiliations with the Alliance of Reformed Churches throughout the World Holding the Presbyterian System.

PRESBYTERIAN CHURCH IN THE UNITED STATES OF AMERICA. This is the largest body of the denomination and is represented by churches in every State of the Union and by official mission stations in Alaska, Cuba, Puerto Rico, and foreign lands. In 1933 its churches in the United States were organized into

46 synods and 290 presbyteries. Statistics for the year ending Mar. 31, 1933, showed a total communicant membership of 1,968,788. The Sunday school enrollment totaled 1,600,460. The number of churches was 9172 and of ministers 9893.

Contributions during the year totaled \$38,034,203, of which \$30,929,990 was for congregational and organization expenses and \$7,695,213 for benevolences. The board of national missions received \$1,923,051, the board of foreign missions \$2,438,220, and the board of Christian education \$480,264. The denomination maintains 52 colleges and 13 theological seminaries. It conducts two national official periodicals, *Everyone* and *Women and Missions*. Three national weeklies, *The Presbyterian*, *The Presbyterian Advance*, and *The Presbyterian Banner*, are privately owned but officially recognized.

The 1933 general assembly was held in Columbus, Ohio, May 25-29. The Rev. John McDowell, D.D., of New York City, secretary since 1919 of the board of national missions, was elected moderator, while Ruling Elder L. Irving Pollitt of Baltimore, Md., was made vice-moderator. The assembly settled a controversy over the doctrinal loyalty of its board of foreign missions by declaring its confidence in the official board by an overwhelming majority. It recommended a policy of progressive disarmament for the United States as an example to the world; stood for the rights of conscientious objectors to war; reaffirmed a standard of moral, social, and industrial relations, with the teachings of the Gospel applied thereto; urged enforcement of anti-liquor laws; and dedicated a new Hymnal.

The offices of the general assembly are in the Witherspoon Building, Philadelphia, Pa., in charge of the Rev. Lewis Seymour Mudge, stated clerk. The board of Christian education, the board of pensions, and the department of history are also housed there. The board of foreign missions and the board of national missions have their headquarters in the Presbyterian Building, 156 Fifth Avenue, New York City.

PRESBYTERIAN CHURCH IN THE UNITED STATES (SOUTH). This division of the Presbyterian denomination covers the territory commonly known as the Southern States. It was composed in 1933 of 17 synods and 90 presbyteries, with 3545 organized churches, 2436 ministers, and 469,310 members. The ruling elders numbered 16,081 and deacons 18,037. Contributions for current expenses amounted to \$6,604,595, and for benevolences to \$2,532,278. In 1933 the church was supporting 409 missionaries in Africa, Brazil, China, Japan, Korea, and Mexico; these missionaries were assisted by 4027 native workers. In the mission field there were 59,026 church members and 103,457 Sunday school members.

The church maintains four theological seminaries, one training school for lay workers (white), one training school for lay workers (colored), 18 colleges, 13 junior colleges, 12 secondary schools, 19 mountain schools, two Mexican mission schools, and 15 orphans' homes and schools. It publishes the *Presbyterian Survey*, which is the medium of communication of all departments with the membership of the Church. Privately owned papers of the denomination are the *Christian Observer* and the *Presbyterian of the South*.

The general assembly met at Montreat, N. C., May 26, 1933. The Rev. Ernest Thompson, D.D.,

of Charleston, W. Va. was elected moderator to succeed the Rev. William Crowe, D.D., of St. Louis, Mo. The offices of the general assembly are located at 1027 Kirby Bldg., Dallas, Texas. The Rev. J. D. Leslie, D.D., is stated clerk.

PRESBYTERIAN CHURCH OF NORTH AMERICA, UNITED. A member of the family of Presbyterian churches, of Scottish origin, formed by the union of the Associate and the Associate Reformed Churches in Pittsburgh in 1858.

The general assembly convened in First Church, Pittsburgh, Pa., June 28, 1933. On that date there were in the United States 11 synods, 56 presbyteries, 874 congregations, 883 ministers, 5088 ruling elders, and a church membership of 177,265. The total membership, including missionary fields, was 242,996. The Sabbath school enrollment was 203,116, while the young people's societies numbered 1033 with a membership of 26,856. Contributions for the year 1932-33 totaled \$4,103,954, and missionary contributions \$1,365,094.

The outstanding feature of the year was the celebration of the church's diamond jubilee. Three national meetings were conducted on this occasion in Pittsburgh, the women's general missionary convention, the national young people's convention, and the general assembly itself. The report of the anniversary committee on findings was unanimously adopted, declaring "a reaffirmation of the fundamental matters of our faith, a determination to set ourselves anew to a revival of soul-saving personal religion, to our corporate obligation to carry to all men the Evangel, to an awakened and reconsecrated church and the application of our Christianity to the solution of civic and social problems." Action on the plan of union with the Presbyterian Church in the United States of America was held in abeyance on account of the necessity of attention to denominational matters of prime importance.

The denomination supports 615 men and women in four foreign fields and 300 men and women in homeland mission fields. It carries on medical work in 32 foreign hospitals and dispensaries, conducts educational work in 369 schools at home and abroad, and last year reached and influenced the lives of 36,703 young men and women in its schools and colleges. Three denominational journals are maintained: *The United Presbyterian* for adults, *The Christian Union Herald* for young people, and the *Women's Magazine*.

The moderator of the general assembly for 1933-34 was the Rev. W. B. Anderson, D.D., LL.D., of Philadelphia, Pa., and the stated clerk was the Rev. O. H. Milligan, D.D., Avalon, Pa. The headquarters of the board of administration are at 705 Publication Bldg., Pittsburgh, Pa.

PRESBYTERIAN SYSTEM, ALLIANCE OF REFORMED CHURCHES THROUGHOUT THE WORLD HOLDING THE. See REFORMED CHURCHES THROUGHOUT THE WORLD HOLDING THE PRESBYTERIAN SYSTEM, ALLIANCE OF.

PRESIDENTIAL POLICIES. See UNITED STATES under *Administration*.

PRESIDENTS OF COLLEGES. See article on each college; **UNIVERSITIES AND COLLEGES.**

PRINCE EDWARD ISLAND. An island north of Nova Scotia constituting one of the Maritime Provinces of Canada. Total area, 2184 square miles; population (1931 census), 88,038. Charlottetown, the capital, had 12,361 inhabitants. In 1931, births numbered 1879; deaths, 912; marriages, 490. There were 17,506 students enrolled

in the primary and secondary schools for the year 1931.

Approximately 90 per cent of the population is engaged in agriculture and 94.2 per cent of the farmers own their own farms. Stock raising, fishing, and silver-fox breeding are other leading industries. Field crops valued at \$6,393,000 were harvested from 476,200 acres in 1932. The estimated gross agricultural wealth of the Province in the same year amounted to \$60,643,000. Live-stock (1931 census): 29,956 horses, 100,487 cattle, 78,478 sheep, 40,586 swine, 926,119 poultry. The marketed value of the fisheries amounted to \$988,919, of which lobsters represented \$750,039; other important fish caught were herring, smelt, and cod. The value of fur-bearing animals on the 648 fur farms amounted to \$1,038,242 in 1931. Pelts of fur-bearing animals taken in 1931-32 were valued at \$693,314. With 290 manufacturing establishments, representing a capital investment of \$4,019,288, and 1170 employees, the gross value of products was \$4,136,576 and the net value was \$1,787,209.

For the fiscal year ended Dec. 31, 1931 ordinary revenue amounted to \$1,149,570; ordinary expenditure totaled \$1,453,191 including expenditure on capital account. The bonded indebtedness on Jan. 1, 1933 was \$3,504,000. Government is administered by a lieutenant-governor, appointed by the Dominion, and a legislative assembly of 30 members elected for four years. In the Dominion Parliament the Province is represented by four members in the senate and four members in the House of Commons. Lieutenant-Governor in 1933, Charles Dalton; Premier, J. D. Stewart.

PRINCETON UNIVERSITY. A nonsectarian institution of higher learning for men at Princeton, N. J., founded in 1746. The total enrollment in the autumn of 1933 was 2602, of whom 2309 were undergraduates and 293 were graduate students and fellows. The faculty numbered 309; there were also 18 assistants and 36 administrative officers. The endowment in 1933 was \$27,733,679; the total income \$2,813,038; and the total expenditures, including reserves, \$2,782,160, leaving an operating surplus of \$30,878. Bequests and gifts amounted to \$93,084 for endowment, \$174,876 for current expenses, \$19,593 for student aid, and \$34,940 for buildings. The library in 1933 contained about 700,000 volumes, exclusive of pamphlets, broadsides, and manuscripts. President, Harold Willis Dodds, A.M., Ph.D., LL.D.

PRIX GONCOURT. See FRENCH LITERATURE.

PRIZEFIGHTING. See BOXING.

PROHIBITION. So suddenly that the United States has not yet recovered from its surprise, the year 1933 saw the legalization of beer, the passage of a new amendment to the Constitution (the Twenty-first) repealing the Eighteenth Amendment, and finally by November 5 its adoption by the thirty-sixth convention of the separate States. Thus, the prohibition experiment, which had been inaugurated 13 years ago with so much certainty by the American people, was dramatically terminated. These columns in previous years have narrated the ups and downs of the experiment. It was plain in the beginning that Prohibition had the support of a very sizeable proportion of the American population in the belief that the abolition of the liquor traffic would bring positive economic gains. It was generally declared, and from very few quarters was any dissent voiced, that with the closing of the

saloon and the termination of the manufacture, transportation and sale of alcoholic beverages, the American population would, because of its increased sobriety, have available a larger portion of the national income for the expenditure on new consumption goods and that increased savings could be utilized for the higher education of children, provision for old age, greater leisure, and the like. Undoubtedly, too, great support for Prohibition came from certain industrialists who had become convinced that temperance would add to the larger efficiency of the American working population by the elimination of industrial accidents and greater productivity per man power so that in turn benefits would redound to the working population in the form of higher wages and shorter working hours. During the whole decade of the twenties, despite increasing skepticism from certain groups in the population, no serious efforts were made to discard the experiment because with the continuance of prosperity it was felt that there did exist, even if incapable of statistical measurement, a correlation between high wages and general employment on the one hand and the abolition of the saloon and the termination of the liquor traffic on the other.

The collapse of prosperity, however, served to sharpen the outlines of the inadequacies of Prohibition enforcement. Then, critics, who before had been crying in the wilderness, were increasingly given serious attention. It came to be seen that the great increase in crime was undoubtedly a direct outgrowth of the creation and operation of the illicit liquor traffic with its whole machinery of rum runners, wild cat breweries, and illegal stills, hi-jackers, speakeasies, beer flats, and the gangs of racketeers who were necessary to act as a kind of private police force for the protection and conduct of the industry. Again, with increasing pressure being made on public funds, the argument was presented that the return of the legal liquor industry would open up an important revenue source for Federal and local jurisdictions. Finally, it no longer could be declared that Prohibition was one of the factors in the maintenance of the era of prosperity.

All these forces converged at once so that the successful election of President Roosevelt, who had pledged himself to the immediate legalization of beer and the submission by Congress to the States of a repeal amendment, plainly indicated that the year 1933 was to see a definite effort made to terminate the Prohibition experiment. The first step was taken on February 16, when the Senate of the newly-elected Seventy-third Congress, called in special session by President Roosevelt, passed by a vote of 63 to 23 the so-called Blaine resolution for the repeal of the Eighteenth Amendment. This resolution embodied the submission of a new amendment to the Constitution for ratification by conventions of the several States. On February 20, by a vote of 289 to 121, the House followed the Senate's example. In the Senate 29 Republicans, 33 Democrats, and 1 Farmer-Laborite voted for the resolution, while 14 Republicans and 9 Democrats voted against it. In the House 109 Republicans, 179 Democrats, and 1 Farmer-Laborite voted for the resolution while 89 Republicans and 32 Democrats voted against. The following is the new Twenty-first Amendment which, as a result of the passage of the repeal resolution was, therefore, submitted to the States to be passed upon by conventions duly elected for this purpose:

Section 1. The Eighteenth Article of Amendment to the Constitution of the United States is hereby repealed.

Section 2. The transportation or importation into any State, Territory or possession of the United States for delivery or use therein of intoxicating liquors, in violation of the laws thereof, is hereby prohibited.

Section 3. This article shall be inoperative unless it shall have been ratified as an amendment to the Constitution by conventions in the several States, as provided in the Constitution, within seven years from the date of submission hereof to the States by Congress.

The second step in the amazing assault on Prohibition came on Mar. 15, 1933, when the House, by a vote of 316 to 97, legalized the manufacture and sale of beer, ale, lager beer, and porter of 3.2 per cent alcoholic content by weight or 4 per cent by volume. The party division for the bill was as follows: 230 Democrats, 73 Republicans, and 5 Farmer-Laborites for; 58 Democrats and 39 Republicans against. The bill also levied a tax of \$5 a barrel of 31 gallons, which, it was estimated, would yield \$125,000,000 to \$150,000,000 a year. In addition, the bill left to the States all regulatory and control measures; protected dry States by reenacting the Webb-Kenyon law, which prevented interstate shipment of beer into a Prohibition State; placed a tax on brewers of \$1000 annually for each brewery; retained the existing law which required wholesalers to take out annual permits at \$50 each and for retailers at \$20 each; and allowed advertising by newspapers, magazines, radio, and by other methods. On March 20, the Senate, by a vote of 43 to 36, passed a bill which was substantially similar to the House measure, the only important difference being the inclusion of wine of the same alcoholic content as that of beer among the legalized beverages. The following was the party division in the Senate: 33 Democrats and 10 Republicans for the bill; 19 Democrats and 17 Republicans against the bill. It was pointed out, when the President signed the bill legalizing the sale of beer on March 22, that in at least 14 States beer could be sold upon the termination of the 15 days fixed in the Federal statute. These were Arizona, California, Illinois, Indiana, Kentucky, Missouri, Montana, Nevada, New Jersey, New York, Oregon, Pennsylvania, Washington, and Wisconsin. In the following States beer could be sold after the indicated dates: North Dakota, July 1; West Virginia, May 9; Wyoming, May 18. In Maryland and Delaware beer could be sold in only parts of the States. In some States dry laws had already been repealed but the sale of beer could not take place until licensing or control legislation had been passed.

Despite the suddenness of this action, the brewery industry was prepared. Because of the existence of some 164 breweries which had been licensed by the Prohibition Unit to make near beer, apparatus and materials were available for the immediate preparation of the legalized beverage. In New York City alone there were 19 such breweries; in Pennsylvania there were 31; in New Jersey there were 10; and in the St. Louis area there were 8, which as soon as the announcement was officially made began the resumption of activities. Hiring began immediately and there was great activity in the refurbishing and the equipping of bottle works. Trucks were bought and before very long in those areas where the sale of beer was unhampered by special State enactments, billboards, and newspapers broke out into a veritable rash of posters and advertisements. There quickly appeared throughout the country a great variety of beer inns, beer taverns,

and beer parlors where the beverage was served to customers with and without food depending upon the particular local provisions for the dispensing of beer. While it was impossible to tell, when the year terminated, what had been the actual economic results of legalization as far as reemployment in the brewing and dispensary industries, the investment of new capital and the amount of federal and local taxation collected, there was no question that the psychological result had at any rate lived up to every expectation. The return of beer in April, just as the United States was beginning to emerge slowly out of a three-year depression, seemed to many to be a happy augury for the future.

The next step in the overthrow of the Prohibition system was the signature by President Roosevelt on March 31 of a bill removing virtually all restrictions from the prescription of liquor by physicians. This meant in effect that the drug stores were in a position to supply hard liquor in bottled form to all persons who were able to present prescriptions made out by duly registered doctors.

Meanwhile the various States were acting on the repeal amendment as prescribed by the resolution which both houses had adopted in February. Michigan was the first State to vote on ratification of the repeal amendment on April 3 when its convention voted for repeal by a vote of 3 to 1. The next day Wisconsin went 5 to 1 for repeal. Rhode Island, which had never ratified the Eighteenth Amendment, ratified the Twenty-first Amendment on May 1 by a majority of 7 to 1. Six to one was the ratio in Wyoming on May 15; and in New Jersey, the next day, only 2 dry delegates out of 226 were elected. New York voted 8 to 1 for repeal on May 23. On May 26 Delaware and Nevada went wet. Illinois gave repeal a 7 to 1 vote on July 5, and the next day Indiana went wet by 2 to 1. Massachusetts voted wet by 5 to 1 on June 13, electing all repeal delegates to the convention. Connecticut, which also had never ratified the Eighteenth Amendment, voted 6 to 1 wet, electing all repeal delegates, on July 20. On the same day New Hampshire voted wet 2 to 1 and Iowa 3 to 2. The rest of the roster of repeal victories follows: West Virginia, June 26, 3 to 2; California, June 27, 3 to 1, all repeal delegates elected; Alabama, July 18, 3 to 2; Arkansas, July 18, 3 to 2; Tennessee, July 20, close; Oregon, July 21, 2 to 1; Arizona, August 8, 3 to 1, all repeal delegates elected; Missouri, August 19, 3 to 1, all repeal delegates elected; Texas, August 26, 2 to 1, all repeal delegates elected; Washington, August 29, 2 to 1; Vermont, September 5, 2 to 1, all repeal delegates elected; Maine, dry for 82 years, September 11, 2 to 1; Colorado, September 12, 2 to 1; Minnesota, September 12, 2 to 1, all repeal delegates elected; Maryland, September 12, 5 to 1, all repeal delegates elected; New Mexico, September 19, 3 to 1; Idaho, September 19, 3 to 2; Virginia, October 3, 2 to 1, all repeal delegates elected; Florida, October 10, 4 to 1, all repeal delegates elected.

On election day, November 7, the six States of Kentucky, South Carolina, Pennsylvania, Ohio, Utah, and North Carolina also voted on the repeal amendment. Early returns indicated that Utah had been carried by the wet forces by about 5 to 4; Ohio had been carried by a vote of 2 to 1; Maine had been carried by a vote of 2 to 1; Pennsylvania had been carried by a vote of 4 to 1;

while North and South Carolina had been won by the drys.

The Eighteenth Amendment to the Constitution of the United States was officially terminated on December 5 when the Twenty-first Amendment was ratified by the convention of Utah, the thirty-sixth State required for the purpose. On the same day Mr. William Phillips, the Acting-Secretary of State, issued the formal proclamation necessary by law to certify to the adoption of the Twenty-first Amendment repealing Prohibition. Early in the same day Pennsylvania had ratified as the thirty-fourth State, and Ohio as the thirty-fifth. President Roosevelt, in another proclamation, proclaimed repeal and urged temperance upon the nation, calling upon the American people to see that "this return to individual freedom shall not be accompanied by the repugnant conditions that obtained prior to the adoption of the Eighteenth Amendment and those that have existed since its adoption."

With the termination of the experiment on December 5, the following was the legal drinking status of the nation on the basis of information collected by the Associated Press: *Alabama*—no; *Arizona*—only with meals in restaurants or hotels; in packages from drug, grocery, and regular liquor stores, unlimited; *Arkansas*—no; *California*—only wine and beer with meals; hard liquor in packages for off-premises consumption; *Colorado*—beer and wines in restaurants, hotels, and dining cars; hard liquor in packages for off-premises consumption; *Connecticut*—beer in taverns; wine and beer in hotels and restaurants; hard liquor in packages; *Delaware*—no bars; hotels, restaurants, and clubs may sell for consumption in dining rooms, tap rooms and bedrooms; grocery and delicatessen stores to sell in packages for consumption off premises; *Florida*—no; *Georgia*—no; *Idaho*—no; *Illinois*—unrestricted except in Chicago, where local ordinance prohibits perpendicular drinking; legislature at work on control law; *Indiana*—whisky can be bought only in packages at drug stores; wines in cafés, etc.; *Iowa*—no; *Kansas*—no; *Kentucky*—no native drinking; distilleries operate for other States; *Louisiana*—anything goes; *Maine*—no; *Maryland*—control bill passed; *Massachusetts*—sale by bottle or glass provided, with local option to decide licensing of taverns; *Michigan*—3.2, until legislature acts; *Minnesota*—no; *Mississippi*—no; *Missouri*—no, until legislature acts; *Montana*—State to vend liquor, not yet ready with stocks; *Nebraska*—no; *Nevada*—anything goes except where dry by local option; *New Hampshire*—no; *New Jersey*—saloons and bars under commission control; *New Mexico*—no bars; any firm under same management three years may sell; *New York*—no bars; drinking with or without meals in hotels, restaurants, or on vessels and dining cars; licensed liquor stores, engaged in no other business, may sell up to three quarts of hard liquor or three gallons of wine per person; *North Carolina*—no; *North Dakota*—no; *Ohio*—3.2, until legislature acts; *Oklahoma*—no; *Oregon*—control unsettled; *Pennsylvania*—State takes over sale of hard liquor in packages on January 2; hotels and restaurants may sell in meantime; *Rhode Island*—drinking only with meals in hotels; licensed stores to sell package goods; drug stores limited to one quart per person; *South Carolina*—one quart per month per person may be imported on application to county judge; *South Dakota*—no; *Tennessee*

—no; *Texas*—no; *Utah*—no; *Vermont*—no; *Virginia*—no; *Washington*—State control unsettled; large cities to control by ordinances; stores city-owned in Seattle; legislature convened; *West Virginia*—no; *Wisconsin*—anyhow, anytime, anywhere until legislature acts at session beginning December 11; *Wyoming*—no; *United States Territories*—no, until Congress acts.

With the passing of Prohibition there were many vexing problems that still remained and called for solution. It must be remembered that the United States, while it did in one form and another permit the legal dispensation of liquor, did favor the spirit of the temperance movement. There was no question, therefore, that one of the most pressing problems of the near future would be the creation of workable systems for the control of the liquor traffic, the checking of intemperance, and the sale of alcoholic beverages to minors. How was liquor to be sold? Was it to be openly dispensed in saloons or was its sale to be restricted only to persons seated at tables and purchasing liquor as a beverage to accompany meals or, on the other hand, was it to be made available only in packages as in Scandinavian countries and, therefore, for home consumption purely? Again, who was to be the dispensing agency? It was being argued that in order to control effectively the liquor traffic, State monopolies ought to be established. An example of such a programme of State control was that of Montana where the State was selling all liquor within its own borders. This was being done through State stores in each county seat and in some of the towns, the stores being open from noon to 8 P. M. every day, except Sundays, holidays, and election days. All profits and tax revenues went to the State with the exception of federal taxes. No liquor was to be sold to any person without a permit issued by the State and was to be used only for home consumption. It was to be unlawful to drink liquor in any public place. Again, how was the liquor traffic to be dissociated from its old partner, the local political machine? The *American Observer* pointed out on November 15, that "the commissions already appointed give evidence of an intention to give these bodies a high standing and free them from political influences. The Connecticut Liquor Control Commission, for example, consists of three members appointed by the governor for overlapping six-year periods, not more than two members to be of the same political party. In New York, the State board is composed of five members appointed for five-year terms by the governor, with the consent of the Senate. A provision regarding their political parties applies in the same way as in Connecticut."

Jouett Shouse, president of the Association Against the Prohibition Amendment, spoke as follows in an address he made on the eve of Virginia's vote on repeal:

The most important phase of the whole business is that the right kind of men and women shall have the authority and be charged with the duty and responsibility of administering the law. If a high-class control board is created in each State, composed of outstanding citizens and vested with the power to revoke licenses without court action, no matter what the plan of retail distribution, more can be done to prevent abuse than through the writing of any laws that the wit of man can devise.

Another important question that the American public had to face was, how would the Federal government carry out its responsibility of pre-

venting the transportation or importation of intoxicating liquors into States which chose to remain dry. The Federal government's previous inability to enforce the Webb-Kenyon Act, which had been passed for a similar purpose in 1913, indicated some of the difficulties in handling the problem. Fully 20 States, by the end of the year, had neither State-wide nor local Prohibition laws on their statute books. In this group there were included the 11 States which had already made provision for liquor control laws as follows: Arizona, California, Colorado, Connecticut, Delaware, Montana, Nevada, New Mexico, North Dakota, Rhode Island, and New York. To prevent the flow of liquor from these wet States into the dry States was a problem that was seriously preoccupying an interdepartmental committee which President Roosevelt had set up for the purpose of studying the matter from various angles and laying its report before the next session of Congress.

The New York State Alcoholic Beverage Control Board, on December 10, issued an elaborate code of liquor regulations for the sale, consumption, and taxation of liquor in the State. The following is a summary of these regulations indicating how carefully States are making an effort to keep the liquor traffic under rigorous supervision: Saloons and speakeasies are prohibited and the table will succeed the bar as the gathering place. Liquor may be served only at tables in legitimate restaurants, hotels, clubs, railroad cars, and ships. Bars are not outlawed, but drinking at bars is. Licensed dispensers of drinks, who are bona fide food vendors, are permitted to serve drinks to be consumed on the premises to customers who order no food. Instead of the cordial shops of Prohibition, there will be retail dispensaries modeled after the Canadian liquor stores. These stores will sell package goods for consumption off the premises. Stores will be limited in number and confined to business thoroughfares. Department stores can qualify. No customer may buy more than three quarts of liquor at once. All-night drinking is forbidden—except in the home. Liquor-serving places must close at 3 A. M. and liquor shops at 8 P. M. The distiller's license is \$5000; the wholesale liquor dealer's, \$1500. Retail liquor licenses for hotels, clubs, and restaurants range from \$250 to \$500 in proportion to the city's population and, for retail liquor stores, from \$166.67 to \$400. Wine license fees for the interim period cost manufacturers \$166.67, wholesalers, \$66.67, and shops, \$16.67. To qualify for liquor licenses, restaurants must have been in business for a year, selling more food than beverages. Drug stores will be taken out of the liquor business, except for filling prescriptions of a pint or less. Women, as well as men, may buy drinks. Minors, intoxicated persons, and habitual inebriates must be turned away. Drinks must be sold for cash only; no credit is to be allowed, for credit tempts drinkers to "have another." The new regulations will be in effect until Apr. 1, 1934.

The Federal administration itself quickly came into action in an effort to foil the bootlegger and the profiteer. In order to assure low price legitimate alcohol the government began to allow the withdrawal of old bonded whiskies from warehouses for blending and shipment to all parts of the country. Thus, by December 5, when the sale and consumption of liquor was legalized, there was available at least 3,000,000 gallons of whis-

ky, most of which could be sold for as low as \$2 a quart. Also the administration made it known late in December that it would oppose all efforts on the part of Congress to impose high taxes on distilleries and distilled liquors, thus again striking at the bootleggers and preventing their competition with legitimate manufacturing and dispensing agencies. In line with its intention to bring the traffic under more complete governmental control, this time using the powers vested in it under the National Industrial Recovery Act, the administration, on November 22, prepared a code for the distilled spirits industry which in effect created a government monopoly over the industry with ownership, of course, in private hands. The following were the chief features of this code which was formally promulgated on November 27 with its signing by President Roosevelt: Creation of a Federal Alcohol Control Administration, consisting of five members, one, as director, to supervise the code's operations. No one will be permitted to engage in the industry except under a permit, which is conditioned on observance of the code and regulations issued under it. Permittees may not use plant equipment additional to that in use at the time of repeal, or on the effective date of this code, if earlier, or new equipment, except under certification by the administration, as needed by increased demand. If the economic condition of the industry should require it, the administration may limit the production and distribution of distilled spirits and allocate and/or provide for same; and also fix prices. Distilled spirits shall be sold in bottles only except to rectifiers, vendors, and publicly operated dispensaries or agencies. Standards of fill, identity, and quality are to be regulated by the administration, and misbranding, false advertising and mislabeling are to be prohibited by regulations. The holding of interests in retail outlets or aiding retailers in any manner is prohibited. Members of the industry, from time to time, shall severally, upon request, make such reports as may be deemed necessary to make the code effective, and shall severally permit examination of their books and records and those of affiliates or subsidiaries. Promulgation of the code or issuance of license gives no vested right to continue in the industry or as to any standard of profits. A forty-two hour six-day maximum week and an eight-hour day are fixed, with the usual exceptions. Basic minimum pay is set at \$14-\$16, or 40 cents an hour, and time and a third pay for overtime. The promulgation of the code meant virtually complete Federal control of the liquor traffic, at any rate until the meeting of Congress and determination by it of its own policy. Mr. Joseph H. Choate, Jr., was named director of the Federal Alcohol Control Board, and thus became in effect the Federal dictator of the distillery industry.

PROTESTANT EPISCOPAL CHURCH.

A religious body representing the Anglican communion in the United States, of which the Church of England is the parent church, and which was brought to America by the Jamestown colonists in 1607. Despite the absence of a colonial episcopate the church, under English clergymen, maintained a firm foothold for 170 years. In 1784 the first American bishop was consecrated in Scotland. Early in 1787 two more were consecrated in Lambeth Chapel, England. The church completed its organization at a convention in Philadelphia in October, 1789, at which the con-

stitution and name were adopted and the Book of Common Prayer was set forth.

In 1933 the total number of communicants of the Episcopal Church, in 8222 parishes and missions, was 1,341,805, an increase of 22,622 over the preceding year. The clergy numbered 6356; 178 priests were ordained during the year, while the 15 theological seminaries of the church reported 517 candidates for orders. In the 5000 church (Sunday) schools 506,571 pupils were enrolled. Baptisms during the year numbered 62,963, and confirmations 68,895. The government of the church centres in a general convention which meets triennially, the next session (the fifty-first) to be held in Atlantic City, N. J., in October, 1934. The affairs of the church between sessions are conducted by a National Council composed of 24 members, 16 of whom—4 bishops, 4 presbyters, and 8 laymen—are elected by the general convention for six-year terms, while eight members are elected by each of the provincial synods.

Operating on a balanced budget, the church in 1932 reported total expenditures amounting to \$3,266,883. Of this sum, the total expenditure for missions by the Domestic and Foreign Missionary Society was \$2,434,205, divided in practically even amounts between the two fields. The foreign-mission fields included Japan, China, Liberia, Mexico, the Philippines, Alaska, Hawaii, Brazil, the Canal Zone, Cuba, Puerto Rico, Haiti, the Dominican Republic, the Virgin Islands, and Palestine; in addition, there were establishments in 10 important European centres. Domestic missionary activities included work among the foreign born, Indians, Negroes, mountaineers, mill workers, in addition to a wide range of social service. American missionaries abroad numbered, men and women, respectively, 191, and 232; native staff abroad, 1260 and 708. During the year, 35 new missionaries were appointed. The Rev. George Van B. Shriver, who sailed in August with his wife to undertake work among the Telegus in the diocese of Dornakal, was the first missionary appointed to India.

The National Council is assisted by auxiliaries and cooperating agencies, including the Woman's Auxiliary; the Brotherhood of St. Andrew; the Church Army; the Daughters of the King; the Guild of St. Barnabas (for nurses); the Girls' Friendly Society in the United States (for girls and young women); the Young People's Fellowship (for young men and women); the Church Mission of Help; the Seamen's Church Institute of America; and the American Church Institute for Negroes. Official periodicals are *The Spirit of Missions* and *Bulletins* of the National Council, together with material dealing particularly with each department of the council. Several independently owned publications make an important contribution to the life of the church: *The Living Church*, *The Churchman*, *The Witness*, *The Southern Churchman*, weeklies; *American Church Monthly* and *The Chronicle*, monthlies.

Under a rule adopted by the house of bishops at the general convention of 1928, the house held its second annual meeting at Davenport, Iowa, Nov. 7-9, 1933, as the guests of the Rt. Rev. Harry S. Longley, Bishop of Iowa. The house received and accepted the resignations of the Bishops of Missouri, Fond du Lac, Duluth, and Sacramento, each of whom were thereupon succeeded in their respective jurisdictions by their coadjutors: The Rt. Rev. A. W. Noel Porter (Sacramento); the Rt. Rev. William Scarlett (Mis-

souri); the Rt. Rev. Benjamin T. Kemmerer (Duluth); and the Rt. Rev. Harwood Sturtevant (Fond du Lac). Among the reports received by the house were preliminary statements from two important commissions appointed to consider the placement of clergy, and missionary districts and aided diocese.

Four bishops died during 1933: The Rt. Rev. W. W. Webb, D.D., Bishop of Milwaukee, who was succeeded by his coadjutor, the Rt. Rev. B. F. P. Ivins; the Rt. Rev. J. M. Horner, D.D., Bishop of Western North Carolina; the Rt. Rev. H. L. Burleson, D.D., assistant to the Presiding Bishop and formerly Missionary Bishop of South Dakota, and the Rt. Rev. Henry Bond Restarick, retired Missionary Bishop of Honolulu. The headquarters of the National Council, of which the Presiding Bishop, the Rt. Rev. James DeWolf Perry, D.D., of Rhode Island, is president, are in the Church Missions House, 281 Fourth Avenue, New York City.

PROTOZOA. See ZoöLOGY.

PRUSSIA, *prüsh'a*. The largest constituent republic of the German Reich, with a total area of 113,036 square miles and a population (1933 census) of 39,958,073. Births in 1931 totaled 655,334; deaths, 461,432; marriages, 325,055. Chief cities with Jan. 1, 1933, census returns: Berlin, 4,227,000; Cologne, 741,000; Essen, 648,000; Breslau, 618,000; Frankfurt-on-Main, 534,000; Dortmund, 533,000. Public and private elementary schools in 1931 enrolled 4,700,671 students; middle schools enrolled 191,550. There were 54,116 students enrolled in 14 universities in 1931-32; and 504,224 students in various other secondary and preparatory schools in 1926.

Agriculture, mining, and manufacturing are the principal industries. The chief crops (1931), with production in metric tons, were: Wheat, 2,610,214; rye, 4,979,575; barley, 1,659,692; oats, 4,287,789; potatoes, 29,653,175; hay, 11,812,656. In the same year 38,377 acres of vineyards yielded 14,770,595 gallons of wine valued at 17,137,320 Reichsmarks. Livestock (1931): 10,787,707 cattle, 2,310,216 sheep, 16,226,451 swine, 1,484,481 goats, 2,376,710 horses, and 59,057,833 head of poultry. The production (1931) of the chief minerals in metric tons was coal, 115,351,758; lignite, 111,368,437; iron ore, 1,709,927; salt, 1,091,196. For the year 1932-33 the budget was estimated to balance at 3,133,528,320 Reichsmarks. On Apr. 30, 1932, the public debt stood at 596,378,125 Reichsmarks.

For the government of Prussia see GERMANY under *History*.

PSYCHICAL RESEARCH. The year 1933 was marked by considerable activity in the (English) Society for Psychical Research. The only work in psychical research outside its limits that was notable was the formation of the American Psychical Institute and the publication of its first *Bulletin*. This consists largely of a report by Mr. Hereward Carrington of an experiment on psychological lines with the trance medium Mrs. Garrett. The technique, suggested some years ago by Mr. Whately Carrington (formerly Whately Smith), consists of the application of the psychogalvanic reflex test to the normal personality of the medium, and then to the trance personality, the comparison of the two sets of records, and the calculation of the degrees of similarity or dissimilarity between them. Mr. Hereward Carrington considers that the results so obtained indicate that Mrs. Garrett's trance-personality is distinct from her own, i.e., is prob-

ably what it claims to be, the surviving spirit of a man who once lived on earth. So revolutionary a conclusion must naturally be scrutinized in the most minute fashion before it can be accepted as a definitive contribution to knowledge. In the meanwhile experiments on similar but on more extended and in some respects more exact lines have for some time past been conducted by the S.P.R. with several mediums, and will be duly reported in course.

Attempts have frequently been made to study these "spirit" Controls of mediums by the direct inspection of their voices and other characteristics. There has always been great difficulty in doing this, since it would obviously have been improper to generalize on the basis of the fleeting impressions obtained at sittings. This difficulty has now been overcome by the S.P.R.'s successful experiment in obtaining a first instalment of gramophone records of three such voices speaking through the leading trance medium, Mrs. Leonard. The voices are those of the Mrs. Leonard Control "Feda," supposed to be an Indian girl, and of two Communicators, one a woman and the other a man. These records are thus extremely valuable; they are available for purchase from the Society.

A yet further line of investigation in the same department was tried by the Society, by means of an ingenious application of electrical direction finding technique. The object was to test the actual source of voices alleged to be independent of the medium. This was done by using two pairs of sensitive microphones arranged at right angles to each other, each microphone being separately wired to the ear of an observer. The investigation showed that the supposition of independence was unfounded in the case of Mrs. Leonard, who does not, however, claim to be a direct voice medium. It is hoped to experiment later with a medium specializing in this phenomenon.

Yet another experiment with the same medium was the attempt, by so-called proxy sittings, to obtain evidential material for persons not present at the sittings and unknown to the sitter and medium. A measure of success was achieved, and has been reported on by the Rev. C. Drayton Thomas in the *Proceedings* of the Society.

Theodore Besterman reports on a so-called book-test obtained with an amateur medium in Norway, who succeeded in quoting verbatim several words from a book in his pocket. This remarkable success was obtained in good conditions and by no means stands alone.

Mr. Besterman also reports on an extensive inquiry into prophetic dreams, intended to test the theory of Mr. J. W. Dunne, according to which dreams of the future occur as frequently as do dreams of the past. This theory he had supported by a series of personal experiences. The result of the experiment appears to show that this theory is unfounded, Mr. Dunne himself failing to produce evidence for it in his own dreams.

Another report, by Maj. Rampling Rose and Mr. Barlow, finally destroys the claims of the spirit-photographer Hope, and with it renders in the highest degree improbable, as has always been supposed by critical investigators, that spirit-photography has any basis in fact.

During the year few valuable books have been published. George Lawton's *The Drama of Life after Death* is a praiseworthy attempt at a "psychology" of spiritualism, but fails to achieve

any real understanding. The late Baron von Schrenck-Notzing's *Die Phänomene des Mediums Rudi Schneider* consists of extracts from the records only. Mr. Besterman has translated books by Prof. Hans Driesch and Dr. E. Osty under the titles, respectively, of *Psychical Research: the Science of the Supernormal and Supernormal Aspects of Energy and Matter*.

PSYCHOANALYSIS. See **PSYCHOLOGY**.

PSYCHOLOGY. NEWS AND NOTES. The forty-first annual meeting of the American Psychological Association was held at the University of Chicago from September 7 through September 10. There was a registered attendance of 825 persons, a considerable increase over the attendance at the 1932 meetings. The presidential address delivered by Prof. L. L. Thurstone, University of Chicago, on "The Vectors of the Mind," was a discussion of a new statistical way of determining multiple factors in the organization of personality. The newly elected president for the year 1933-34 was Prof. Joseph Peterson, George Peabody College for Teachers. An invitation was accepted from Columbia University to hold the 42nd annual meeting in New York City, Sept. 5-8, 1934.

A matter of business having special interest because it related to the employment situation was the report of the Committee on Standard Requirements for the Ph.D. in Psychology, which was an analysis of "supply and demand for psychologists."

One hundred and thirty-two papers were read in a series of twenty sessions. As before, Animal Psychology took the lead, with three sessions devoted to twenty papers. Two sessions were taken up with fourteen papers on Child Psychology. Nine papers apiece were contributed on Sensation and Perception, Human Learning, Mental Tests, and Social Psychology, and the remaining single sessions considered from three to eight papers each on Abnormal, Clinical, Industrial, and Physiological Psychology, the field of Personality, the Psychology of Reading, and on the special topics of Psycho-physics, Galvanometric Studies and Aesthetics. There was also a session devoted to the exhibition of eight research films, evenly divided between Child Psychology and Animal Psychology. The amount of time devoted to Child Psychology at the meetings showed that this field, considered in connection with related interests, has had a marked gain in activity and interest in the United States.

At the meeting of the National Academy of Sciences held at Washington, D. C., April 24-26, psychology was represented by M. F. Washburn, E. L. Thorndike, and C. E. Seashore, who presented papers. The programme of the American Association for the Advancement of Science listed 37 papers under Section I, Psychology. These meetings took place at Harvard University, Cambridge, Mass., December 28-30. There were six sessions and a neurological demonstration at the Boston City Hospital. The chairmen were: W. R. Miles, W. S. Hunter, E. G. Boring, J. P. Nafe, C. L. Hull, and J. E. Anderson. Occasional addresses were given by the retiring vice-presidents Walter S. Hunter, Section I, psychology, and Stuart A. Courtis, Section Q, education. As at the American Psychological Association meetings, moving pictures were extensively used.

German psychology has been feeling the full impact of disorganizing forces which have affected German science generally. In consequence of the political situation the Deutsche Gesellschaft für

Psychologie, which was scheduled to meet at Dresden in April, postponed its time of meeting to October 15, and the place to Leipzig. The general theme of the altered meeting was announced as "Central questions of present-day German life." William Stern, David Katz, and Kurt Koffka were forced to resign as president, vice-president, and literary editor of the Society, and their places were filled respectively by F. Krueger, W. Poppelreuter, and G. O. Klemm. Besides these changes, members of the Society have been expelled. The Gesellschaft für Aesthetik und allgemeine Kunstwissenschaft also postponed its meeting, planned for October 7-10 at Vienna, to some time in 1934. Professor Stern, who has been joint editor with Otto Lipmann of the *Zeitschrift für angewandte Psychologie* for many years, was forced from this post at about the time of Lipmann's death, and also from his editorship of the *Zeitschrift für Pädagogische Psychologie*. Many German psychologists have lost their places on University faculties, and several are in exile. Professor Theodor Lessing met his death by political violence in Marienbad, Czechoslovakia. The New School for Social Research in New York City formed a "University in Exile" to employ German scholars. This is a graduate school of political and social sciences. The psychologists Max Wertheimer and Erich von Hornbostel joined its faculty. Heinz Werner received an appointment to the University of Michigan's faculty, Kurt Lewin to Cornell University, and David Katz to the University of Manchester, England.

Because of economic conditions in the United States the radio broadcasts which had been presented for the past two years by the National Advisory Council on Radio in Education, and which included addresses on psychology, were discontinued. The committee of the Council on the Broadcasting of Psychology was, however, continued in office, under the chairmanship of Walter V. Bingham, in anticipation of resuming its programmes. The Committee on Public Relations of the Association of Consulting Psychologists, Norman Powell, chairman, arranged a series of broadcasts from Station WEVD, under the University of the Air, on Wednesday evenings from March 8 to April 5. The speakers in this series were E. T. Barr, M. Chappell, D. Fryer, D. Mitchell, and G. Tallman, introduced by R. H. Paynter, president of the Association. Other radio broadcasting was conducted under the direction of Prof. Carl Seashore from local stations near the State University of Iowa.

Professor Donald A. Laird of Colgate University organized a laboratory of sleep and fatigue at the Century of Progress Exposition. This venture, reminiscent of the bureau of psychometrics conducted by Dr. Joseph Jastrow at the Chicago 1893 World's Fair, was conducted by Robert Mason, a Colgate graduate student.

At New Haven, Conn., was held the 25th anniversary of the founding by C. W. Beers of the Society for Mental Hygiene. President J. R. Angell of Yale gave the address at the exercises. Mr. Beers was presented with a medal of the National Institute for Social Science.

NECROLOGY. The following prominent psychologists have died during the year: G. W. A. Luckey, formerly of the United States Bureau of Education, March 30; Irwin G. Priest, of the Bureau of Standards, July 19, known for his work in colorimetry, and formerly connected with the Munsell Company; Eleanor A. McC. Gamble,

Professor of Philosophy and Psychology at Wellesley College, August 30, one of Titchener's early graduate students, who contributed to the literature many articles on taste and smell as well as on other topics, and who did pioneer work in the application of Weber's law to smell; Theodor Lessing, of the faculty of the Technische Hochschule at Hanover, in the latter part of August, formerly known as an economist but later interested and productive in the field of characterology, editor and author of works on this subject; Dr. Martha Muchow, *Docent* in the Psychological Laboratory, University of Hamburg, September 29, for many years co-worker with W. Stern in research in child psychology; Otto Lipmann, Director of the Institut für Angewandte Psychologie, Neubabelsberg, Prussia, October 7, since 1907 co-editor of the *Zeitschrift für angewandte Psychologie*, author of more than a hundred articles on the applications of psychology in industry and associated topics; Shepherd Ivory Franz, Professor of Psychology at the University of California, October 14, well known for his research in sensation, brain functions, and abnormality, and who recently published a textbook on psychology. Previously unreported in this YEAR-BOOK is the death of Ludwig Reinhold Geissler, Professor of Philosophy and Education at Randolph-Macon Women's College, on Dec. 15, 1932. Professor Geissler, who was also director of the Psychological Laboratory at Randolph-Macon, was a co-founder of the *Journal of Applied Psychology*, and active in the field of industrial psychology.

The Psychological Exchange, a bi-monthly publication edited by James Hargan, and published at 507 Fifth Ave., New York City, entered upon its second year with the April-May issue. This journal, besides carrying items of news, has served as a medium for the discussion of problems in the teaching and practice of psychology, and serves as a clearing-house of information in regard to research being undertaken, literature in manuscript form, the placement of psychologists, etc.

The Modern Psychologist also completed its first year. This is a popular monthly edited by Dr. Dagobert D. Runes, with editorial offices at 310 Riverside Drive, New York City. It contains a wide variety of articles on the application of psychology to problems of living, accounts of recent psychological research, and reviews of psychological literature.

A second edition of the *Handbook of Child Psychology* was issued by the Clark University Press. Besides containing revisions of most of the articles appearing in the first edition (Clark University Press, 1931) it is augmented by many articles from new contributors.

Announcement has been made of the publication of a *Rivista de Psicologia i Pedagogia* by the General Psychotechnical Institute and Pedagogical Seminary of Catalunya University, Barcelona, Spain.

Several textbooks suitable for general use were published during the year. Gardner Murphy's *General Psychology* (Harper's, 1933) deals with psychology as the interaction of the world with the organism. It contains 28 chapters and 657 pages. *Psychology*, by Shepherd Ivory Franz and Kate Gordon, has eight collaborating contributors. It is an eclectic elementary textbook, divided into five general sections. In connection with it is published a *Psychology Work-Book* (McGraw-Hill

Co.), containing elementary laboratory exercises, demonstrations, and questions on the text. *Seven Psychologies* (twelfth in the Century Psychology Series) is intended by the author, Edna Heibredner, of Minnesota, for elementary students. It considers prescientific and scientific psychology, structuralism, the psychology of James, functionalism, behaviorism, dynamic psychology, Gestalt psychology, and Freudian psychology.

Judging from the nature of recent research it appears that the lines of demarcation between the various fields of psychology were much less sharply drawn during 1933 than has been the case in other periods. Greater activity occurred in the fields of social, educational, and genetic psychology, with many instances of work belonging at once to more than one of these divisions. The point of view of Social Psychology in particular permeated all the fields to a great extent.

GENERAL AND THEORETICAL PSYCHOLOGY. In theoretical psychology the general tendency is toward the digesting of the rich literature of recent years, to the accompaniment of minor controversies. Organismic conceptions of various kinds still hold the place of greatest interest, and functional psychologies are making strong headway. "Purposive" theories of behavior and German dynamic views continue to attract discussion. The majority of articles in the *Psychological Review* for the year consist of such discussion. Kurt Lewin has clarified the relationship of his own views to those of Tolman in *Vectors, Cognitive Processes, and Mr. Tolman's Criticism. Journal of General Psychology*, 1933, vol. viii, pp. 318-345, finding, beyond verbal differences, a slight disagreement of emphasis in regard to the "situational field." With a strong theoretical interest in the dynamic properties of the organism basic to much of the discussion, the problems of motivation were prominent not only in the theoretical papers but in a great many experimental investigations. Somewhat in contrast to the prevailing trend of the emphasis on motivation, was Max Meyer's challenging of the validity of the concept "emotion" in the *Psychological Review*, 1933, vol. 40, pp. 292 ff.

Another instance of the tendency to digest, summarize, and clarify, may be seen in the publication by L. N. Munn of an *Introduction to Animal Psychology, the Behavior of the Rat* (Houghton Mifflin, 1933), which brings together many of the contributions to this favorite field of research.

The German "Understanding Psychology" was advanced by A. Pfänder's *Die Seele des Menschen: Versuch einer verstehenden Psychologie* (Halle: Niemeyer); and a less philosophical work, more closely related to the trend of American psychology, was *Zur Grundlegung einer Bedürfnispsychologie* by David Katz, *Zeitschrift für Psychologie*, 1933, vol. 129, pp. 292-304.

A systematic contribution to theoretical psychology was E. G. Boring's *The Physical Dimensions of Consciousness* (Century, 1933). This work, a psychophysiological version of existential psychology, considers the possibilities of finding neurological correlates for the so-called "conscious dimensions," and is based in part on suggestions found in the work of the physiologist E. D. Adrian.

SOCIAL PSYCHOLOGY. The year's activity in social psychology fell largely into the divisions of practical social problems, personality study, and consideration of the individual as a social being. A work of general interest is Floyd H.

Allport's *Institutional Behavior* (University of North Carolina Press, 1933), which examines institutionalism as a psychological product of individuals. Interest in special social problems and in modern society is strong. *Research in Social Psychology of Rural Life*, published under the editorship of J. D. Black by the Social Science Research Council, is a handbook of theories and methods, with projects for research. An investigation of unemployment by M. Lazarsfeld and H. Zeisl, *Die Arbeitslosen von Marienthal, Psychologische Monographien*, 1933, No. 5, is an analysis of a small community nearly all of whose members are chronically unemployed. Comparative standards of living, social and anti-social habits, attitudes, and outlooks within the group are studied exhaustively. Three attitudes were found to divide the population into as many groups: resignation, relative cheerfulness, and desperation. There is a section on the technique of the "sociographic" method for making such studies.

The field of personality drew the attention of many investigators, who applied measuring scales not only to traits of personality and elements of character, but also to *attitudes and prejudices*. The national election of a year ago resulted in a study, *Trends of the Voter's Mind*, by Edward S. Robinson, *Journal of Social Psychology*, 1933, vol. iv, pp. 266-284. Another social question of current interest was investigated in *A Study of Racial Attitudes of College Students*, K. C. Garrison and V. S. Burch, same journal, pp. 230-235. The interest in attitudes, it may be noticed, is related to the prevailing interest in motivating forces of personality. H. Cason and A. Chalk contributed a study of *Annoyance and Behavior*, *Journal of Social Psychology*, vol. iv, pp. 143-156. The question of *The Personality and Emotions of Men* was the subject of research by E. G. Fleming, *ibid.*, p. 187. A typical study of traits of personality was that of Carney Landis and John H. Ross, *Humour and Its Relation to Other Personality Traits*, *ibid.*, pp. 156-176. In connection with the study of personality there was a discussion of the way in which judgments of personality are made. Thus P. E. Vernon, in *Some Characteristics of the Good Judge of Personality*, *Journal of Social Psychology*, 1933, vol. iv, pp. 42-57, determined some of the qualities of the good judge of the personality of (1) oneself; (2) friends and associates; (3) strangers. A new bibliography, *Studies in Character and Personality in German Psychological Literature*, *Psychological Bulletin*, 1933, vol. 30, p. 209 ff. was compiled by J. B. Maller.

An investigation of personal behavior by objective methods was *Studies in Expressive Movement* by G. W. Allport and P. E. Vernon (Macmillan, 1933). Besides including much interrelated material on expressive movements this work contains a chapter on *Matching Sketches of Character with Script* by Edwin Powers. Largely under the influence of Robert Saudek the investigation of judgments of personality by graphology continues to advance, as is indicated by the second volume of *Character and Personality* of which he is editor.

An important contribution to the theory and measurement of personality was *The Theory of Multiple Factors* (Univ. Chicago Press), by L. L. Thurstone, an exposition of a mathematical method for analyzing the personality.

Charlotte Bühler published *Der menschliche Lebenslauf als psychologisches Problem* (Leip-

zig: Hirzel), which is a study of the lives of 200 people of importance. It is in a sense an attempt to establish laws of biography. Five biological and five psychological periods of life are distinguished. Every career, the author finds, is definitely steered or ordered by a self-selected goal.

A translation of V. Bechterev's *General Principles of Human Reflexology* (London: Jarrolds) has appeared, containing an account of the fundamentals of social psychology from the point of view of Russian behaviorists.

With a constantly increasing interest in child psychology, especially of the preschool age, there is growing up in social psychology a department devoted to the social development of very young children. Much of the work is undertaken with methods adapted to the facilities of institutions in which the best controls can be secured. Thomas, Loomis, and Arrington have completed the first volume of their *Observational Studies of Social Behavior* (Yale University). This volume, entitled *Social Behavior Patterns*, determines the reliability with which the behavior of young children can be observed and interpreted. A critical extension of this work is offered by Jersild (*Amer. J. Psychol.*, vol. 45, no. 1).

In 1933 James H. Leuba, dean of American psychologists of religion, retired from the Department of Philosophy and Psychology at Bryn Mawr College and went to Switzerland for an extended stay. During the year he published *God and Man*, a work relating to the present-day philosophy of religion and to psychology. The semidecennial report on the literature of the psychology of religion was made in the *Psychological Bulletin* (vol. 30, no. 5) by Abraham Cronbach. Anthropological and ethnological studies, which are for the time being on the increase, and which include comparative investigations of American Indian tribes, Alaskan Indians, etc., have given added impetus to interest in racial psychology. An investigation which may be mentioned in this connection is *A Study of the Emotional Attitudes of Indians Possessing Different Degrees of Indian Blood*, by S. L. and L. C. Pressey, in the *Journal of Applied Psychology*, 1933, vol. xvii, pp. 410-416.

EDUCATIONAL PSYCHOLOGY (including *Mental Tests*). As was the case with general psychology, the year's progress both in educational psychology and in child psychology included the publication of new textbooks. Harry L. Hollingworth's *Educational Psychology* (Appleton, 1933) contains four sections, dealing respectively with the general principles of learning and motivation, problems of instruction, problems of special school subjects, and general educational problems. Robert S. Woodworth published *Adjustment and Mastery: Problems in Psychology* (Baltimore: Williams and Wilkins), in which the means of adjustment are presented in relation to the situations which demand the development of special abilities and the general ability to meet life. Also in this field was S. L. Pressey's *Psychology and the New Education* (Harper's, 1933).

The *Psychological Bulletin*, vol. 30, no. 7, gives references to tests and testing. In general, work in the field of tests involved much productive criticism and re-examination of the nature and province of psychological tests. The mathematical theory of testing (and, of course, of personality investigation) was worked over extensively, representative contributions being made by Spearman, Thorndike, Garrett, Lee, and Segel, notably in the

October number of the *Journal of Educational Psychology* (vol. xxiv).

The interest in motivation, noticed earlier, appeared in educational psychology in work on incentives and rewards, usually in connection with the problem of learning. A sample study is *The Influence of Increase and Decrease of the Amount of Reward upon the Rate of Learning*, by E. L. Thorndike and George Forlano, *Journal of Educational Psychology*, vol. xxiv, pp. 401-411. A bibliography on human learning by John A. McGeech, appeared in the *Psychological Bulletin*, vol. 30, no. 1, and a bibliography on *Conditioned Responses in Animals other than Dogs*, by G. H. S. Razran, no. 4.

A work having to do with learning, child psychology, animal psychology, and social psychology, was *The Ape and the Child* (Whittlesey House, 1933), by W. N. and L. A. Kellogg. The subtitle of this book is *A Study of Environmental Influence upon Early Behavior*. It consists of a comparison between the progress of an ape and a child brought up in the same household.

Arthur T. Gerslind is the author of a new *Child Psychology* (N. Y.: Prentice Hall, 1933). A work written in popular style for parents is *Child Upbringing and the New Psychology* by R. A. Howder (London: H. Mulford, 1933). A *Genetic Psychology* (Ronald Press), by A. R. Gilliland, treats of developmental problems in psychology. S. Isaacs is the author of *Social Development in Young Children: A Study of Beginnings* (London: G. Routledge and Sons). Maud E. Watson published *Children and Their Parents*. The study of adolescence was advanced by Elsie M. Smithies, *Case Studies of Normal Adolescent Girls* (Appleton, 1933). This work contrasts with both the abundant studies of adolescent abnormality that have appeared in the past, and with the purely theoretical studies which endeavor to fix the laws of adolescence.

ABNORMAL PSYCHOLOGY (including *Psychoanalysis*). Much interest was taken in a new work by W. A. White called *Forty Years of Psychiatry*, published as Monograph no. 57 of the *Nervous and Mental Disease Monographs*. Though not a large book (154 pages) it includes material of theoretical value in addition to a record of experiences.

Clark L. Hull brought together the results of his experimental work in hypnotism and suggestion in *Hypnosis and Suggestibility: an Experimental Approach* (Century, 1933). The emphasis in this work is more on hypnotism than suggestibility. The phenomena of suggestion are taking a more and more important position outside of the abnormal field, as indicated by the recent studies of prejudice and attitudes in social psychology, and by the extensive investigation of advertising and advertising media in applied psychology.

Havelock Ellis published *Psychology of Sex, a Manual for Students* (New York: Ray Long and Richard Smith, 1933). This work of 337 pages combines the literary skill and aptness in research for which the author, long recognized as an authority in the field, is noted. Its usefulness is not confined to those groups for whom its title indicates it to have been written. An increasing demand for works on education in sex may be noticed as a recent trend. This demand is connected with the interest in the theoretical psychology of sex differences as well as with the study of the psychology of sex adjustment.

The Mind of the Child, a Psycho-analytical Study is a translation by Eden and Cedar Paul from the French of C. Baudouin. It is another example of overlapping within the fields of psychology; significant developments in psychological theory are combined with Freudian conceptions. The impression is growing that the psychology of psychoanalytic schools may at last be assimilated into general psychology, partly through the elaboration of appropriate experimental techniques.

Sigmund Freud's *New Introductory Lectures on Psychoanalysis* appeared in German and English, the translation being by W. J. H. Sprott. W. W. Norton is the American publisher.

A practical interest within the abnormal field is the investigation of crime and criminals. An extensive work has been undertaken by Dr. B. Karpman of Washington. The first volume of his *Case Studies in the Psychopathology of Crime* (Washington, D. C.: The Mimeoform Press, 1933) has been published. This volume, which contains 1926 pages (large octavo), consists of a study of five criminal cases, with exhaustive accounts of their history and development. Although its approach is systematically genetic, the work is not psychoanalytic. Similar case studies were made in Germany, following the example of investigations made in recent years by Italian and Spanish psychologists. The *Zeitschrift für angewandte Psychologie* for 1933 contained such studies.

APPLIED PSYCHOLOGY. In this field as well as in others, changes in the social and economic order influenced the interests of investigators and the direction of their research. Perhaps the most imposing single contribution to applied psychology was the completion of a two-year survey of advertising by the Psychological Corporation. Under the direction of Prof. S. N. Stevens of Northwestern University, this survey, conducted over the country as a whole with large numbers of graduate students as investigators, consisted of the questioning of consumers about the influence of advertising on their purchases. As in other studies made elsewhere, such as that undertaken by the Psychological Institute at the University of Vienna, the results of this large survey indicated that the advertising message is of primary importance. The form of the layout, in the case of advertisements in the press and through posters, and the use of pictures and color, which have been objects of careful attention in the past, were found to be of lesser importance in making the advertisement effective. American women were found to be most impressed by straightforward appeals of evident sincerity, and were also affected favorably by dramatic values contained in such appeals.

The study of the efficacy of radio broadcasting for commercial purposes has been prosecuted extensively in recent years as part of a general programme of radio-research. C. Kirkpatrick published the results of his research in this field, finding that listening to the radio is a "middle class habit," that the materials of greatest interest to the average listener were news, information, music, and dramatics. Kirkpatrick's work is published as a *Report of Research into the Attitudes and Habits of Radio Listeners* (St. Paul: Webb Book Publishing Company). Other studies of the radio which are in progress indicate that a large new field has been opened in applied psychology and other branches as well. The third volume of *Education on the Air*, a yearbook pub-

lished at Ohio State University, made its appearance.

The second *Year Book* of the Association of Consulting Psychologists was also published. This Association met on May 6 at Philadelphia. One item of widespread interest was the report by Ethel Cornell on the movement to license psychologists. This movement was undertaken in the interests of psychologists, of organizations making use of psychologists' services, and of the general public.

Psychology Applied is the title of a book by George W. Crane (pub. Northwestern University Press). It shows the relation of psychology to a wide range of life problems.

Former United States Commissioner of Education, Dr. William John Cooper, has conducted a national survey of secondary education which is of psychological interest; the findings report the need of definite psychological guidance in schools. The work will be reported in twenty-eight monographs to appear in the future.

Psychologists are coming, in a sense, to apply psychology to psychology. There is a great deal of interest in, and criticism of, the teaching of psychology. One representative study is that of A. R. Gilliland, *The Nature and Aims of the Introductory Course in Psychology*, *Journal of Applied Psychology* 1932, vol. 16, pp. 614-622. During 1933 a symposium was held in the *Psychological Exchange* on the value of the work on the physiology of the nervous system that has always been a part of elementary courses in psychology. In the same journal the question of the advisability of using the points of view of abnormal psychology and mental hygiene as bases for elementary courses, instead of the present mixture of theories and experimental results, constituted another popular symposium to which many teachers contributed.

PUBLIC AFFAIRS, INSTITUTE OF. An organization inaugurated in 1927 at the University of Virginia for the purpose of advancing the popular understanding of public questions and stimulating in the public mind a more vital interest in public matters, particularly the domestic problems of the United States. The attendance at the 1933 session, held from July 2 to 15, consisted of 654 registered members and delegates, and 914 registered visitors from 30 States, the District of Columbia, Australia, China, Chile, Cuba, Czechoslovakia, Japan, Norway, Siam, and Wales. Membership in the institute is open to men and women who have taken part in public life and to those who are interested in any phase of public affairs.

The programme of the 1933 session was planned in accordance with the announced purpose of the institute to limit its discussions primarily to a study of governmental problems of national, State, and local concern, and to certain economic and social conditions underlying them. In addition, however, because the Institute of Politics at Williamstown was closed, three round tables in international relations were included: "Our Latin-American Relations"; "The Relations of the United States with the League of Nations"; and "The United States and the Far East." In the future programmes will be devoted to both domestic and international affairs. The programme dealt also with the following subjects: "The Country Church and Agriculture"; "County Government"; "The Money, Banking, and Financial Situation in the United States"; "Unemploy-

ment Insurance"; and "Religious Education." There were five special conferences on "Adult Education"; "Club Activities and Problems of the Federation of Women's Clubs"; "Municipal Administration"; "Roadside Beauty"; and "Parent-Teacher Training Course." In addition to the leaders of these round tables and conferences there were 106 invited speakers before the round tables and 28 speakers before the general sessions in the evening.

The officers of administration in 1933 were: John L. Newcomb, president of the University of Virginia; Charles G. Maphis, director of the institute and Marjorie McLachlan, secretary of the institute. Headquarters are at the University of Virginia, Charlottesville, Va.

PUBLIC FINANCE. The serious conditions in Federal public finance which had become so strongly marked during the year 1932, assumed a new phase during the latter part of the fiscal year following. During the latter part of that year (March-June, 1933), a new management of public affairs had come into office. The immense fiscal deficit, amounting to \$3,153,097,507 for the fiscal year ending June 30, 1932, had attracted close attention. It had formed a major subject of discussion during the political campaign which occupied the latter part of 1932 and had formed the topic of positive pledges on the part of the new administration during its pre-election period. These pledges had included a positive promise that the budget be balanced, that taxation be re-adjusted, and that economies in the actual conduct of affairs be introduced at Washington, particularly through the ending of demand for a bonus payable to the ex-enlisted men of the World War—the so-called "veterans." This programme, of course, could not, under the most favorable conditions, be immediately carried into effect; and consequently the latter half of the fiscal year 1933 (January-June 30, 1933), proved nearly as disappointing and alarming as its predecessor—the deficit amounting to about \$1,880,000,000. At the same time, there was, during the winter of 1932-33, little tendency toward business expansion or recovery, and hence no improvement in revenue. It was only after advance in activity had begun to make itself apparent, during the spring, that some betterment was noted. Accordingly, the fiscal year 1933 ending June 30, 1933, must be regarded as a survival from the conditions of the Hoover régime as modified only very slightly during the first quarter of that year.

The new administration, however, assumed, early in its career, the task of carrying out some of the pledges it had undertaken; and as a result it shortly decided against the immediate payment of the soldiers' bonus. This endeavor was successfully carried through; and then the balancing of the budget was undertaken. Here political expediency soon proved too strong for the new government. The incoming administration had pledged a 25 per cent cut in actual running expenses, and this promise was shortly made effective by marked reductions (15-30 per cent) in salaries of civil servants, and of retired army officers, and other pensioners. Great irregularities and injustices occurring in these endeavors, readjustments proved needful, but in substance an attempt was made with more or less genuine success to fulfill the pledges of the campaign. But here the success ended and to effect the promised ideal of a balance, the discredited European

device of an ordinary and an extraordinary budget—the latter to include all sums paid out on public works, relief, and the like—was resorted to. Only to the extent of interest and other carrying charges necessitated by the new budget, was it deemed needful to charge the ordinary budget with new burdens. Thus the extraordinary session of Congress, which had been summoned immediately upon the advent of the new administration came to an end, with an equivocal adjustment of the budget situation.

Congress, however, had found it needful, in spite of the unpopularity of its course, to make at least a gesture of provision of new sources of income. It had, accordingly, adopted an amended form of the income-tax, applicable for the return covering the year 1933 (returns due March, 1934), in which limitation was provided for the deduction of losses and in which certain additions were made to rates so that the final result was a burdensome impost in some respects more severe than the war revenue taxation. This legislation moreover, added some hastily conceived nuisance

cement, the Treasury department whose management had, meantime, been changed, submitted to the Ways and Means committee of the House of Representatives, then studying legislation with a view to the forthcoming session to open early in January, 1934, a new programme for taxation designed to render the income tax a still more severe burden, and to make it press still more heavily upon the taxpayers subject to it. Particularly was the effort made to close the avenues which, as Senatorial investigation into investment banking had shown, were permitting large taxpayers to make extensive legal deductions from the amount of their incomes subject to taxation. This programme had been taken under advisement at the end of the year, and many other suggestions had been given attention, but no action definitely taken. The year 1933 was thus a period of many promises, but of no performance, although steps had been taken and action determined upon, which, in the near future, must bring considerable changes into the income situation of the Federal government.

ORDINARY RECEIPTS, FISCAL YEARS 1920 TO 1933

[On basis of daily U. S. Treasury statements (unrevised)]

Year ending June 30—	Customs	Income and profits taxes	Miscellaneous internal revenues	Miscellaneous revenues, including Panama Canal Proceeds from foreign obligations	All other	Total *
1920	\$322,902,650	\$3,944,949,288	\$1,460,082,287	\$ 74,296,622	\$892,834,542	\$6,694,565,389
1921	308,564,391	3,206,046,158	1,390,379,823	114,821,206	605,121,383	5,624,932,961
1922	356,443,387	2,068,128,193	1,145,125,064	75,222,068	464,185,439	4,109,104,151
1923	561,928,867	1,678,607,428	945,865,333	232,989,156	587,744,697	4,007,135,481
1924	545,637,504	1,842,144,418	953,012,618	221,774,675	449,475,487	4,012,044,702
1925	547,561,226	1,760,537,823	828,638,068	183,637,677	459,773,890	3,780,148,684
1926	579,430,093	1,982,040,088	855,599,289	194,237,957	351,448,263	3,962,755,690
1927	605,499,983	2,224,992,800	644,421,542	206,089,173	448,390,943	4,129,394,441
1928	569,000,000	2,178,400,000	621,000,000	205,900,000	468,900,000	4,042,300,000
1929	600,810,838	2,331,274,428	608,135,036	199,131,566	293,836,505	4,030,250,225
1930	589,000,903	2,410,986,977	628,308,035	303,870,694	247,725,091	4,177,941,702
1931	378,354,005	1,860,394,295	569,386,721	184,474,622	314,623,856	3,317,233,493
1932	327,700,000	1,057,300,000	503,700,000	.....	232,500,000	2,121,228,006
1933	250,750,251	746,206,445	858,217,512	.....	224,522,534	2,238,356,180

* General, special, and trust funds combined.

taxes—one a tax of 5 per cent upon all dividends, to be deducted at source by the dividend-paying corporation, another a tax upon the capital stock of corporations, while several relatively minor changes and adjustments rendered taxation extremely inquisitorial and heavy. Some attempt to mollify the taxpayer was seen in the provision that, in the event of the repeal of the Eighteenth Amendment to the Constitution, providing for prohibition of the manufacture and sale of alcoholic liquors, these nuisance taxes should end (as of Dec. 31, 1933). The electorate having voted, through the usual machinery of State conventions, to repeal the Eighteenth Amendment, prohibition came to a close on Dec. 5, 1933, and the recall of the nuisance taxes was accordingly ordered made effective at the close of the year.

Meantime, the extraordinary appropriations of Congress, and the amazing extravagance of the administration at Washington, including the creation of many useless bureaus, and offices, was calling attention once more to the need of revenue. The liquor taxes, long heralded as an almost illimitable source of income, were speedily seen to be likely to yield only a very moderate amount of revenue, and the changes in the income tax structure made by Congress had not only produced dissatisfaction, but had failed to make the yield much larger than during the preceding year—so far as the current year's returns were disclosing. Accordingly, at the beginning of De-

FEDERAL INCOMES. Total incomes for the fiscal year ending June 30, 1933, including trust funds, were about equal to those of the preceding period, amounting to \$2,238,356,180, and were thus relatively better than for 1932, which had shown a marked falling off from 1931. Expenditures for 1933 amounted to \$5,306,623,054 compared with \$5,274,325,513 for 1932. There was thus deficit of \$3,068,266,874. Receipts from personal incomes and corporation income taxes, were respectively \$352,573,620 and \$394,217,784, while customs duties continued to fall as foreign trade progressively declined, amounting for the fiscal year to only \$250,750,251. Income throughout the United States was, in fact, progressively shrinking. This was fundamentally due to the unemployment which resulted in corresponding reduction in the output of wealth. Among that small class subject to income taxation, the fall in money income resulted from the gradual falling of corporation profits, which was so marked a feature of 1932, accompanied as it was by further decrease of dividend outlays during the forefront of the current year (January-June, 1933). Revival of business in a halting and partial way held out better prospects of income, and increased some items of internal revenue, while the restoration of legalized beer brought in some small additions, not previously available, though nothing to compare with the extravagant anticipations held out by opponents of prohibition. On the other hand,

RECEIPTS AND EXPENDITURES FOR THE FISCAL YEAR 1933, ON THE BASIS OF DAILY TREASURY STATEMENTS (UNREVISED), AND ESTIMATED RECEIPTS AND EXPENDITURES FOR THE FISCAL YEARS 1934 AND 1935

[This statement does not include contingent liabilities resulting from the issue of debentures by the Reconstruction Finance Corporation]

GENERAL AND SPECIAL FUNDS		1933, actual	1934, estimates	1935, estimates
Receipts:				
Internal revenue—				
Income tax		\$748,206,444.95	\$864,000,000.00	\$1,265,000,000.00
Miscellaneous internal revenue—				
National Industrial Recovery Act taxes ^a			153,700,000.00	80,000,000.00
All other		858,217,511.61	1,242,900,000.00	1,440,100,000.00
Processing tax on farm products			403,000,000.00	548,000,000.00
Customs—				
Spirits and fermented liquors			89,000,000.00	84,000,000.00
All other		250,750,251.27	310,000,000.00	382,000,000.00
Miscellaneous receipts—				
Proceeds of Government-owned securities—				
Principal—foreign obligations		31,567,518.98	20,000,000.00 ^b	(^b)
Interest—foreign obligations		67,190,207.22		
All other		32,090,746.50	95,439,315.00	79,952,416.00
Panama Canal tolls, etc.		23,267,500.34	25,672,424.00	25,661,000.00
Other miscellaneous		70,406,560.89	56,227,017.00	69,952,063.00
Total		2,079,696,741.76	3,259,938,756.00	3,974,665,479.00
Expenditures:				
<i>General</i>				
Departmental—				
Legislative establishment		21,477,373.26	17,718,500.00	18,734,500.00
Executive Office		369,112.82	369,400.00	379,400.00
State Department		15,225,568.81	11,100,100.00	11,036,000.00
Treasury Department ^d		268,617,901.01 ^a	103,671,500.00	98,479,300.00
War Department (nonmilitary) ^d			1,350,400.00	1,150,900.00
Department of Justice		44,088,327.05	34,107,200.00	31,178,500.00
Post Office Department		57,882.41		
Interior Department		74,579,716.62	56,166,100.00	43,845,800.00
Department of Agriculture		250,981,139.02	59,903,800.00	52,167,800.00
Department of Commerce		45,968,153.14	29,263,400.00	38,134,000.00
Department of Labor		13,677,841.57	15,569,900.00	13,831,400.00
Shipping Board		28,518,830.33	(^r)	(^r)
Other independent offices and commissions		54,010,977.14 ^a	23,509,260.00	15,360,000.00
Unclassified items		895,138.48		
Total departmental		816,677,684.70	348,729,560.00	324,277,600.00
Public building construction and sites, Treasury Department ^d			89,568,600.00	15,440,600.00
River and harbor work ^c		118,391,256.03	92,349,300.00	40,479,100.00
National defense—				
Army ^d		309,557,458.47 ^a	229,014,600.00	230,484,600.00
Navy		349,561,924.59	281,115,200.00	310,180,300.00
Veterans' Administration ^c		763,154,886.30	491,940,000.00	488,928,000.00
Adjusted service certificate fund		100,000,000.00	50,000,000.00	50,000,000.00
Agricultural Adjustment Administration			514,800,000.00	570,744,000.00
Farm Credit Administration ^f		2,574,625.74 ^j	16,588,407.00	3,949,200.00
Agricultural marketing fund (net) ^f		3,254,996.45	13,600,000.00	13,000,000.00
Distribution of wheat and cotton for relief		34,240,628.21		
Refunds of receipts—				
Customs		12,576,841.79	11,860,000.00	11,010,700.00
Internal revenue		57,763,119.46	56,916,900.00	46,605,000.00
Postal deficiency		117,380,192.33	69,595,000.00	92,014,200.00
Panama Canal		12,672,728.59	10,600,000.00	9,340,800.00
Subscriptions to stock of Federal land banks		249,545.00		
Civil service retirement fund (Government share)		20,850,000.00	20,850,000.00	20,850,000.00
Foreign service retirement fund (Government share)		418,000.00	292,700.00	159,100.00
District of Columbia (Government share)		7,775,000.00	5,700,000.00	5,700,000.00
Interest on the public debt		689,365,105.60	742,000,000.00	824,349,000.00
Public debt retirements—				
Sinking fund		425,660,300.00	488,121,500.00	525,738,800.00
Purchases and retirements from foreign repayments		30,977,000.00		
Received from foreign governments under debt settlements		2,909,650.00		
Estate taxes, forfeitures, gifts, etc.		2,057,850.00	50,000.00	25,000.00
Total general ^a		3,865,915,458.88	3,533,691,767.00	3,763,276,000.00
<i>Emergency ^a</i>				
Federal Emergency Administration of Public Works:				
Administrative expenses			9,812,000.00	30,000,000.00
Loans and grants to States, municipalities, etc.			203,174,000.00	182,152,000.00
State Department			1,211,000.00	750,000.00
Treasury Department—				
Public building construction and sites			10,000,000.00	22,000,000.00
All other			14,845,300.00	11,229,900.00
War Department (nonmilitary)—				
River and harbor work			181,934,000.00	75,552,000.00
All other			1,552,100.00	540,000.00
National defense—				
Army			61,880,800.00	26,007,600.00
Navy			56,068,200.00	144,669,400.00

RECEIPTS AND EXPENDITURES FOR THE FISCAL YEAR 1933, ON THE BASIS OF DAILY TREASURY STATEMENTS (UNREVISED), AND ESTIMATED RECEIPTS AND EXPENDITURES FOR THE FISCAL YEARS 1934 AND 1935—(Continued)

[This statement does not include contingent liabilities resulting from the issue of debentures by the Reconstruction Finance Corporation]

	1933, actual	1934, estimates	1935, estimates
<i>Emergency—Continued</i>			
Panama Canal		925,000.00	75,000.00
Department of Justice		979,800.00	.....
Interior Department—			
Boulder Canyon project		5,450,000.00	24,000,000.00
All other		42,898,800.00	78,780,400.00
Department of Agriculture—			
Public highways		323,162,600.00	236,878,100.00
All other		21,264,300.00	14,321,800.00
Department of Commerce		2,919,400.00	3,071,300.00
Department of Labor		1,510,000.00	893,400.00
Veterans' Administration		1,191,000.00	675,000.00
Independent offices and commissions		1,040,900.00	542,000.00
District of Columbia		872,300.00	887,200.00
Unclassified, including unallotted funds		334,505,300.00	237,408,000.00
Civil Works Administration		400,000,000.00	.....
Administration for Industrial Recovery		4,250,000.00	(¹)
Agricultural Adjustment Administration—			
Department of Agriculture		40,250,000.00	5,000,000.00
Farm Credit Administration		60,000,000.00	.....
Commodity Credit Corporation		3,000,000.00	.....
Farm Credit Administration (revolving fund)		40,000,000.00	.....
Emergency Conservation Work		341,705,600.00	65,190,000.00
Reconstruction Finance Corporation—			
Direct expenditures by the corporation	1,153,438,246.06		
From funds allocated by the corporation—			
Crop production loans	37,148,880.24		
Regional agricultural credit corporations	44,685,756.79		
Loans to joint stock land banks .....	.....	
Farm mortgage relief	110,023.55		
Farm Credit Administration	2,294,738.91		
Commodity Credit Corporation .....	.....	
Capital stock of home loan banks	42,950,000.00		
Federal Surplus Relief Corporation .....	.....	
Capital stock of Home Owner's Loan Corporation	1,000,000.00		
Tennessee Valley Authority		19,000,000.00	31,000,000.00
Federal land banks—			
Subscriptions to paid-in surplus		44,400,000.00	5,600,000.00
Payment for reduction of interest rates on mortgages		7,950,000.00	7,050,000.00
Federal Savings and Loan Associations (subscriptions to preferred shares)		50,000,000.00	.....
Federal Deposit Insurance Corporation (subscriptions to stock)		150,000,000.00	.....
Total emergency *	1,277,038,167.73	6,357,486,700.00	723,286,500.00
Total general and emergency expenditures *	5,142,953,626.61	9,891,178,467.00	4,486,562,500.00
Excess of expenditures over receipts *	3,063,256,884.85	6,631,239,711.00	511,897,021.00
<i>Summary</i>			
Excess of expenditures	3,063,256,884.85	6,631,239,711.00	511,897,021.00
Less public-debt retirements	461,604,800.00	488,171,500.00	525,763,800.00
Excess of expenditures (+) or excess of receipts (—) (excluding public-debt retirements)	+2,601,652,084.85	+6,143,068,211.00	—13,866,779.00
Trust and contributed funds, ² excess of receipts (—) or expenditures (+)	+5,009,988.73	—1,565,822.00	—1,610,929.00
Total excess of expenditures (+) or excess of receipts (—) (excluding public debt retirements)	+2,606,662,073.58	+6,141,502,389.00	—15,477,708.00
Increase (+) or decrease (—) in General Fund balance	+445,008,042.44	—205,221.00	.....
Increase (+) or decrease (—) in the public debt	+3,051,670,116.02	+6,141,297,168.00	—15,477,708.00
Public debt at beginning of year	19,487,002,444.13	22,538,672,560.00	28,679,969,728.00
Public debt at end of year	22,538,672,560.15	28,679,969,728.00	28,664,492,020.00
<i>TRUST AND CONTRIBUTED FUNDS³</i>			
Receipts	158,659,438.80	155,848,063.00	154,137,079.00
Expenditures	163,669,427.53	154,282,241.00	152,526,150.00

NOTE—Excess credits in italics to be deducted.

¹ Receipts for the temporary revenue provisions of the National Industrial Recovery Act are estimated for the periods prior to their termination following the proclamation on Dec. 5, 1933, of repeal of the Eighteenth Amendment.

² The total amounts owing to the United States on account of obligations of foreign governments are \$328,000,000 and \$335,000,000 for the fiscal years 1934 and 1935, respectively. To the extent that receipts from foreign governments exceed amounts included in the estimates, there will be a corresponding increase in total receipts.

³ Additional expenditures on these accounts for the fiscal years 1934 and 1935 are included under "Federal Emergency Administration of Public Works."

⁴ The classification of general expenditures for public-building construction and sites, Treasury Department, and for War Department (nonmilitary) prior to the fiscal year 1934 is not available, and such expenditures for the

RECEIPTS AND EXPENDITURES FOR THE FISCAL YEAR 1933, ON THE BASIS OF DAILY TREASURY STATEMENTS (UNREVISED), AND ESTIMATED RECEIPTS AND EXPENDITURES FOR THE FISCAL YEARS 1934 AND 1935—(Continued)

[This statement does not include contingent liabilities resulting from the issue of debentures by the Reconstruction Finance Corporation]

fiscal year 1933 are therefore included in general expenditures under Treasury Department and National Defense—Army, respectively.

* Revised to adjust \$1,112,941.82 credit in special deposit account of Farm Loan Bureau now Farm Credit Administration.

† Included under Department of Commerce.

* Revised to adjust \$8,773,569.75 for Emergency Conservation Work included in daily Treasury statements in 1933 under National Defense, Army.

‡ Exclusive of \$8,773,569.75. See note *.

* On and after May 27, 1933, repayments of loans made from agricultural marketing fund—Federal Farm Board, and interest thereon, are reflected as credits in the expenditures of the Farm Credit Administration.

† Exclusive of \$1,112,941.82. See note *.

* Emergency expenditures prior to the fiscal year 1934 (except Reconstruction Finance Corporation) are included in general expenditures, the classification of which emergency expenditures is not available for comparison with emergency expenditures for the fiscal year 1934. Therefore, neither the totals of general expenditures nor the totals of emergency expenditures for the fiscal year 1934 are comparable with the totals for prior fiscal years.

* No allotment has yet been made for 1935. Estimate of expenditures is included in the figures relating to unallotted funds.

* The estimates of expenditures of the Reconstruction Finance Corporation are contingent on the enactment of legislation extending the Corporation's authority to incur obligations to June 30, 1934. If the authority is not extended, the estimated expenditures for 1934 will be reduced by \$903,000,000, and the net repayments for 1935 will be reduced by \$74,000,000.

* Of the emergency expenditures made up to and including the fiscal year 1935, it is roughly estimated that \$2,500,000,000.00 represents loans that will be repaid to the Government during the fiscal year 1936 and subsequent years, which repayments will be available for reduction of the public debt.

* Total expenditures and excess of expenditures for the fiscal year 1933 include expenditures made by the Reconstruction Finance Corporation, whereas total expenditures in previously published statements for 1933 did not include Reconstruction Finance Corporation expenditures.

* The classification of receipts and expenditures on account of contributed funds prior to the fiscal year 1934 is not available. Such receipts and expenditures were classified as special funds and are included in the receipts and general expenditures under General and Special Funds for the fiscal year 1933.

the undertaking of a huge programme of public works estimated to cost some \$3,300,000,000; and the provision of some \$1,000,000,000 additional for the Reconstruction Finance Corporation's issues gave promise of a still deeper plunge into deficit financing.

The second half of the calendar year, from July to December, 1933, afforded some improvement in actual revenue conditions. Beer and (just at the close of the year) "hard liquor" taxes, began to bring in some substantial incomes—still far below promises held out by advocates of liberal drink legislation. The corporation dividend and capital stock taxes, enacted in May, likewise yielded moderately, and customs duties late in the year were slightly increased. For the first half of the fiscal year 1934 (July 1, 1933 to Dec. 31, 1933) ordinary receipts were \$1,468,897,941 which was about \$446,000,000 more than for the same period of the preceding year.

FEDERAL EXPENDITURES. Congress had assembled for the special session in March, 1933, eager for large government subsidies payable to all sorts and conditions of voters. It not only made the huge appropriations for relief and public works already briefly described, but it speedily appropriated substantial sums for the payment of bonuses to farmers in return for the "plowing under" of undesired cotton, abandonment of "excess" acreage destined to wheat, and the wanton slaughter of farm animals in the effort to end an existing (alleged) surplus of meat products. Fantastic expenditures of every sort abounded in the appropriation bills of the spring, and in the actions of the Reconstruction Finance Corporation during the same period and money was prodigally provided for the establishment of the administrative mechanism called for in the enforcement of the various schemes of recovery and relief which had originally been thought of as palliatives, or as sedatives for uneasy bodies of voters. Expenditures for the years 1920-1933 are shown in the accompanying table on column 2.

BANKING POLICY. As the deficit situation con-

tinued to grow in seriousness, the administration of the Treasury Department naturally found itself obliged to consider with increasing gravity the question of relationships with the banks. President Roosevelt, in his campaign addresses, had called sharp attention to the practice of his predecessor in relying upon heavy bank borrowing as the means of providing himself with funds for current necessities and had advocated the adoption of a policy of funding. This proposal had been strongly approved by the financial community, and had been urged as a first step to be taken during the early months of the new management. The weak excuse that banking conditions did not permit any such step to be taken

ORDINARY RECEIPTS, EXPENDITURES CHARGEABLE AGAINST ORDINARY RECEIPTS, AND SURPLUS 1920 TO 1933*

[On basis of daily Treasury statements (unrevised)]

Fiscal year	Total ordinary receipts	Expenditures chargeable against ordinary receipts	Surplus
1920 ...	\$6,694,565,388	\$6,482,090,191	\$212,475,197
1921 ...	5,624,932,960	5,538,209,189	86,723,771
1922 ...	4,109,104,150	3,795,302,499	313,801,651
1923 ...	4,007,135,480	3,697,478,020	309,657,460
1924 ...	4,012,044,701	3,506,677,715	505,366,986
1925 ...	3,780,148,684	3,529,643,446	250,505,238
1926 ...	3,962,755,690	3,584,987,873	377,767,817
1927 ...	4,129,394,441	3,493,584,519	635,809,922
1928 ...	4,042,848,156	3,643,519,875	398,328,281
1929 ...	4,033,250,225	3,848,463,190	184,787,035
1930 ...	4,177,941,702	3,994,152,487	183,789,215
1931 ...	3,317,238,493	4,219,950,338	902,716,845*
1932 ...	2,121,228,006	5,274,325,513	3,153,097,507*
1933 ...	2,238,356,180	5,306,623,054	3,068,266,874*

* Deficit † General, special, and trust funds combined.

(although presumably they permitted continuous reliance upon the banks for direct aid, even during the continuance of the bank holiday) was not generally regarded with approval especially as the year advanced, and the immediate calls for funds increased. The figures for current conditions showed that the government was cur-

PRELIMINARY STATEMENT OF THE PUBLIC DEBT, DEC. 31, 1933
[On the basis of daily Treasury statements]

Bonds:		
2% Consols of 1930	\$ 599,724,050.00	
2% Panama Canal loan of 1916-36	48,954,180.00	
2% Panama Canal loan of 1918-38	25,947,400.00	
3% Panama Canal loan of 1931	49,800,000.00	
3% Conversion bonds of 1946-47	28,894,500.00	
2½% Postal Savings bonds (6th to 45th series)	68,638,500.00	
		\$ 821,953,630.00
First Liberty loan of 1932-47—		
3½% bonds	\$1,892,227,350.00	
4% bonds (converted)	5,002,450.00	
4½% bonds (converted)	535,982,100.00	
	1,988,211,900.00	
4½% Fourth Liberty loan of 1933-38 (called and uncalled)	5,369,852,450.00	
		7,308,064,350.00
Treasury bonds—		
4½% bonds of 1947-52	758,983,800.00	
4% bonds of 1944-54	1,036,834,500.00	
3¾% bonds of 1946-56	489,087,100.00	
3¾% bonds of 1943-47	454,135,200.00	
3¾% bonds of 1940-43	352,993,950.00	
3¾% bonds of 1941-43	544,915,050.00	
3½% bonds of 1946-49	819,097,000.00	
3% bonds of 1951-55	755,486,350.00	
3½% bonds of 1941	834,474,100.00	
4½%-3½% bonds of 1943-45	1,398,095,650.00	
		7,444,102,200.00
Total bonds		15,569,120,180.00
Treasury Notes:		
3% series A—1934, maturing May 2, 1934	244,234,600.00	
2½% series B—1934, maturing Aug. 1, 1934	345,292,600.00	
3% series A—1935, maturing June 15, 1935	416,602,800.00	
1½% series B—1935, maturing Aug. 1, 1935	353,865,000.00	
3½% series A—1936, maturing Aug. 1, 1936	365,138,000.00	
2½% series B—1936, maturing Dec. 15, 1936	360,533,200.00	
2½% series C—1936, maturing Apr. 15, 1936	560,419,200.00	
3½% series A—1937, maturing Sept. 15, 1937	830,991,500.00	
3% series B—1937, maturing Apr. 15, 1937	504,778,900.00	
2½% series A—1938, maturing Feb. 1, 1938	277,516,600.00	
2½% series B—1938, maturing June 15, 1938	620,861,800.00	
	4,880,144,200.00	
4% Civil Service retirement fund, series 1934 to 1938	240,000,000.00	
4% Foreign Service retirement fund, series 1934 to 1938	2,445,000.00	
4% Canal Zone retirement fund, series 1936 to 1938	2,221,000.00	
		5,124,810,200.00
Certificates of Indebtedness:		
¾% series TM—1934, maturing Mar. 15, 1934	460,099,000.00	
¼% series TJ—1934, maturing June 15, 1934	174,905,500.00	
2¼% series TD—1934, maturing Dec. 15, 1934	992,496,500.00	
	1,627,501,000.00	
4% Adjusted Service Certificate Fund series, maturing Jan. 1, 1934	126,100,000.00	
		1,753,601,000.00
Treasury Bills (Maturity Value):		
Series maturing Jan. 3, 1934	100,050,000.00	
Series maturing Jan. 10, 1934	75,020,000.00	
Series maturing Jan. 17, 1934	75,523,000.00	
Series maturing Jan. 24, 1934	80,034,000.00	
Series maturing Jan. 31, 1934	60,180,000.00	
Series maturing Feb. 7, 1934	75,335,000.00	
Series maturing Feb. 14, 1934	75,295,000.00	
Series maturing Feb. 21, 1934	60,063,000.00	
Series maturing Feb. 28, 1934	100,027,000.00	
Series maturing Mar. 7, 1934	100,050,000.00	
Series maturing Mar. 21, 1934	100,263,000.00	
Series maturing Mar. 28, 1934	100,890,000.00	
		1,002,730,000.00
Total interest-bearing debt outstanding		23,450,261,380.00
Matured debt on which interest has ceased:		
Old debt matured—issued prior to Apr. 1, 1917	1,504,820.26	
4% and 4½% Second Liberty loan bonds of 1927-42	2,244,150.00	
4½% Third Liberty loan bonds of 1928	3,616,050.00	
3½% Victory notes of 1922-23	11,150.00	
4½% Victory notes of 1922-23	887,350.00	
Treasury notes, at various interest rates	2,802,850.00	
Certificates of indebtedness, at various interest rates	42,686,600.00	
Treasury bills	10,492,000.00	
Treasury savings certificates	508,175.00	
		64,753,145.26
Debt bearing no interest:		
United States notes	346,681,016.00	
Less gold reserve	156,039,088.03	
	190,641,927.97	
Deposits for retirement of national bank and Federal Reserve bank notes		
Old demand notes and fractional currency	102,772,118.00	
Thrift and Treasury savings stamps, unclassified sales, etc.	2,038,657.08	
	3,828,512.24	
		298,776,210.29
Total gross debt		23,818,790,785.55

rently increasing the amount of public securities held by banks, in about the same proportion that the deficit grew, and this added materially to the anxieties of the financial public; but the year closed without any effort to place the floating debt in the hands of the general public. The only effort at any general policy of the sort was afforded by an announcement of intent to refund the 4¼ per cent Fourth Liberty loan, still outstanding, into 3¾ per cent longer term bonds, in October, 1933. The offer at first bade fair to succeed, but the adoption of the gold-buying policy for inflation purposes quickly checked the partial success thus enjoyed, and the undertaking came to an unsatisfactory close—with only a fraction of the bonds presented for refunding. The warning thus administered proved sufficient to serve as a caution against continuance with the inflation tactics and propaganda during the period of the December financing:—at which time \$950,000,000 in Treasury notes was issued partly to be used in meeting maturing obligations, partly for current interest. This was followed by an issue of \$100,000,000 Treasury bills, also placed with the banks, and thus subjected them to added strain. The December financing thus provided for was the largest for a long time at that season. Perhaps the Treasury would not have been able to force upon the banks any such large quantity of its own obligations, had not the condition of the banks been such as to lead the government to resort to the plan of practically compelling the various institutions to issue preferred stock on a large scale. During the autumn, the Reconstruction Finance Corporation became the owner of more than \$500,000,000 of such stock, in over 300 banks, and as it had advanced to this same group some \$600,000,000 as direct loans, it was at the close of the year in various ways interested in the several institutions to the extent (in all) of over a billion and a quarter dollars. The banks obviously were not in position to refuse to take the offerings of their largest stockholder and thus the Treasury was practically in the position of the old well-known banking syndicates so much criticized of recent years which were in the habit of forcing new issues upon their members by the simple process of assignment of "quotas."

THE DEBT. In the table on page 698 is afforded a tabular view of the national debt at the close of the year. The striking element in the showing, as will have been inferred, from what has already been said, will be seen in the great increase of the floating debt captions—the Treasury notes, Treasury bills, and others of similar maturity.

LEGISLATIVE PROSPECTS. Shortage of income and constant advance of debt led to serious proposals for an immense increase in taxation which were presented to the preliminary sessions of the Ways and Means committee, held during December in preparation for the reopening of Congress which (according to the new system, now for the first time inaugurated, of deferring the opening until after the holidays), was to begin its deliberations after the beginning of January. The measures submitted by the Treasury department called for a severe advance in individual income taxation, and for drastic elimination of exemptions and abatements. The proposals met with considerable sharp criticism and various substitutes were offered, but the Ways and Means committee adjourned for the holidays without coming to a decision regarding the

programme for the coming year. About the only definite action taken by it with reference to taxation was to vote a tax of \$2 per gallon upon the sale of alcoholic liquors whose manufacture and sale had not been provided for by the final action taken on the fifth of December, whereby the Eighteenth (prohibition) Amendment to the Constitution was repealed. This repeal had, incidentally, brought into effect a conditional measure adopted by Congress whereunder the tax on dividends and that on capital stock of corporations were to be withdrawn upon the first of January immediately succeeding the cancellation of the Eighteenth Amendment.

PUBLIC UTILITIES. See POWER PLANTS; MUNICIPAL OWNERSHIP.

PUBLIC WORKS ADMINISTRATION. See RAILWAYS; TUNNELS; BUILDING; RAPID TRANSIT; RAILWAYS.

PUERTO RICO, pwër'tō rē'kō. An American possession in the West Indies, acquired from Spain, Dec. 10, 1898. The name was changed from Porto Rico to Puerto Rico by joint resolution of the United States Congress, approved May 17, 1932. Capital, San Juan.

AREA AND POPULATION. With an area of 3435 square miles—about the size of Connecticut—Puerto Rico had a population of 1,597,500 on July 1, 1932 (1,190,191 white and 407,309 colored), compared with 1,543,913 at the census of 1930. The estimated population July 1, 1933, was 1,623,814, or a density of 472.7 per square mile. Births in 1932 numbered 66,433 (41.5 per 1000 inhabitants) and deaths 35,610 (22.3 per 1000). The population of the chief cities in 1930 was: San Juan, 114,715; Ponce, 53,530; Mayaguez, 37,060.

EDUCATION. Approximately 40 per cent of the population over 10 years of age were illiterate in 1933. During the school year 1932-33 there were 233,457 pupils (194,387 white and 39,070 colored) enrolled in public schools, including 117,833 in elementary rural schools, 101,833 in elementary urban schools, 6496 in second unit rural schools, 163 in continuation schools, and 7132 in high schools. Public school teachers numbered 4638. The per capita expenditure on enrolled students of public schools was \$22.53. The University of Puerto Rico had 2308 students in 1931-32.

PRODUCTION. Agriculture is the main occupation. There were 52,113 farms in 1930. The main crops are sugar, coffee, tobacco, and citrous fruits. Cotton, cacao, coconuts, beans, plantains, and vegetables are secondary crops. Sugar production in the year ended June 30, 1933, was 816,337 short tons (992,432 tons in 1931-32); tobacco, 17,000,000 pounds in 1933 (5,500,000 pounds in 1932); coffee (estimated), 11,200,000 pounds in 1933-34; pineapples, 400,000 crates in 1932-33; cultivated oranges, 25,000 boxes; wild oranges, 400,000 boxes; grapefruit, 900,000 boxes; coconuts, 4,600,000 nuts. The 1932-33 crops were badly damaged by the hurricane of Sept. 26-27, 1932, which caused losses estimated at \$20,441,586, including \$11,553,332 damage to the sugar crop, \$3,742,837 to coffee and bananas in groves, \$1,905,500 to citrous fruits and pineapples, and \$1,666,627 to minor fruits.

Manganese and salt are the chief mineral products, although gold, silver, iron, copper, bismuth, tin, mercury, platinum, and nickel exist. The chief manufactured products are refined sugar, cigars and cigarettes, garments, fine needlework, and canned, and preserved fruits.

COMMERCE. In the fiscal year ended June 30, 1933, merchandise exports from Puerto Rico were valued at \$75,406,455 (\$86,416,938 in 1931-32), while merchandise imports totaled \$51,745,711 (\$61,281,101 in 1931-32). Exports to the United States were valued at \$73,388,298 (\$83,645,803 in 1931-32); to foreign countries, \$2,018,157 (\$2,771,075 in 1931-32). Imports from the United States were \$48,886,644 (\$52,826,794 in 1931-32); from foreign countries, \$5,859,067 (\$8,454,307). Puerto Rico in 1932-33 ranked eighth among the leading markets of continental United States. In the calendar year 1932 it was the chief Latin American market for exports from the United States. Sugar accounted for two-thirds of the value of all exports (822,423 short tons valued at \$50,780,422 in 1932-33 and 912,169 short tons valued at \$55,116,975 in 1931-32). Exports of cotton manufactures to the United States were valued at \$10,434,522; tobacco and its manufactures, \$5,703,628; and fresh fruits, \$2,089,809. The leading imports were rice (\$5,016,796) and other grains, cotton manufactures (cotton cloth, \$5,287,776), cigarettes (\$2,163,316) and other tobacco products, iron and steel products, meats, lard, fertilizers, wearing apparel, etc.

FINANCE. The fiscal year 1932-33 closed with a budget deficit of \$1,721,502, which was decreased to \$1,083,263 by appropriating the surplus of \$638,239 left over from the previous fiscal year. Actual revenue receipts during the year were \$9,374,358, non-revenue receipts were \$1,382,486 (including loan of \$1,250,000), and the cash balance on July 1, 1932, was \$874,422, making total resources available for liquidation of appropriation liabilities of \$11,631,266. Total appropriations in force during 1932-33 were \$12,887,967, including the 1932-33 budget appropriations of \$10,287,836. The excess of appropriation liabilities over resources left a deficit on June 30, 1933, of \$1,256,701, of which \$173,437 represented an advance to be repaid, leaving a final deficit of \$1,083,263. The estimates for the operating budget for 1933-34 were reduced to \$9,007,018 in order to absorb the 1932-33 deficit. The bonded indebtedness of the Insular government on July 1, 1933, was \$28,542,000 (\$28,761,000 on July 1, 1932), while notes payable on June 30, 1933, totaled \$1,173,494 (\$379,494 on June 30, 1932).

COMMUNICATIONS. In 1931 there were 306 miles of railway line operating as public carriers and 157 miles of private lines. The total length of hard-surfaced highways in the island on June 30, 1933, was 1141 miles, not including municipal or secondary roads. Vessels entering and clearing the ports during 1931-32 from the United States and foreign countries numbered 3364.

GOVERNMENT. Puerto Rico is governed in accordance with the Jones Act passed by the United States Congress Mar. 2, 1917 and subsequently amended. The Act conferred American citizenship collectively upon the inhabitants. Executive power is vested in a governor appointed by the President of the United States and legislative power in a legislature of two elective houses—a senate of 19 members and a house of representatives of 39 members, all elected for four years by universal male and female suffrage. A resident commissioner, elected for four years, represents the island in the United States Congress. The seven departmental heads form an executive council, presided over by the Governor. Governor James R. Beverley, who assumed office Jan. 30, 1932, was succeeded on July 1, 1933, by Robert H. Gore.

Resident Commissioner in Washington, Santiago Iglesias, elected Nov. 8, 1932. The composition of the House of Representatives following the election of Nov. 8, 1932, was: Coalition group (Union Republicana and Socialist parties), 30; Liberals, 9. In the Senate, the Coalitionists held 14 seats and the Liberals 5.

HISTORY

ISLAND POLITICS. Robert H. Gore, President Roosevelt's appointee as Governor of Puerto Rico, became involved in a bitter political conflict soon after he assumed his post on July 1, 1933. He adopted a policy of governing in cooperation with the Union Republicana-Socialist coalition, which had captured control of the Legislature in the Nov. 8, 1932, election and ended the Liberal party's 30-year domination of the government. From the outset the Governor was bitterly attacked by the Liberal press and politicians, while the governing parties vigorously defended him and his policies. Two of the Governor's acts in particular aroused storms of criticism. One was his statement that he expected a resignation in advance from each of his appointees, a statement which he withdrew when he found that he had the authority to remove appointees at will. The Liberals declared that the incident indicated Mr. Gore's "complete ineptness" and demanded his removal by the President.

The other act which drew criticism from many nonpartisan Puerto Ricans as well as from the Liberals was the Governor's appointment of Rafael Alonzo Torres as a trustee of the University of Puerto Rico. Señor Alonzo Torres, a prominent labor leader and Socialist, was a self-made man without academic education. His appointment was made at the request of the governing coalition and was regarded as a move to give the coalition control of the University, in which the Liberals had become firmly entrenched. The students, believing that Señor Alonzo Torres was opposed to the university's best interests, charged that he was "culturally unfitted" to hold the position as trustee and went on strike in protest against his appointment. The strike continued from October 19 to November 6, when Señor Alonzo Torres resigned. Meanwhile the Governor had steadfastly refused to withdraw his appointment. He accepted the resignation, commended Alonzo Torres for his public spirit in resigning, and expressed regret that the Socialist executive committee would not permit him to name another Socialist to the vacant trusteeship. The Socialists decided, instead, to make the liberalization of the educational system for the benefit of the masses an issue before the next Legislature.

The period of the student strike was marked by several attempts to terrorize the Governor. A bomb was found near his official residence in San Juan and another exploded on the roof of his country residence. An anonymous letter warned the Governor of a plot to poison himself and his family. Additional guards were placed about the Governor's residence. Toward the end of October the Coalition groups sent a commission to Washington to defend Governor Gore against his critics. They declared that the Liberals represented a small minority of the population, who were incensed because they could not "boss" the Governor. Early in November, Governor Gore left San Juan with his family to undergo medical treatment at Johns Hopkins Hospital in Baltimore. He remained in the United States until the end of the

year and it was intimated that he did not plan to return. Acting Governor Benjamin J. Horton was in charge during his absence.

ECONOMIC CONDITIONS. The people of Puerto Rico hailed the inauguration of President Roosevelt and the early development of his recovery programme with much enthusiasm. On October 15 a great demonstration of loyalty to the President and his New Deal was held in San Juan under the auspices of the Coalition parties. Later it became apparent that the recovery programme in the United States was adding to the island's economic difficulties and considerable political unrest developed.

Governor Gore obtained a tangible share of public works and emergency relief appropriations for Puerto Rico during a visit to Washington in October. He announced that the Roosevelt Administration had appropriated \$1,500,000 for highways, \$1,300,000 for the San Juan aqueduct, \$900,000 for emergency relief, \$700,000 for improvement of the harbors at Mayaguez and Arecibo, \$1,000,000 for reclamation of swamp land, and \$500,000 for malaria control.

In contrast with these benefits, the San Juan correspondent of the *New York Times* estimated that the New Deal would cost Puerto Rico \$21,000,000 during the first year of operation. Of this, \$18,000,000 was attributed to the increased cost of commodities imported from the United States and \$3,000,000 to the cost of various processing taxes. Much confusion and uncertainty attended the application of the recovery legislation to the island. Codes for the sugar and needle-work industries submitted in the fall were not acted upon by the end of the year. There was no agreement for increased wages, despite an increase of about 25 per cent in the cost of articles imported from the United States. The islanders were almost unanimous in demanding that all of the recovery measures should be applied at once. An NRA coordinator finally arrived in San Juan the last week in December in an effort to bring order out of confusion.

Meanwhile the decline of the dollar on the exchange markets had caused a sharp reduction in imports from foreign countries, reducing customs collections to a record low level. Internal revenue receipts also declined far below the estimates, and at the end of 1933 another budget deficit was in prospect. The Treasury met a \$1,900,000 payment to United States holders of insular government bonds on Jan. 1, 1934, but was hard put to meet the December payrolls.

LEGISLATION. The first regular session of the Thirteenth Legislature, in session from Feb. 13 to Apr. 15, 1933, passed 142 bills and 186 joint resolutions. Governor Beverley vetoed 6 bills and 5 joint resolutions and pocket-vetoed 77 bills and 128 joint resolutions. The measures enacted into law provided for internal revenue taxes on beer, wine, and similar liquors, an appropriation for investigating the mineral resources of the island, tax relief for owners of property damaged or destroyed by the September, 1932, hurricane, and various other measures. Measures vetoed included bills designed to reduce the executive power, amending the Civil Service Law so as to withdraw about 69 per cent of the government employees from the Civil Service, etc. The Legislature repassed over the Governor's veto a bill to amend the election law, which the Governor stated would have the effect of restoring the standing of the parties to what it was before the election of

1932. The President sustained the Governor's veto when the bill was referred to him under the provisions of the Jones Act.

OTHER DEVELOPMENTS. A survey of the island's mineral resources was commenced Nov. 21, 1933, by four representatives of the United States Bureau of Mines, designated for the survey on request of Governor Gore. A survey of the educational system was made toward the end of the year by President Hopkins of Dartmouth College, at the request of Secretary of War Dern, and was completed on December 19. Senator Millard E. Tydings of Maryland, chairman of the United States Senate Insular Possessions Committee, studied conditions on the island during December.

PUGILISM. See BOXING.

PULITZER PRIZES. A series of awards established in 1915 by the will of Joseph Pulitzer, publisher of the *New York World*, to be presented annually by Columbia University on recommendation of the advisory board of the Pulitzer School of Journalism, for outstanding achievements in letters and journalism. The value of the prizes in the group devoted to letters is \$1000, with the exception of that for the best work on the history of the United States which is \$2000. The value of the prizes in the journalistic group is \$500, with the exception of that for the best example of a reporter's work during the year which is \$1000.

Early in May it was announced that the \$1000 award for the best novel published during the preceding year by an American author was awarded to Thomas Sigismund Stribling. His book, *The Store*, is the second volume of a trilogy depicting the decline of Southern civilization following the Civil War, and deals with the life of a Southern community some twenty years after the close of that war. The late Frederick Jackson Turner, who died in March, 1932, and was professor emeritus of history at Harvard, was awarded posthumously the \$2000 prize for a work dealing with the history of the United States. The volume, *The Significance of Sections in American History*, is a collection of twelve of his essays and lectures. The biography of Grover Cleveland, by Allan Nevins, professor of American history at Columbia University, was considered by the jury as the most outstanding work of the year in "teaching patriotic and unselfish service to the people, illustrated by an eminent example." Maxwell Anderson's play, *Both Your Houses*, was adjudged to represent best "the educational value and power of the stage." The play, concerning the active operation of government officials, has for its theme the padding of a deficiency measure from an initial \$40,000,000 to ten times that amount, and characterizes the unscrupulous methods of "pork-barrel" politicians. Archibald MacLeish, now on the staff of *Fortune*, received the \$1000 award in poetry for his volume *Conquistador*, historical in background, and dealing with the conquest of Mexico by Cortez.

In journalism, the \$500 gold medal for "the most disinterested and meritorious public service rendered by an American newspaper during the year," was awarded to the *New York World-Telegram* for "its wisely planned and judiciously conducted series of articles on veterans' relief, on the real estate bond evil, the campaign urging voters in the last New York municipal election to 'write in' the name of Joseph V. McKee, and the articles exposing the lottery schemes of various fraternal organizations." The "best example

of correspondence during the year," was adjudged to be that of Edgar Ansel Mower, Berlin correspondent of the Chicago *Daily News*, with especial mention of "his interpretation of the series of German political crises in 1932, beginning with the Presidential election and the struggle of Hitler for public office." For the best editorial during the year, "the test of excellence being clearness of style, moral purpose, sound reasoning, and power to influence public opinion," the \$500 prize was awarded to the Kansas City *Star* for a series of editorials on national and international subjects. Francis A. Jamieson, staff correspondent of The Associated Press, received the \$1000 prize for the best example of a reporter's work during the year, the award being based on his "prompt, full, skilful, and prolonged coverage of news of the kidnaping of the infant son of Charles A. Lindbergh." Harold M. Talburt, of the Washington *Daily News*, received a \$500 award for the best cartoon published in any American newspaper during the year; the selection was his cartoon "The Light of Asia," published on Jan. 27, 1932, which depicted a clenched fist, labeled "Japan," holding a blazing torch of crumpled papers labeled "Nine Power Treaty," "Kellogg Pact," "League of Nations."

PULLORUM DISEASE. See VETERINARY MEDICINE.

PULP. See PAPER.

PURDUE UNIVERSITY. A State technological institution in Lafayette, Ind., founded in 1869. The main purpose of the institution has been to train men for service in the fields of engineering, agriculture, and applied science and women in the fields of home economics and general science. The enrollment for the autumn of 1933 was 3695, of whom 3053 were men and 642 women; registration in the 1933 summer session was 620. There were 298 members on the faculty and in addition 70 assistants. The endowment amounted to \$340,000, and the income for the year was \$3,759,041. The library contained 113,786 volumes. President, Edward C. Elliott, Ph.D., LL.D.

PUTNAM, EBEN. An American genealogist, died in Boston, Mass., Jan. 22, 1933. Born at Salem, Mass., Oct. 10, 1868, he received his schooling in Cambridge, Mass. After acting as a clerk in the Boston brokerage house of Soley, Stearns, and Gay from 1885 to 1890, he became manager and treasurer of the Salem Press (originally the Essex Institute Press) and four years later publisher. He acted also from 1899 to 1902 as managing editor of the *International Monthly*. Until two years before his death he was associated with the Boston investment firm of F. L. Putnam and Co., Inc., and with the F. L. Putnam Securities Co. as treasurer and director.

Mr. Putnam's interest in genealogy dated from 1890 when he founded the *Salem Press Historical Genealogical Magazine*, later known during its 27 years' existence as *Putnam's Historical Magazine*, the *Genealogical Quarterly*, and the *Genealogical Magazine*. From 1900 to 1903 he edited also the *Genealogical Bulletin* and the *Vermont Antiquarian*. He was the author of *A History of the Putnam Family in England and America* (2 vols.); *The Putnam Lineage*; *Military and Naval Annals of Danvers*; *New England Ancestry of Grover Cleveland*; *Holden Genealogy*; *Lt. Joshua Heves*, a *New England Pioneer*; and genealogies of other leading New England families, such as

the Higginson, Endicott, Edgecombe, and Purington.

During the World War Mr. Putnam served at Nantes, France, as captain with the Quartermaster Corps, being later advanced to the rank of major in the Quartermaster Reserve Corps in 1923 and to that of lieutenant-colonel in 1927. As official historian for the Massachusetts troops of the A. E. F. after 1923, he wrote *Gold Star Record of Massachusetts and History of Massachusetts in the World War*. He was also historian of the Massachusetts department of the American Legion during 1919-20 and national historian of that organization after 1920. Partly owing to his efforts, the National Archive Building in Washington was erected.

QUAKERS. See FRIENDS, RELIGIOUS SOCIETY OF.

QUEBEC, kwě-běk'. The largest of the provinces of Canada, bounded on the south by the State of New York, and New Brunswick; and west by Ontario and the Hudson Bay. Total area, 594,534 square miles; total population (1931 census), 2,369,665. Chief cities: Montreal, 818,577 inhabitants in 1931; Quebec, the capital, 130,594; Verdun, 60,745; Three Rivers, 35,450; Hull, 29,433; Sherbrooke, 28,933. In 1930, there were in the Province 8279 schools of all kinds, with 634,757 students enrolled. The 4 universities had a total of 21,239 students enrolled for 1930-31.

The basic industry of Quebec is agriculture of which the estimated gross production for 1932 amounted to \$129,656,000 including field crops from 5,832,100 acres valued at \$70,382,000. Live stock (1931 census): 304,537 horses, 1,720,400 cattle, 732,000 sheep, 725,398 swine, and 7,932,000 head of poultry. The value of pelts of fur bearing animals taken during 1931-32 was \$2,334,202. Quebec has a total forest area of some 243,714 square miles and in 1931 produced 1,513,658 tons of wood-pulp valued at \$41,884,387; paper (including newsprint) was valued at \$71,385,954; lumber and sawmill products, \$15,333,194. The marketed value of the fisheries for 1932 amounted to \$1,815,544.

Mineral production for 1932 had a total value of \$24,557,066 of which 401,105 oz. of gold represented \$8,291,576; 628,902 oz. of silver, \$199,184; 67,336,692 lb. of copper, \$4,296,216; 122,977 tons of asbestos, \$3,039,721; magnesite and dolomite valued at \$262,860; 36,249 tons of pyrite, \$133,838; cement, \$3,155,702; limestone, \$1,327,484. The preliminary figures for 1933 showed the production of gold valued at \$8,013,684; silver, \$154,889.

In 1931 the 7505 manufacturing establishments had a capital investment of \$1,662,811,076, 180,808 employees, and a value of output of \$849,154,353 gross and \$480,110,221 net. For the fiscal year ending June 30, 1932, ordinary revenue amounted to \$36,941,020; ordinary expenditure, \$37,525,729; the total public debt was \$91,987,691 and the net funded debt was \$66,860,821.

Quebec is governed by a lieutenant-governor and a responsible ministry, assisted by a legislative council of 24 members appointed for life by the Lieutenant-Governor, and a legislative assembly of 90 members elected for 5 years. The 18th Legislative Assembly, elected Aug. 24, 1931, was constituted of 79 Liberals and 11 Conservatives. The Province is represented in the Dominion Parliament at Ottawa by 24 members in the Senate and 65 members in the House of Commons.

Lieutenant-Governor in 1933, H. G. Carroll; Prime Minister, L. A. Taschereau (Liberal).

QUEEN'S-CHICORA COLLEGE. A college for women in Charlotte, N. C., founded in 1857; nonsectarian in purpose but under the direction of the Presbyterian Church. The enrollment for the autumn term of 1933 was 360. There were 32 members on the faculty. The endowment amounted to \$336,000. The library contained 14,000 volumes. President, William H. Frazer, D.D., Litt.D.

QUEENSLAND. A state of the Commonwealth of Australia of which it forms the northeastern part. Total area, 670,500 square miles; population (June 30, 1933 census), 947,789 (exclusive of full-blood aborigines). Brisbane, the capital, had 334,000 inhabitants on Jan. 1, 1933. During 1932, births numbered 17,367; deaths, 7813; marriages, 6415. In 1931, there were 1934 schools of all kinds with a total enrollment of 193,247 pupils (exclusive of 3556 full-time and 8131 part-time students in the technical colleges). The University of Queensland had 799 students in the same year.

Agriculture, stock raising, and manufacturing are the leading industries. The total area under cultivation in 1932 amounted to 1,426,648 acres of which 1,245,638 acres produced crops valued at £11,305,731, including 2,493,902 bushels of wheat valued at £447,169; 1,653,853 bushels of maize, £389,345; 3,546,370 tons of sugar cane, £6,582,717; green forage, £981,905; 2,303,861 lb. of tobacco, £230,386; 1,869,883 bunches of bananas, £427,208; hay and straw, £415,821; 14,017 tons of potatoes, £108,630; pineapples, £196,914; cotton, £125,106; oranges and mandarins, £122,818. Livestock (Jan. 1, 1933): 21,161,142 sheep, 5,410,049 cattle, 436,176 horses, 222,686 pigs. The total wool production (greasy) for 1931-32 amounted to 184,716,462 lb. valued at £6,626,703.

Mineral production for 1932 was valued at £1,858,828 of which gold represented £173,144. The principal minerals were coal, lead, copper, gold, silver, and tin. In 7397 manufacturing establishments with a total of 35,799 employees, during 1931-32, the net value of production was £12,133,356. For the year ended June 30, 1932 there were 931 ships aggregating 3,265,988 tons cleared the ports in the overseas trade. Revenue for 1932-33 was reported at £13,396,644; expenditure, £14,951,088. The net public debt on June 30, 1932 amounted to £111,423,409. Executive power is vested in a governor, who acts through a responsible ministry, and legislative power in a legislative assembly of 62 members elected for 3 years. Governor in 1933, Sir L. O. Wilson; Premier, W. F. Smith (Labor).

RACING. See HORSE RACING.

RACKETS. See CRIME.

RACQUETS. See COURT GAMES.

RADCLIFFE COLLEGE. A nonsectarian college for women in Cambridge, Mass., founded in 1879. The enrollment for the autumn of 1933 was 1046, distributed as follows: Regular students, 795, graduate students, 221, special students, 30. Instruction was given to the students of the college by 300 teachers from Harvard University. The productive funds amounted to \$4,595,612 and the income, including tuition, for college purposes, was \$513,806. The library contained more than 71,000 volumes, exclusive of pamphlets. President, Ada Louise Comstock, A.M., Litt.D., L.H.D., LL.D.

RADIO. Radio broadcasting receivers were improved by the use of multifunction tubes with

several, instead of three, electrodes which made it possible for one tube to perform several duties.

Other improvements were higher efficiency coils and small high-capacity dry electrolytic condensers. Almost all of the sets used the superheterodyne principle. This made it possible to reduce the size of all the sets and to produce the "midget" set with four tubes which will operate on a power supply of either alternating or direct current. A "vest pocket" set was also brought out with two multifunction tubes. Some of the more expensive sets would receive in three ranges of frequencies, the usual broadcast band, 500 to 1500 kilocycles, the police call band from 1500 to 2800 kilocycles, and the foreign short wave broadcast band, 4000 to 12,000 kilocycles or 75 to 25 meters.

The automatic volume control on these new sets makes it difficult to determine when a set is properly tuned because this condition does not necessarily mean maximum volume. A new instrument has been devised to determine correct tuning by means of the plate current in one of the tubes, for instance, the detector. The new instrument is connected into the circuit of the receiver and has a magnetic vane which turns so that when the set is not tuned the vane casts a broad shadow, and when the set is tuned the vane casts a very narrow shadow, hence its name "Shadow Instrument."

In some hotels wiring was provided so that in each bedroom there was a choice of five broadcast programmes. This was accomplished by means of five high class sets receiving the different radio signals and feeding the audio signals into different audio amplifiers which in turn supplied five networks reaching every room.

One of the events of the year was the opening of Radio City at 50th Street and Fifth Avenue, New York City, to which the whole paraphernalia of Stations WEA and WJZ was moved and added to new equipment already installed so now this building holds all the studios and technical equipment of these two well-known stations. The actual transfer of each station in one night with no interruption of the regular programme was a remarkable feat.

A new high-power station (500 kw.), the most powerful in U.S.A. is being completed in Cincinnati and will be known as WLW. Some of the new features are: tubes with 12,000 volts and 100 amps on the plate; filaments heated by alternating currents instead of direct current, which, although common in receivers for years, has not been done with transmitters before because it was impossible to suppress the hum. The audio power given by the modulator will be 7, x 10¹⁶ times as great as that received by the microphone and is said to give true reproduction of sound in the range from 30 to 10,000 cycles.

In transoceanic radio communication there is the new link between Madrid and Buenos Aires which carries both telephonic and telegraphic messages at the same time.

Most commercial aircraft in the U.S.A. are now equipped with two-way radio telephones for receiving beacons and weather reports and blind flying is possible by means of directional radio giving up and down as well as right and left indications for landing in a fog.

Radio communication with both the Byrd and Ellsworth Antarctic expeditions has been maintained with great regularity, usually via Honolulu.

While the new station at Cincinnati is the only one in the U.S.A. having a power of 500 kw. there are many such in Europe and the reason seems to be the desire to use them for political propaganda from one country to another. This war of words is becoming a serious international affair. For instance, Austria complains of a high-power German station near the common border preaching the Nazi doctrine to the Austrians. In more than one country laws forbid tuning in a loud speaker in restaurants, etc., to a foreign station.

The Auto-Radio has become very popular and now many taxis as well as private cars are so equipped. Power is taken from the 6-volt storage battery converted to alternating current by a vibrator, stepped up to high voltage by a transformer, converted to direct current by a tube and impressed upon the plates of the tubes. It was found that some directional beacon stations with cross-loop radiators were giving erratic indications so they were changed to vertical type radiators and a special circuit known as an "artificial line" was developed to maintain proper phase relation between the different parts of the system of antennas so that a specific directional effect is maintained.

The Federal Radio Commission is considering extending the band allocated to broadcasting to include from 1500 to 1600 kilocycles and three experimental stations have been authorized to operate in this band with a separation of 20 kilocycles and a power of one kilowatt.

A new output tube was produced which will give one watt of power at 700,000,000 cycles or a wave length of 43 centimeters. This is in the range known as "Microrays" being exploited by Marconi.

The Federal Radio Commission obtained a court injunction against a radio broadcast station which was sending out programmes by wired radio over power lines in Bridgeport, Conn. The court held that since the programmes could be received by an ordinary radio set the station would have to comply with the Commission and apply for a broadcasting license.

RADIOACTIVITY. See PHYSICS.

RADIO CITY. See RADIO.

RAILROAD TRANSPORTATION ACT, EMERGENCY. See RAILWAYS.

RAILWAY ACCIDENTS. For the eleven months ending with November, 1933, there were reported a total of 5078 train accidents in the United States, according to a summary of the Interstate Commerce Commission. This total was 137 less than in the corresponding period of the previous year, although the casualties were heavier in 1933, with 184 persons killed and 1205 injured as against 164 killed and 922 injured in 1932. Derailments constituted nearly 60 per cent of the train accidents, and accounted for 103 deaths. Train-service accidents, involving 4221 deaths and 13,780 injured persons, caused 237 more deaths than in the corresponding period of 1932. As in the previous year the largest item in the fatality record comprised persons struck or run over not at public crossings, with a total of 1662 deaths as against 1464 in 1932. Accidents at highway grade crossings continued to take a great toll of victims with 1284 deaths and 3162 injured as compared with 1291 deaths and 3459 injured in 1932. Of the grand total of 37 passengers killed in 1933, fourteen deaths resulted

from train collisions, and ten from getting on or off cars.

Some of the major accidents of the year throughout the world were:

March 17. In Manchoukuo in a rear-end collision when a freight train crashed into a passenger train, 50 passengers, mostly Chinese, were killed and 70 injured.

April 10. In Colombia a derailment caused the death of 18 with injuries to about 100.

June 4. At Nantes, France, a derailment caused 14 deaths with the injured reported at 100.

June 6. At Lucknow, India, a motor-bus was wrecked by a train at a grade-crossing, causing 16 deaths.

July 9. Four were killed and 16 hurt by the derailment of a train at Apolda, Germany.

August 20. In Kiangsi Province, China, from 30 to 50 passengers, mostly soldiers, were killed when a train left the tracks.

August 29. An eastbound express from Los Angeles was wrecked by the collapse of a flood-weakened bridge at Tucumcari, New Mex.; 11 were killed, 40 injured, and several missing.

September 5. Near Binghamton, N. Y., a milk train crashed into the rear of a passenger train; 14 were killed and 30 injured.

October 26. Derailment of a passenger train between Evreux and Conches, France, caused the death of 30, with 32 injured.

December 10. Near Trujillo, Peru, 8 were killed by derailment of a train.

December 14. At a grade-crossing near Crescent City, Fla., a school bus was hit by a freight train; 10 were killed and 30 injured.

December 23. Near Lagny, France, the Paris-Strasbourg express crashed into the rear end of a local train, crowded with holiday passengers, and halted by fog, 180 were reported killed in the greatest railway tragedy of the year.

RAILWAYS. The report of the National Transportation Committee was made public Feb. 15, 1933. It was signed by Bernard Baruch, Vice Chairman, Clark Howell and Alexander Legge. The Chairman of the committee, Calvin Coolidge, had died and Alfred E. Smith, the fifth member of the committee, wrote a concurring opinion.

A new principle of rate making was recommended. "Whenever there is fair competition it will decide the rate question and it should be permitted to do so freely." . . . When fair competition does not exist "costs of service under efficient operation are a better general guide than some arbitrary determination of assets values." Rates "should look to the retirement of new debt for the purchase of productive facilities during their life and out of returns from their use."

The committee advised the railways to reduce competitive service and abandon unnecessary service and to consolidate terminal facilities.

Alfred E. Smith said that while he agreed with the other members of the committee he would lay stress on giving debtor relief to the railways so that they might scale down their debts without bankruptcy. The relief to terminate on Jan. 1, 1935.

The Emergency Railroad Transportation Act was passed on June 9, 1933 and authorized the appointment of a Federal coordinator. It provided for railway company reorganizations without bankruptcy.

It provided for the study of railway problems. It repealed the clause of the earlier Transportation Act directing the Interstate Commerce Commission to fix rates yielding a fair return on valuation and providing for recapture of earnings of more than 6 per cent on valuation.

Flexible rates were indicated as desirable.

The jurisdiction of the Interstate Commerce Commission was extended over all forms of acquisition or control of railways.

It provided for the regulation of holding company accounts.

It provided for keeping valuation up to date. Regional railway systems were provided for, "looking eventually to a single National system."

Joseph B. Eastman, a member of the Interstate Commerce Commission, was appointed by the President, Federal Coordinator.

On July 10 he announced his initial organization, dividing the central administration between freight service, car pooling, and purchases. He designated three regions, Eastern, Western, and Southern.

At the beginning of his work he let it be known that past theories and antagonisms were to be put aside. He instructed his staff that this was the spirit in which their work must be carried on.

The first report submitted under the Emergency Transportation Act of 1933 was not made public until Jan. 20, 1934 but the report was compiled in 1933 and reflects the attitude of the man who was selected by the President in that year. The objective of the government's treatment of the railways is the gradual welding together of the transportation facilities of the entire United States with dependence on the government for financing the whole thing, the implication being that government ownership would be the final result.

The Interstate Commerce Commission without Mr. Eastman's vote, refused an application for a 10 per cent reduction of railway freight rates. The reduction had been asked by farmers, lumber shippers, and coal shippers.

The railway officers gave evidence of their willingness to cooperate with each other, something entirely new, by joining in an appeal to people traveling to Chicago, for the Century of Progress Exposition, to travel by rail regardless of what railway they used.

LOANS TO RAILWAYS. By the end of 1933 the Reconstruction Finance Corporation had authorized loans to railways amounting to \$411,845,678 of which \$394,094,258 had been actually disbursed to 67 companies, and of this \$57,014,636 had been repaid. During 1933, Congress passed a law restricting R.F.C. loans to railway companies where the maximum salary paid to any officer was \$17,500 a year. According to *Railway Age*, the balance due from the railways to the R.F.C. at the end of 1932 was \$272,471,708 and at the end of 1933 the balance due the R.F.C. from the railways was \$337,079,622. Only five companies that had not borrowed from the R.F.C. in 1932 did so in 1933. Five railway companies repaid the R.F.C. in full. The interest rate on R.F.C. loans to railways in 1932 was 6 per cent; this was reduced on Jan. 1, 1933 to 5½ per cent, again on July 1, 1933 to 5 per cent, and to 4 per cent for one year on November 1.

On Nov. 2, 1933, the Federal Public Works Administration announced that it had "allotted" \$51,000,000 for the purchase of rails and fastenings and \$84,000,000 for a loan to the Pennsylvania Railroad for the completion of its electrification work and for the construction of cars and locomotives, "for the direct encouragement of heavy industries and in consummation of the Administration's plan for thus quickly aiding the movement of men from relief rolls to pay rolls in industries that have curtailed employment."

On November 20 the P.W.A. announced a policy of making loans for repairing cars and locomotives. On December 7 it was announced that \$5,500,000 had been allotted to the New York, New Haven & Hartford and to the Lehigh Valley for this purpose and on December 9 it was announced that

allotments amounting to \$36,307,500 had been made to four other railways for the purchase of cars and locomotives. *Railway Age* says that other allotments were made, and on December 28 announcement was made from Mr. Eastman's office of definite allotment of rail for which certain railway companies had contracted with Mr. Eastman's approval.

To obtain loans from the P.W.A., the railways are to give their promissory notes for ten years with interest at 4 per cent except for the first year. The notes will be payable in eight installments, the first payment to be made at the beginning of the third year. For loans for maintenance the P.W.A. has required collateral but for loans, the proceeds of which are to be used for the purchase of equipment, the P.W.A. has announced that it will accept railway equipment trust notes to run for fifteen years for freight cars and for twenty years for locomotives and passenger cars, interest to be at 4 per cent except for the first year. The loan to the Pennsylvania Railroad is to run for thirty years.

ELECTRIFICATION OF RAILWAYS. The operation of the Pennsylvania Railroad with electric motive power from New York City to Philadelphia, 90 miles, was begun in January (16th) 1933. Alternating current is used, 11,000 volts. The system allows for an axle load of 75,000 lbs. There is 1250 h.p. applied to each axle. The electrification of the Philadelphia suburban lines has been completed as far west as Paloi.

The justification for this Pennsylvania Railroad electrification is thought to be that it was the only feasible way to increase track capacity and improve the smoothness and frequency of train service.

AIR CONDITIONING. By 1933 air conditioning had been applied to equipment on; *Dining Cars*: Atchison, Topeka & Santa Fe; Chicago, Burlington & Quincy; Chicago, Milwaukee, St. Paul & Pacific; Chicago, Rock Island & Pacific; New York Central; Southern Pacific; Union Pacific. *Lounge Cars and Dining Cars*: Missouri-Kansas-Texas; Missouri Pacific; St. Louis-San Francisco; Texas & Pacific. *Through Trains*: Chesapeake and Ohio. *Full Trains*: Baltimore & Ohio; Alton; Chicago & Eastern Illinois; Illinois Central; Wabash; Pennsylvania Railroad (New York to Washington).

IMPROVEMENT IN BUSINESS. Purchases by railways began to show an increase in April, 1933. The trend of earnings had been upward and by April was thought to be clearly enough marked to justify some increased railway spending. Just how large the drop in railway earnings was is well shown by a comparison of the first six months of 1933 with the first six months of 1922, the worst year heretofore in American railway history.

In the first six months of 1922 gross earnings for the railways of the United States was \$2,613,600,000; for the corresponding period of 1933 gross earnings were \$1,415,200,000, a decrease of 46 per cent. Expenses of operation in the first half of 1922 were \$2,080,000,000 and in the first half of 1933 were \$1,068,900,000 a decrease of 49 per cent. Figures for car loadings had begun to show an improvement in business in August, 1932, and by April, 1933, railway officers acted on this advance notice of increased revenues and began making purchases that had been deferred.

Railway officers are able to forecast car loadings to some extent so the figures for car loadings

through June give the picture as they saw it when they began to make increased purchases.

Average weekly car loadings:

July, 1932 484,427

Percent of increase or decrease of average weekly car loadings:

August, 1932	+ 6.6
September, 1932	+ 15.8
October, 1932	+ 30.4
November, 1932	+ 13.3
December, 1932	- 2.7
January, 1933	- 1.4
February, 1933	+ 1.0
March, 1933	- 5.0
April, 1933	+ 3.4
May, 1933	+ 9.8
June, 1933	+ 16.9

Average weekly car loadings in the period 1925-29 compare with average weekly car loadings in the first months of 1933 as follows:

	1925-29	1933
March	957,889	460,301
April	958,402	500,949
June	1,001,905	566,345
July	1,009,839	621,763

Car loadings for the last few years were as follows:

1933	28,961,000	1931	37,151,000
1932	28,180,000	1930	45,717,000
1925-29 average	52,075,000		

MAINTENANCE. The surplus or deficit of a railway is in the roadbed and equipment rather than in cash in a bank. Thus five miles of railroad with new, heavy rails, new treated ties, and well repaired and painted stations and bridges represents about \$15,000 surplus which may be dipped into by discontinuing maintenance expenses for a certain period. Five miles of railroad with badly worn rails, rotted ties, dilapidated stations, and bolstered up bridges represents a deficit, not shown in the balance sheet. In 1933 the railways of the United States had a huge deficit, in part incurred in the three previous years and still further drawn upon in the first half of 1933. The *Railway Age* estimates undermaintenance since 1929 at three billion dollars. The exact extent would be a matter of opinion but the extent may be indicated. In the first seven months of 1933 the railways operating 241,147 miles (all the larger ones) spent \$738 a mile for maintenance of way and structures compared with \$1753 a mile spent in the first seven months of 1922 on the 235,758 miles then in operation. The year 1922 is selected for comparison because it was a year in which severe economies were necessitated by low railway revenues.

In July, 1933, the railways spent \$126 a mile for maintenance of way and structures. In July, 1922, they spent \$278 a mile. These figures both indicate the extent to which a draft on railway property had been made and also confirm the report of those who sell to railways, namely, that an increase in railway buying took place in the first half of 1933 (railway supply men said April).

In July the 1933 expenses of maintenance of way were 46 per cent of those of July, 1922. The seven months' expenses of maintenance of way in 1933 were but 42 per cent of the expenses for

maintenance of way in the seven months of 1922.

In July, 1932, the expenses of maintenance of way a mile were \$122 and for the seven months of 1932 were \$901. Thus the July, 1932, maintenance of expenses were 43 per cent of the July, 1922, maintenance of way expenses while the seven months 1932 maintenance of way expenses were 51 per cent of the seven months' maintenance of way expenses of 1922.

PASSENGER SITUATION. The fare for passengers on railways was 3.60 cents per mile in January, 1933, but during the year a majority of railway officers were in favor of reducing this to 2.50 cents in the hopes of getting back the passenger business that was being carried by busses.

By the end of the year passenger rates on all Western railways, many southeastern and some eastern railways had been reduced to 2 cents a mile for coach passengers and to 3 cents a mile for passengers riding in Pullman cars.

The basis for railway men's anxiety is shown in the following table:

PASSENGERS CARRIED

1919	1,211,022,000
1920	1,269,918,000
1932	478,738,000

Many favored the abolition of the surcharge for passengers riding in Pullman cars and greater stress in railway advertising and service on the comfort of a night trip by railway with its Pullman berth as compared with a trip by bus. Betterment of railway passenger service included air conditioning and electrification mentioned elsewhere in this article. The passenger bus pick up and delivery of passengers at train side of the Baltimore & Ohio railroad in New York City was described in previous *INTERNATIONAL YEAR BOOK* articles and was in service in 1933. It was generally considered satisfactory by passengers and an effective means of competing with a centrally located passenger station.

STORE DOOR DELIVERY OF FREIGHT. The Boston & Maine railroad made an extensive experiment with a store door pick up and delivery of freight the results of which were published in 1933. The Boston & Maine management said that the experiment proved that the service was a success both from the point of view of satisfactory service and effectiveness in competition with trucks. Agents in small towns voted 21 out of 34 that it was a success. Agents in large towns voted it a success, 10 out of 12. A canvass of shippers showed them enthusiastically in favor of the service.

In October, 1933, the Pennsylvania Railroad withdrew the tariffs providing for store door delivery of freight notwithstanding the fact that Joseph B. Eastman, Federal Coördinator, had approved of the Pennsylvania's plan over the protest of the New York Central. The tariffs had provided for store door delivery throughout the Pennsylvania system.

LABOR CONDITIONS. On June 21, 1933 an agreement was reached by railway labor leaders and railway managements extending the 10 per cent reduction in basic wage rates, without the right of appeal to arbitration to June 30, 1934, notice of intention to appeal not to be given before Feb. 15, 1934.

FINANCIAL SITUATION. On July, 1, 1933 the Great Northern Railroad had \$41,963,000 consolidated St. Paul, Minneapolis & Manitoba bonds

falling due. Had railway bonds been readily salable the company would have sold General Mortgage bonds and with the cash received from their sale have paid off the St. Paul, Minneapolis & Manitoba bondholders. But railway bonds were not readily salable. Therefore, holders of the maturing bonds were asked to extend their loan for 10 years, and holders of outstanding General Mortgage bonds were asked to approve the extension of the St. Paul, Minneapolis & Manitoba mortgage which underlay their own. Holders of 98 per cent of the General Mortgage bonds agreed to do so and a bank loan having been arranged to permit paying off maturing bonds, the holders of which would not extend their bonds, the whole plan was put through in the spirit that was indicated by the Emergency Transportation Act and by Joseph B. Eastman in his informal talks with his staff when he was appointed Federal Coordinator.

Another manifestation of this spirit was the reorganization of the Chicago, Rock Island & Pacific Railway Company without receivership or foreclosure.

Still another was the dismissal by the Interstate Commerce Commission of all actions at law for the recovery of excess (in excess of 6 per cent on their valuation) earnings. Most of these recapture cases were against small railroads—roads that were little more than plant facilities. One, however, of the companies against which recapture proceedings had been brought was the Richmond, Fredericksburg & Potomac, an important line connecting the southeastern railroads with the northeastern railroads. It is owned jointly by the Pennsylvania Railroad, the Baltimore & Ohio, the Chesapeake & Ohio, the Seaboard Air Line, the Atlantic Coast Line and the Southern Railway. Regardless of the amount of money involved, the new attitude of the Interstate Commerce Commission as shown by discontinuing the recapture cases is an important event in United States railway history.

Of great importance also is the fact that Joseph Eastman, Federal Coordinator of railways, has a seat on the Recovery Committee which includes the members of President Roosevelt's cabinet, General Johnson, and the head of the Reconstruction Finance Corporation.

This recognition of the railways as a major element in the economic life of the country to be cooperated with by the government marks 1933 as a period of distinct change from policy begun in 1870 with the creation of the Interstate Commerce Commission for curbing railway power. Taken together with the new principle of rate making laid down by the National Transportation Committee, quoted at the beginning of this article, it bids fair to make 1933 an important year in American railway history.

In line with this recognition of railways as a major factor in American economic life the Public Works Administration made an allotment of \$135,000,000 "to buy qualified securities of railroads desiring to purchase equipment now."

The announcement of the willingness of the Public Works Administration to advance money to the railways through the purchase of their securities was made by Secretary Ickes after a conference with President Roosevelt. One allotment of \$51,000,000 is for the purchase of steel rails and fastenings by all roads wishing to take advantage of the temporary price agreed on by President Roosevelt and heads of four large steel

companies just prior to the announcement by Secretary Ickes.

The remainder, \$84,000,000, is to go to the Pennsylvania Railroad Company for electrification and to pay for 7000 freight cars. In principle the railways, including the Pennsylvania, were glad to sell their securities to the Public Works Administration and the PWA was ready to buy them and the restrictions that had been placed on railroad officers' salaries by acceptance of Reconstruction Finance Corporation loans was not a bar to sale of securities to the Public Works Administration. In practice there were differences of opinion as to what constituted qualified securities.

In the spirit of the National Transportation Committee report, J. B. Eastman, coordinator, began a study of cost accounting for railways and, of great significance, he ruled that the study, which may be the basis for a modified system of accounting and statistics for railways, should be undertaken by means of research work rather than by means of public hearings. Mr. Eastman was a member of the Interstate Commerce Commission during many of the bitter dialectic sparring matches on valuation. Valuation had heretofore been used as a basic factor in fixing railway rates.

Mr. Eastman also undertook to gather some facts about water and bus competition in the field of transportation. He sent a questionnaire to 1100 companies engaged in inter-coastal, coast-wise, inland, and Great Lakes transportation by water. He also sent personal letters to 48 State commissions.

Thus later railway history may be affected by the new policies that had their inauguration in 1933.

A minor instance of this was the establishment of three bus routes by the Missouri Pacific Railway in Kansas. They were from Concordia on the east and west line, Athlison to Stockton, to Salina on the east and west line; Kansas City to Pueblo, Colo.; and the third from Osawatimie to Yates Center. The effect of these routes is to permit the railway owned busses to short haul the railway itself. It is a step in the direction of trying to forestall competition by an adoption of new methods of transportation in the interests of shippers.

NEW RAILWAY BUILT. There was only 24 miles of new railway built during 1933. According to the *Railway Age* this was the least number of miles built in any year since the Civil War. The record printed in the *Railway Age* goes back to 1893. The smallest figure for any year previous to 1933 was 163, the mileage built in 1932. The largest figure was 6026, the mileage built in 1902. Of the 24 miles built in 1933 the longest piece was 11 miles built by the Virginian Railway as the last section of the Guyandot River line between Elmore, W. Va., and Gilbert. There was one uncompleted line under construction during 1933. This was the Dotsero cutoff which will connect the so-called Moffat Line (Denver Northwestern & Pacific) and the Denver & Rio Grande Western thus giving a line of railway almost due west from Denver to Salt Lake City. The project dates back more than thirty years but the cost of financing the Moffat tunnel through the backbone of the Rocky Mountains—there is no pass directly west of Denver—was prohibitive until undertaken by the State of Colorado through a special taxing district that included the city of Denver. The tun-

nel was completed prior to 1933 but the connection with the Denver & Rio Grande Western was still under construction at the end of the year.

RAILWAY ABANDONED. There was 1876 miles of railway abandoned during 1933. This is the greatest mileage abandoned of which there is any record. The longest piece of line abandoned was 72 miles of the Southern Pacific running from Cochise, Ariz. to Commonwealth.

FREIGHT CARS ORDERED. The number of freight cars ordered by the railroads in 1933 was 1892 of which 1685 were for use in the United States, 132 were for export and 75 were for Canada. The corresponding figures for 1932 were: total 2546, United States 1968, export 77, Canada 501.

FREIGHT CARS BUILT. The *Railway Age* which compiled the figures given above also gives a figure for the freight cars built; for 1933 the figure was 2311 for the United States and 550 for Canada. According to the *Railway Age* record this compares with 3326 built in the United States in 1932 and with none built in Canada in 1932.

LOCOMOTIVES ORDERED. The same records show 49 locomotives ordered in 1933 of which 7 were for export to countries other than Canada. Of the total 42 ordered for use in the United States, 17 were steam, 20 were oil electric, 2 gasoline electric, and 3 were gasoline.

LOCOMOTIVES BUILT. The total for the United States was 63, there were none built in Canada. Of the 63 built in 1933, 57 were for domestic service and 6 were for foreign service. This compares with a total built in the United States in 1932 of 120—102 for domestic service and 18 for foreign service. The Canadian output in 1932 was 3, of which 1 was for foreign service and 2 were for domestic service.

PASSENGER CARS ORDERED. There were but 6 passenger cars ordered in 1933 and all 6 were for service in the United States. No orders were placed by Canadian railways either with builders in the United States or with builders in Canada. There were 39 ordered in 1932, all in the United States.

PASSENGER CARS BUILT. There were 6 passenger cars built in 1933, all in the United States and all for domestic service. In 1932 there were 39 passenger cars built, all in the United States and all for domestic service.

SIGNALING CONSTRUCTION. Automatic block signaling was placed in operation on 118 miles of railway in 1933 comparing with 190 miles in 1932. This statement should be taken in connection with the further statement made in the *Railway Age* that counting each automatic signal lever and each lever of interlocking, highway crossing signal, spring switch, etc. (all properly coming under the heading of *Signaling Construction*) as a unit, the total number of units placed in service in 1933 was 3711 as compared with 2837 units placed in service in 1932, a gain of 31 per cent for 1933 over 1932.

REVENUES AND EXPENSES. Reports of the larger (those earning one million dollars or over, called Class I) railways to the Interstate Commerce

Commission show the accompanying combined income accounts.

BREAKUP OF REVENUE [In millions]

	1933	1932
Freight	\$2,493	\$2,451
Passenger	331	377
Mail	92	97
Express	46	54
All other	139	148
Total	\$3,101	\$3,127

BREAKUP OF EXPENSES [In millions]

	1933	1932
Maintenance of way	\$ 321	\$ 351
Maintenance of equipment	602	619
Traffic	86	96
Transportation	1,079	1,158
General and other	165	179

RECEIVERSHIPS. There were eighteen railway companies placed in the hands of receivers or trustees (under the new Federal Bankruptcy Act a trustee can be appointed without the technical default occurring but the trustee's powers and responsibilities are much the same as those of a receiver). The mileage of these roads was 21,222 and their funded debt outstanding was \$842,805,971 and their stock outstanding was \$386,872,212. The two largest and most important were the Chicago, Rock Island & Pacific (known as the Rock Island) with 8333 miles, \$310,532,885 funded debt and \$128,909,212 stock and the Missouri Pacific with 7412 miles and \$350,932,500 funded debt and \$154,639,600 stock. Both of these lines serve the southwestern part of the United States where competition between railways has been especially keen for years and the credit of each had been used in such a way as to leave the company dependent on continued prosperity for its solvency. The Chicago, Rock Island & Pacific was used by D. G. Reid and E. S. Moore as the basis of a huge holding company structure. The Missouri Pacific was used by the late George Gould to form the basis of his projected Atlantic to Pacific system of railways. In neither case was the long past financial juggling responsible for the receivership of 1933 but the use of the companies' credit for purposes other than that of the development of the physical property may be considered a remote factor in the 1933 receivership.

At the end of 1933 there were 44,334 miles of railway being operated by receivers.

FORECLOSURE SALES. Only two small railways were sold under foreclosure during 1933, the total mileage being 298 and one of the two railways sold was not reorganized but operation of the 33 miles was abandoned. The name of this railway was the Savannah & Statesboro.

NEW FINANCING. The only public offering of new railway securities during 1933 was an offering by J. P. Morgan & Co. of \$12,000,000 5 per cent mortgage bonds of the Cincinnati Union Terminal at par, the bonds being guaranteed by the railways that use the terminal. It is estimated by Dr. Julius H. Parmelee, Director of the Bureau of Railway Economics, that the total capital expenditures of the Class I railways was \$100,000,000 for 1933.

DIVIDEND CHANGES. The *Railway Age* gives the dividend changes during the year as follows:

INCOME ACCOUNT [In millions]

	1933	1932
Total operating revenues	\$3,101	\$3,127
Total operating expenses	2,253	2,403
Taxes	255	275
Net railway operating income	470	328

The directors of the Alabama Great Southern in December declared a dividend of \$2 on its common stock, the first such disbursement made since 1932.

The Atchison, Topeka & Santa Fe paid \$1.50 instead of the customary \$2.50 per share on its 5 per cent preferred stock in the first half of 1933. In the second half \$3.30 was paid, bringing the total for the year to \$4.80, as compared with \$5 heretofore paid.

The directors of the Canadian Pacific during the year voted no dividends on either its preference or its ordinary shares. The former carried regular dividends in 1932 and 31½ cents was paid on each ordinary share in that year.

The directors of the Chesapeake & Ohio in August declared a quarterly dividend of 70 cents on its common stock—an increase of 7½ cents over the customary quarterly rate of 62½ cents.

Dividend action on its common stock was deferred by the directors of the Delaware & Hudson. The quarterly rate was formerly \$2.25 but this was reduced to \$1.50 in the latter half of 1932.

The directors of the Kansas City Southern in June omitted the dividend on its preferred stock upon which 50 cents per share was paid in the first quarter.

The St Joseph & Grand Island paid a dividend of \$5 a share on its senior preferred stock and \$4 a share on its second preferred—the former being the first payment made on that issue since 1902 and the latter being the first declaration ever made in favor of the second preferred.

MOTOR CARS. The following is quoted from an article in the annual statistical number of the *Railway Age*. The article is headed, "Character of Rail Motor Cars Changed in 1933" and is signed by C. B. Peck, Mechanical Department Editor.

"The steam railways of the United States placed orders for 18 rail motor trains, motor cars, and trailers in motor trains during 1933.

"Since the introduction of cars of great strength and light weight construction for use in light branch line service in 1932, the possibilities of combining great strength with light weight offered by aluminum alloys and stainless steel construction have rapidly passed beyond the branch line phase of their development. The possibilities which these materials offer in connection with suitable streamlining for the reduction of air resistance to meet the new ideas of high speed service were quickly seized upon and orders were placed for three light weight streamlined high speed articulated trains. Two for the Union Pacific and one for the Chicago, Burlington & Quincy."

RAINFALL. See METEOROLOGY.

RANDOLPH-MACON WOMAN'S COLLEGE. An institution for the higher education of women in Lynchburg, Va., under the auspices of the Methodist Episcopal Church, South, founded in 1893. The enrollment for the autumn of 1933 was 558. The faculty numbered 69. The endowment amounted to \$1,203,565, while the income for the year was \$558,671. The library contained over 40,000 volumes. President, Theodore H. Jack, Ph.D., LL.D.

RAPID TRANSIT. With a number of our great cities in financial difficulties the construction of subway facilities for rapid transit are more or less at a standstill. It is only in the great centres of population that this very costly type of construction is undertaken, and it would appear that there will be little work of this type underway for several years to come.

NEW YORK. Although the city has spent over half a billion dollars on its municipally-owned "Independent Subway System," this system is in operation only in part—a considerable amount of work is still to be done in equipping certain passenger stations, track laying, etc. The Public Works Administration has made an allotment of \$23,160,000 to complete and put the lines in operation. This sum, in part a grant, the remainder being a loan to be repaid by 1963, will not be made available, however, unless the city

budget is balanced—a task which the new mayor has undertaken to accomplish but which is, as yet, not a reality.

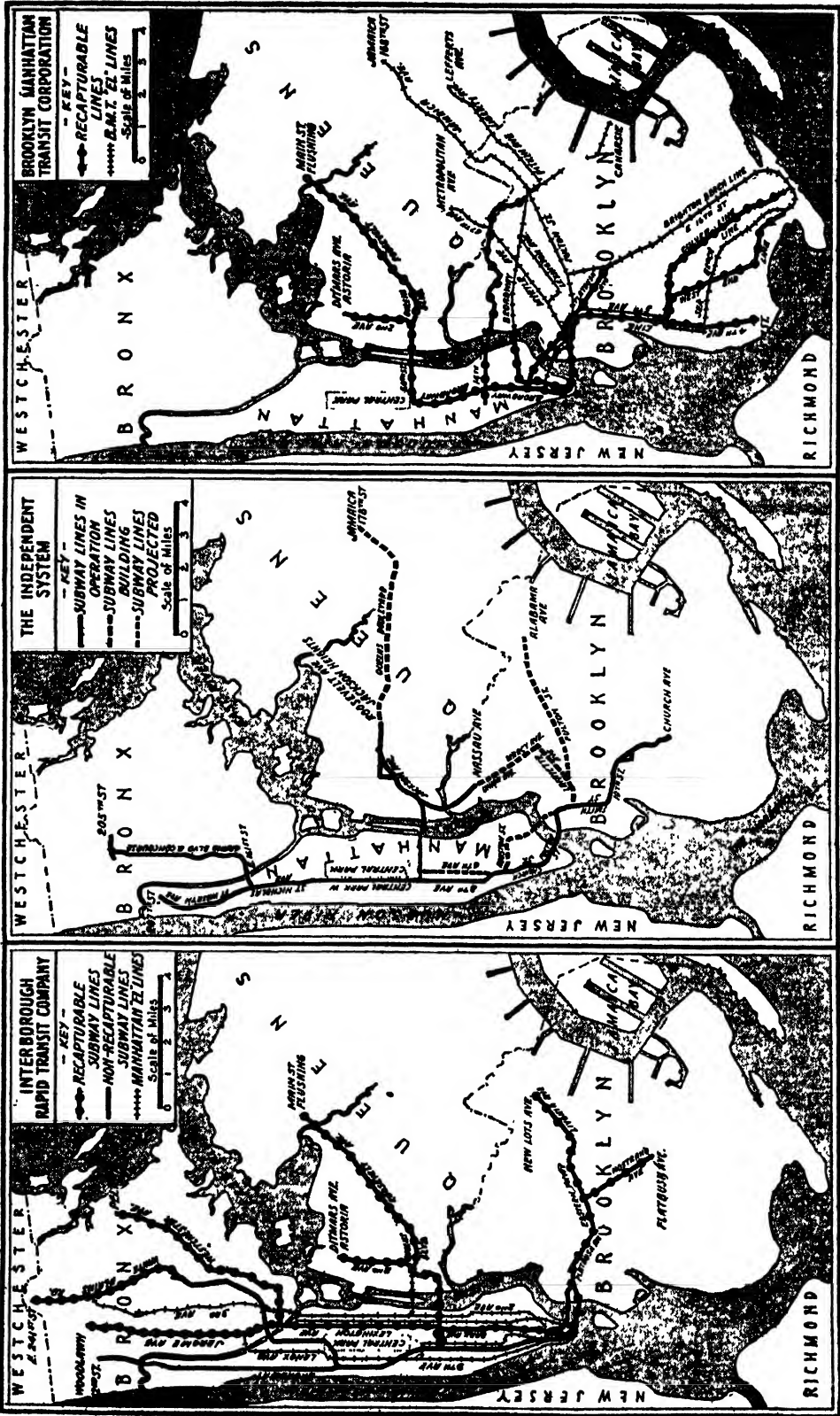
Mayor La Guardia's administration also faces the problem of unification. The three great subway systems of the city—the Interborough, the Brooklyn Manhattan (B.M.T.) and the Independent—could be combined into one operating whole and this problem of unification will undoubtedly continue to be agitated until some form of unified operating agreement is achieved. Practically all the lines of the B.M.T., and all except the "original subway" of the Interborough, are "recapturable" by the city. City finances, however, do not make such a move possible in the near future. Indeed, the problem of the five-cent fare is more likely to be settled first, for it has been found that the new city lines cannot meet expenses on a five-cent basis. See map on page 710.

BOSTON. Plans for a subway under Huntington Avenue to cost eight and one-half million dollars, have been under discussion during the year. This would permit the removal of all surface cars from Boylston St. and Copley Square.

RASMUSSEN, räs'mus'sen, KNUD (JOHAN VICTOR). A Danish Arctic explorer and author, died in Copenhagen, Dec. 21, 1933. He was born at Jakobshavn, Greenland, June 7, 1879, son of a Danish missionary and Eskimo woman, and was reared on that island. At the age of 17 he entered the University of Copenhagen and, after obtaining his Ph.D. degree in 1901, made his first ethnological excursion to Lapland in order to study the natives. The following year he joined the Danish Literary Greenland Expedition, led by Ludwig Mylius-Erichsen, which discovered near Evigheds Fiord, West Greenland, two ice-free mountain ranges, spent 10 months in a study of the heathen Eskimo of Cape York, and made the return journey to Upernivik across the ice of Melville Bay, the first sledge crossing on record. Rasmussen made ethnological expeditions to Greenland during 1906-08, in 1909, and during 1910-11, establishing on the latter the Cape York station at Thule, North Greenland, for the purpose of studying Eskimo folklore. His researches on these expeditions were published as *Nye Mennesker* (New People, 1905), *Under Nordenvindens Svøbe* (Under the Lash of the North Wind, 1906), *Lapland* (1907), and *The People of the Polar North* (1908).

In 1912 Rasmussen made a remarkable crossing of Greenland for the recovery of the records of the Mylius-Erichsen expedition of 1905-07, which explored and charted the entire coast line of northeastern Greenland but, owing to the prolongation of its journey, failed to reach its ship, perishing of starvation and cold. His outward journey, 764 miles across the inland ice, was made from Inglefield Gulf to the Denmark Fiord, thence to Independence Bay; the return journey of 621 miles was to Wolstenholme Sound. As confirmed later by the Mylius-Erichsen and Mikkelsen records, he found the Peary Channel to be nonexistent, thereby establishing the continuity of Greenland from Cape Farewell, 60° N., to the most northern land ever reached 83° 39' N. He discovered also a large area of ice-free land, with ample game in the region. The Mylius-Erichsen records, however, were discovered at Denmark Fiord by Eynar Mikkelsen who, after his rescue from Shannon Island by a Norwegian whaler, brought them back to Copenhagen in 1912.

Outstanding among Rasmussen's later expedi-



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RAPID TRANSIT—NEW YORK CITY'S THREE SUBWAY SYSTEMS

tions were the second Thule Expeditions around North Greenland (1916-18), the fourth Thule Expedition which studied folklore among the Angmagssalik Eskimos of East Greenland (1919), and the fifth Thule Expedition from Greenland to the Pacific Ocean (1921-24). The purpose of the latter was to make an ethnological survey of the Eskimo tribes between Baffin Bay and Bering Strait. Accompanied by an Eskimo man and woman, Rasmussen traversed 20,000 miles, largely by native methods, gathering Eskimo legends and observing their tribal life, influenced especially in Alaska by the innovations introduced by American whalers. His travels ended when the Soviet government refused to permit him to complete his investigations among the tribes of arctic Siberia, but the expedition had confirmed his theory that anatomically as well as culturally the Eskimos were sprung from the same stock as the North American Indians.

The last expedition which Rasmussen led was the sixth Thule Expedition. In 1931 it investigated the coast of East Greenland for 2500 miles between the fiords of Juhanehaab and Angmagssalik, and in 1932 mapped by aeroplane the southeastern coastline from Pikiutdlek (south of Angmagssalik) to Cape Farewell. This expedition, together with those conducted by Lauge Koch and Eynar Mikkelsen, was stimulated by the rivalry between Norway and Denmark for possession of unsettled parts of Greenland. Previous to his death he was engaged in supervising the filming in East Greenland of ethnographic pictures of Eskimo life.

In addition to receiving medals from the leading geographical societies of the world Rasmussen was made Knight of the Royal Order of Dannebrog (Denmark), Knight of the Royal Order of the North Star (Sweden), Commander of the Order of St. Olav (Norway), and Commander of the White Rose (Finland). He wrote: *Min Rejsedagbog* (Diary of My Journey, 1915); *Foran Dagens Øje* (Before the Day's Eye, 1915); *Grønland langs Polhavet* (Greenland by the Polar Sea, 1919); *Myter Og Sagn fra Grønland* (Myths and Legends from Greenland, 3 vols., 1921-25); *In the Home of the Polar Eskimos* (1923); *Across Arctic America* (1927); and *The Eagle's Gift* (1932).

RAYON. Rayon production in the United States established a new high record in 1933 of 207,579,000 pounds, a figure 54 per cent above the 1932 output of 134,814,000 pounds, and 45 per cent greater than the previous high of 1931, according to the statistics of the industry compiled by the *Textile Organon* of the Tubize Chatillon Corporation. Consumption in 1933 was also far in excess of previous years reaching a total of 206,773,000 pounds as against 152,178,000 pounds in 1932. Although imports rose from 197,000 pounds in 1932 to an estimated 950,000 pounds for the year, the increase is inconsiderable by comparison with the importation of more than fifteen million pounds in 1929. In other words, domestic industry is equipped to handle domestic consumption.

By trades the production of rayon was distributed as follows, with 1932 percentages in parentheses: hosiery 9 per cent (14 per cent); other knit goods 20 per cent (25 per cent); broad woven goods 67 per cent (57 per cent); narrow woven goods 2 per cent (2 per cent); miscellaneous 2 per cent (2 per cent).

It is estimated by *Textile World* that rayon production in the United States was not far short of

one-third of world production, estimated at 660,155,000 pounds. Leaders among other producing countries in 1933 were: Japan, 89,165,000 pounds; Great Britain, 84,300,000 pounds; Italy, 80,990,000 pounds; Germany, 76,000,000 pounds; France, 53,000,000 pounds; Holland 22,000,000 pounds; Switzerland, 12,000,000 pounds. No other producing country attained an output of 9,000,000 pounds. See CHEMISTRY, INDUSTRIAL OR APPLIED.

REBER, COL. SAMUEL, U.S.A., RET. An American soldier and aviation and radio pioneer, died in Washington, D. C., Apr. 16, 1933. He was born in St. Louis, Mo., Oct. 16, 1864. On his graduation from the United States Military Academy in 1886, he was commissioned a 2d lieutenant in the 4th Cavalry, being promoted to 1st lieutenant in the 9th Cavalry in 1892. Both these regiments were principally engaged in service against hostile Indians in Arizona. Assigned to the Signal Corps as 1st lieutenant in 1894, he was made major of the United States Volunteers on the outbreak of the Spanish-American War and participated as chief signal officer, with the rank of lieutenant-colonel, in the expedition under General Miles which landed in Puerto Rico, July 25, 1898. In 1900 he returned to the regular Army as a captain and after his promotion to major in 1903 served on several occasions as chief signal officer of the Second Corps Area, gaining considerable experience as an expert in the field of military telegraphy and telephony.

In 1914 Reber was made chief of the aviation section of the United States Army, which was then under the direction of the Signal Corps, and supervised the various international air meets held in the United States. His special interest was in the development of the dirigible. After the entry of the United States into the World War he directed, as a colonel of the Signal Corps, the set-up of the air service of the American Expeditionary Force in France, serving with the 28th and 88th Divisions and at the headquarters of the Second Army. This service consisted of observation, pursuit, day bombardment, night bombardment, and instruction squadrons. In addition there were balloon companies which operated the observation balloons and dirigibles.

On his retirement from the Army in 1919 Reber decided to enter the newly-developed radio field, being associated for a time with the Columbia Syndicate. In 1923 he joined the Radio Corporation of America as general foreign representative. Sent to Japan on his first assignment, he assisted after the earthquake of September, 1923, in re-establishing communication with the outside world by wireless and cable and in recognition of this service was decorated by the Emperor with the Order of the Rising Sun, fourth class. He attended the International Telegraph Conference in Paris (1925); the International Radiotelegraph Conference in Washington (1927); the World Engineering Congress in Tokyo (1929); the Fourth International Juridical Congress on Radio in Liège (1930); and the Second Conference of the International Technical Consulting Commission on Radio in Copenhagen (1931). At the time of his death he was vice-president of the Radio Corporation of America Communications, Inc.

RECEIVERSHIPS. See RAILWAYS.

RECLAMATION. In the United States the work of the Bureau of Reclamation had reached an impasse due to the exhaustion of available funds and the failure of the majority of the projects constructed to bring in any substantial pay-

ments on capital costs. With the advent of the Reconstruction Finance Corporation, however, a number of projects are again under discussion. In Wyoming, the Casper-Alcova project, involving an expenditure of \$22,700,000, has been approved but is being opposed by Colorado on the ground that a reasonable division of the waters of the North Platte must first be effected. Irrigation and work on the Rio Grande, as in the case of flood control with which many irrigation projects are linked (see FLOOD CONTROL), has been stimulated by the new agreements between the United States and Mexico. This development will be watched with interest. In the northwest, the Columbia River Basin developments, irrigation linked with power and navigation, promise to be of unusual interest. A number of other smaller projects will receive R. F. C. grants, which, however worthy from the viewpoint of relieving unemployment, will apparently add new acres to our overproduction of agricultural products.

Plans for the All-American Canal, which will carry water from the Boulder Dam to the Imperial Valley, have progressed slowly. As has been pointed out in previous YEAR BOOKS, this project is not only a great canal undertaking but involves unique problems due to drifting sands. It appears that differences in connection with the use of this water may at last be settled and construction should begin early in 1934.

SOIL EROSION. Technical publications have devoted much space during the past year to the problem of soil erosion and the rapid loss by erosion of many acres of previously fertile land. The removal of forests, overgrazing, and the consequent killing of grass protection, are blamed for much of this trouble. Indeed the Tennessee Valley Authority, recently set up by President Roosevelt, states that one of its major problems in the economic rehabilitation of the area under its control is that of arresting the rapid erosion by rain and streams, of the arable lands. This is a comparatively new but apparently vitally important phase of the reclamation problem.

ZUIDER ZEE. The completion of the great dike, by means of which Dutch engineers have reclaimed a large portion of the Zuider Zee area, was noted in the 1932 YEAR BOOK. It was found during 1933 that the phenomenally large flows of the rivers draining through this area caused severe scour of the sea bottom at the outlet sluices where this flow passes through the dike and into the North Sea. Accordingly, great mattresses, similar to those used to protect the dike itself, were placed on the sea bottom at the outlets.

PONTINE MARSHES. Since the time of Cæsar the marshy and malarial area south of Rome, through which the Appian Way passes on the first great tangent of its course to southern Italy, has been the scene of various attempts at reclamation and drainage. Mussolini, with his characteristic vigor, has now turned to this problem. Some 187,000 acres are involved and the cost is to reach \$35,000,000. Two objects are in view. First, the work affords employment for a number of Italy's war veterans. Secondly, a colonization scheme is proposed. Half the cost is borne by the Italian government, the remainder is to be paid by settlers under a system of long term bonds.

Canals for intercepting water courses entering the area from the hills, drainage canals which will operate by gravity, and others which will be fed by pumps, are required to make effective the net work of ditch construction now under way.

SALONIKA, GREECE. Faced with the problem of providing land for a million Greek and Armenian refugees expelled from Asia Minor by the Turks in 1923, the Greek government has undertaken to reclaim part of a fertile but swampy area of 600 square miles lying to the west of the City of Salonika. The total work is estimated to cost some \$18,000,000 and a contract was let to an American firm in 1925. About two-thirds of the project has been completed.

The Plain of Salonika is subject to inundation by the Axios and Aliakmon rivers. Plans provided for a main channel on the Axios and for various intercepting canals of which the so-called Circulatory Canal, which intercepts much of the Aliakmon drainage, are the principal features.

EGYPT. Civil Engineering (London) of January, 1934, carried an article under the title "Harnessing the Nile" in which earlier constructions on the Nile were reviewed and the function of the new Gebel Aulia project (see DAMS) was described. Briefly stated this dam on the Blue Nile, together with the increased storage provided by raising the Aswan Dam (now under way) will increase the reservoir supply of Egypt at low river stages by about one-third. The possibilities of drought and famine in the fertile valley of the Nile will thus be markedly decreased.

RECONSTRUCTION FINANCE CORPORATION. See BANKS AND BANKING; UNITED STATES under *Administration*; SOILS; RECLAMATION; BUILDING; RAILROADS.

RECORDS, AERONAUTIC. See AERONAUTICS.

RED CROSS, THE AMERICAN NATIONAL. A semi-governmental organization, chartered by Congress in 1905 not only to furnish volunteer aid to the sick and wounded of armies in time of war but to continue and carry on a system of national and international relief in time of peace and to apply the same in mitigating the sufferings caused by pestilence, famine, fire, floods, and other great national calamities.

The nation's year of greatest need since the World War was also the year of most intense and varied activity of the Red Cross. In addition to extensive participation in unemployment relief through its chapters, the Red Cross completed in 1933 the distribution of 844,000 bales of cotton and 85,000,000 bushels of wheat, voted by Congress from Farm Board surpluses, and gave assistance to sufferers in 120 disasters. It is estimated that 25,000,000 persons in the United States received some form of Red Cross relief. This service extended into all but six of the 3098 counties of the country.

Under arrangement with the flour milling industry, a no-profit conversion fee was paid for the milling of flour, allowance being made for by-products. Shipping instructions to the various chapters were given the millers, who paid the transportation and were reimbursed in wheat or the proceeds from the wheat by the national organization. Under this arrangement the flour was received for local distribution without any cost to the community.

One barrel of flour as a 90-day supply for the average family was continued as a recognized adequate standard of relief. Distribution was by one of two plans: issuance of flour from a central warehouse or relief distribution depot to which the approved family came, or inclusion on regular grocery orders issued to local grocers, flour having been delivered to the grocer for this free distribution. At the end of the operation, 5,803,

000 families had received flour from the Red Cross.

As with flour, the Red Cross received the complete coöperation of the textile industry in its distribution of cotton. The terms of contract under which manufacturers sold goods to the Red Cross provided for payment in terms of cotton. Manufacturers assumed responsibility for delivery of goods to the local relief organization. Upon receipt of the manufacturer's invoice covering the cost and transportation, payment was made in raw cotton and later in money from the proceeds of the cotton under the second Act of Congress relating to this project. The terms of contract provided for claims adjustments because of differences of grade, weight, and staple.

At the end of the fiscal year, 5,465,410 families had been listed for clothing, and it was estimated that as much as 50 per cent of their yearly clothing requirements had been met. Thousands of sewing groups in Red Cross chapters had shared with factories 91,077,633 yards of cloth for the making of garments, while 4,085,390 dozen finished garments, 405,338 dozen sweaters, 1,995,511 blankets and comforters, and 1,110,867 yards of sheeting for the sick and aged had been purchased for distribution.

During the year 2834 chapters participated in unemployment relief activities. These activities included acting as family welfare agencies, enlargement of service to veterans, clothing production, food conservation and canning campaigns, hot school lunches, service to transients.

In the 12 months ending June 30, 1933, the Red Cross directed aid in 96 domestic disasters, and gave needed assistance in 21 disasters in insular territory and 3 disasters on foreign soil. The year's catastrophes included 44 tornadoes, 26 floods, 24 fires, and a long category of hailstorms, hurricanes, and explosions. The Red Cross was constantly busy, from the great fires at Ellsworth and Auburn, Maine, to the destructive earthquake in California, giving emergency relief and rehabilitation to victims.

The so-called "regular" services continued to meet growing needs. Nursing Service maintained 35,750 nurses in active status, ready for instant call. More than 700 Red Cross public health nurses were employed by the chapters. Home hygiene instruction by Red Cross authority reached 53,000 persons. In the year, 78,795 certificates were issued in life-saving and 66,354 in first aid. School children enrolled in the Junior Red Cross numbered 6,629,866. Senior membership totaled 3,701,866. There were 3701 chapters and approximately 10,000 branches.

The President of the United States is president of the Red Cross, which is governed by a board of 18, of whom six are appointed by the President. John Barton Payne is chairman of the board; and James L. Fieser, Ernest P. Bicknell, and James K. McClintock, vice-chairmen. National headquarters are in Washington, D. C., with branch offices in St. Louis and San Francisco.

REED COLLEGE. A nonsectarian, liberal college of arts and sciences for men and women in Portland, Ore., founded in 1911. The enrollment for the autumn term of 1933 totaled 432 students. The faculty numbered 35 with 13 graduate assistants. The productive funds for 1932-33 amounted to \$1,797,408, while the net income as of Aug. 31, 1933 was \$50,170. The library contained approximately 46,203 volumes. President, Norman Frank Coleman, LL.D.

REFERENDUM. UNITED STATES OF AMERICA. The year 1933 witnessed extensive use of the referendum, especially by the Federal government. For the first time in its history, Congress utilized the alternative method authorized by the Constitution in ratifying proposed amendments, viz. "by conventions" instead of, as theretofore, "by the legislatures." As the delegates composing these conventions were chosen mostly by popular vote, for the sole purpose of passing on the proposed 21st amendment, the elections virtually amounted to a referendum on the question. Indeed they were as much of a referendum as could ever be provided for such a proposal under the present Constitution; for in *Hawke v. State*, 253 U. S. 221, the Supreme Court held invalid an attempted submission of such an amendment to a popular vote. Some of the States, in legislating for a convention, provided expressly that its action should be determined by the result of the vote for delegates, the ballot containing the label, "for" or "against." This was criticized in some quarters as removing the convention from the category of "deliberative assemblages," to which, according to the decision just cited, it belongs. Most of the States, however, put the pressure on the candidates by requiring them to file written acceptances under one of the labels above mentioned. Some States also required a pledge and others an oath, from the candidate, to abide the result of the poll. One State penalized the failure to vote in accordance with instructions. Altogether it was much more of a popular referendum than the process by which the original Constitution was adopted; for the conventions which passed on the latter were chosen from a very limited electorate.

For the first time a proposal was offered of an amendment to repeal another amendment. Neither the Constitution nor any Federal legislation provided the details concerning the required conventions—how they should be called, who should compose them, or what procedure they should follow. All this was left to the States; although there was a considerable sentiment in Congress that it was a Federal rather than a State prerogative. As one result of the absence of any provision in the submitting resolution, the number of delegates and the mode of their election differed considerably. In New York there were 150 delegates; in New Mexico but three. Some States provided for local representation by districts or counties; many more elected delegates at large; while in a few the two methods were combined.

The States acted with unusual speed in setting up the necessary machinery. The proposal was finally submitted on February 20, when the House passed it, the Senate having done so on February 16. Barely six weeks later, on April 3, delegates were elected in Michigan. From that date until November 7, when the electors of six States voted, 39 in all chose conventions on the dates and by the vote indicated in the table on page 714.

While this was a referendum, it was by no means so nearly a popular one as the national election of the previous year. But the national referendum was not the only one which took place in the United States during 1933. The referendum is now in vogue in some 20 States and a number of them employed it for other purposes than to test public sentiment regarding the 18th amendment.

Alabama. On October 10 the electors of Birmingham voted against proposals that the city build

State	For	Against	Majority for
Michigan	850,546	287,931	562,615
Wisconsin	648,081	141,518	506,513
Rhode Island	150,244	20,874	129,370
Wyoming*			
New Jersey	573,532	90,733	482,799
Delaware	45,615	13,505	32,110
Indiana	557,082	312,120	244,942
Massachusetts	436,356	97,702	338,654
New York	1,946,532	247,450	1,699,082
Illinois	1,227,668	341,778	885,895
Iowa	376,661	249,534	127,127
Connecticut	236,742	34,816	201,926
New Hampshire	76,044	30,409	45,635
California	1,019,818	139,981	699,837
West Virginia	218,638	136,552	82,086
Arkansas	67,622	46,091	21,531
Oregon	136,713	72,854	63,859
Alabama	100,269	70,631	29,638
Tennessee	126,983	119,870	7,113
Missouri	503,642	156,961	346,681
Arizona	37,643	11,323	26,320
Nevada*			
Vermont	41,182	20,714	20,468
Colorado	133,066	62,969	70,097
Washington	490,088	208,206	281,882
Minnesota	390,179	209,049	181,130
Idaho	56,652	40,977	15,675
Maryland	205,130	45,776	159,354
Virginia	99,459	58,517	40,942
New Mexico	53,321	14,041	39,280
Florida	98,247	24,439	73,808
Texas	310,710	195,341	115,369
Kentucky	386,653	234,417	152,236
South Carolina	33,074	35,845	2,771 ^b
Ohio	1,444,033	583,842	860,191
Pennsylvania	1,864,411	583,513	1,280,898
Utah	101,665	67,234	34,431
Maine	114,795	53,000	61,795
North Carolina	120,190	293,484	173,294 ^b
Total	15,279,216	5,533,992	9,745,224

* Delegates to conventions in Wyoming and Nevada were chosen at precinct mass-meetings or county conventions; no popular vote.

^b Majority against repeal.

or acquire and operate municipal electric, heating, transportation, and water systems. The vote aggregated 16,619 as against 21,758 at the municipal election of the preceding year—a much better showing than on the repeal of the 18th amendment.

Arizona. At a special election on October 3, the voters adopted a constitutional amendment substituting execution by lethal gas in capital cases, for death by hanging, and two measures referred by the legislature—one requiring applicants for licenses to practice medicine to pass an examination in the basic sciences and the other, prohibiting, except under certain prearranged conditions, deficiency judgments in mortgage foreclosures. Proposals to extend the terms of State and county officers to four years were defeated.

Connecticut. On October 3, the voters in "small town" elections approved two amendments to the State constitution. One authorizes the governor to nominate judges of the court of common pleas (previously chosen by the legislature) avoiding an unseemly partisan scramble as at the last session. The other abolishes the "pocket veto" but allows more time for executive consideration of measures.

Kentucky. A proposal to authorize the general assembly to remove the State tax bill on real property was voted upon.

Louisiana. On February 27, the State supreme court, in *Wadkins v. State*, held invalid a referendum of the preceding year, at which the electors voted to repeal the "Hood act" for prohibition enforcement. The basis of the decision was that the legislature had no implied power to refer the measure and the constitution conferred none

expressly. But for over a century the courts of other States had held to the contrary (see Lobingier, *The People's Law*, 350).

Missouri. A bill to carry into effect the constitutional amendment adopted by the voters at the 1932 election, authorizing an old age pension law, was before the legislature at a special session.

Nebraska. Steps were taken to initiate a proposal to reduce the legislature, now consisting of 133 members, to 21. This accords with a plan long advocated by Senator Norris and will be voted on at the next general election.

New Mexico. In September the electors voted on six acts of the legislature whose operation had been suspended by referendum petitions.

New York. At the general election on November 7, no less than six proposals were submitted to the voters of the city and State. Four were proposed constitutional amendments, viz.:

(1) Authorizing the detail of two or more supreme court justices to dispose of proceedings to condemn land for public use, and thus to promote expedition and uniformity of result therein; (2) giving civil service preference to veterans not citizens of the State at the time of their enlistment. (This was intended to overcome the effect of Justice Cardozo's decision in *Matter of Bartholmess*, 231 N. Y., 435); (3) authorizing the construction of a State highway in the Adirondacks; (4) ceding the 53d St. barge canal terminal (found unsuitable) to the city. All of these except No. 2, which was vigorously opposed by the Citizens' Union and by the press, were adopted. "Emergency unemployment relief bonds" in the amount of \$60,000,000 were also voted by a heavy majority; but the proposed local law for New York City, providing for a charter commission, of 17, who would have been appointed by the retiring mayor, was rejected because, in the editorial language of the *New York Times*, "there will be no charter revision under Tammany auspices."

The municipal referendum in Utica, which resulted in the adoption of the city manager form of government, was frustrated by an order of supreme court Justice Dowling, restraining the mayor from carrying it into effect, on the ground that the city and county clerks' notices of the election were insufficient in form.

North Carolina. Voting on November 7, this State and its neighbor, South Carolina, were the only ones which rejected the 21st amendment to the Federal Constitution. Earlier in the year the general assembly authorized pari-mutuel betting on horse races, provided the votes of the locality should approve it in a referendum. McDowell county voted affirmatively on June 27, after an unsuccessful attempt to obtain an injunction to prevent the election being held. Its expenses, however, were defrayed by a private citizen, no appropriation having been made therefor.

North Dakota. On September 22 the electors voted upon two proposed constitutional amendments and three referred measures. The former were adopted, the first (rearranging the section relative to the county officers' elections) by a vote of 84,207 to 62,945; the second (relating to the reading of legislative bills) by a vote of 77,077 to 61,987. A proposed law for the "administration of insolvent banks" was rejected by a vote of 94,130 to 58,746; a proposed sales tax law by a vote of 113,807 to 41,241; and a proposal to permit the governor to remove any workmen's com-

pensation commissioner "without cause," by a vote of 94,429 to 50,819. Here again "intelligence and discrimination" appear; though the variance in the vote discloses that the electors are much more interested in some (e.g. fiscal) measures than in others.

Ohio. Besides the referendum on the 21st amendment, municipal elections were held in this State on November 7. That of Cincinnati was virtually a referendum on the proportional representation feature of city charter. The charterites polled about 51 per cent of the vote and retained a majority of one in the municipal council. At the same time a proposal to take over the local, privately owned gas and electric light plants was heavily defeated.

Rhode Island. On May 1, the electors, besides voting to repeal the 18th amendment (Federal), also approved a \$3,000,000 bond issue for unemployment relief.

Tennessee. By a vote of 4482 to 2362, the electors of Knoxville, on November 25, approved a bond issue of \$3,225,000 for a municipal power distributing system, to utilize Muscle Shoals power, supplied by the Tennessee Valley Authority, whose transmitting line is to pass within 25 miles of Knoxville. The vote is reported as much smaller than was expected.

Washington. A referendum on a State commission form of government was proposed in a resolution presented in the legislature on February 10.

GERMANY. This is one of the countries where popular legislation had its most extensive development during the post war period. Clauses providing therefor appeared in the provisional constitutions of no less than six German states as well as in that of the Reich as early as 1919 and all of the 17 states "adopted some form of the referendum in their permanent constitutions." That of Baden was submitted to the electors and required (sec. 23) popular approval of all proposed amendments. Again all permanent constitutions, except that of Lübeck, provide for the initiative, not only as to constitutional amendments but also as to ordinary legislation; and (save in Lübeck, Hamburg, and Mecklenburg-Schwerin) on the question of dissolving the legislature. Here, indeed, it has been most extensively used. Beginning with 1922, there have been few years when the electors were not called upon to vote as regards dissolution of a legislative body. In a number of these instances the desired result was accomplished through the initiative and, in that way, legislative deadlocks have been avoided. The question of consolidating states has been submitted to the voters of several. In Mecklenburg-Schwerin, the electors may initiate an appeal to the state *gericht* (court); but the attempt by this method to summon the ministry before the court in 1928, for alleged misappropriation of public funds, was unsuccessful.

Events of the present year show that, whatever may become of other democratic institutions, the referendum is to remain—at least in form. Hardly had the Hitlerites become seated in power when they began to prepare for an appeal to the electorate, for a show of popular support. The methods employed strangely resembled those of the Napoleonic plebiscites. But a single question was submitted, viz.:

Dost thou, German man or woman, approve the policy of thy Reich government and art thou ready to acknowledge this policy as the expression of thine own viewpoint and will and solemnly pledge thyself thereto?

Here the voter was given no opportunity to express his view on alternative proposals, such as the restoration of representative institutions. Again the campaign was conducted mainly on the government's behalf; open opposition was unsafe. Appeals to prejudice, fear, self interest, and perverted nationalism characterized the government's crusade, which closed with an appeal, evidently extorted, from the venerable President Von Hindenburg. Yet the result was not nearly so pronounced as in France under the Napoleons. In a very full turnout (also obviously stimulated) on Sunday, November 12, when the vote was taken, about 40,000,000 registered for the Hitler régime and about 3,500,000 against it. Said the New York Times, editorially:

The Hitler ticket received 92.8% of the total vote. But in January, 1919, in the elections for the Weimar National Assembly, the parties which Hitler has destroyed—Socialists, Centrists, Democrats, and People's—received 91.4% of the total vote. Thirteen years ago the Weimarites were just as strong in a free election as Hitler is now in a dragooned one.

A unique feature of this referendum was the polling of German citizens in other lands and even on shipboard. In Austria, the Baltic states, Danzig, Estonia, Italy, the Netherlands (where the former Kaiser's servants are said to have voted), Peru and Switzerland, not to mention others, Germans turned out *en masse* and in some of them "Nazi" emissaries had long been active.

ICELAND. America was not the only country to hold a referendum on repeal of the prohibition laws. In that far northern isle, where democratic institutions have flourished for 1000 years, the people voted in October on the same question, much as they used to in the althing, though in scattered localities instead of in one place. The result also was much the same—an overwhelming majority for repeal. It is reported that in one group of five villages, with a total of 1700, the vote for repeal was unanimous.

PORTUGAL. On March 19 a national plebiscite was taken on the proposed new constitution, under which the President and all members of the legislative body are to be chosen by popular vote, with the premier responsible to the former. Registered electors who refrained from voting, were, under a presidential decree, counted as approving the instrument.

REFORMED CHURCHES, THROUGHOUT THE WORLD HOLDING THE PRESBYTERIAN SYSTEM, ALLIANCE OF. An organization formed in London, Eng., in 1875 with the one great purpose, to encourage comity, cooperation, and efficiency in the accomplishment of Christian work. In 1933 there were 106 churches connected with the alliance. The members and adherents of the Presbyterian and Reformed churches throughout the world numbered about 60,000,000 including members of the Evangelical Church in Germany. The general secretary is the Rev. W. H. Hamilton of Edinburgh, Scotland, and the American secretary is the Rev. Henry B. Master, D.D., whose offices are at 1012 Witherspoon Building, Philadelphia. The Fourteenth Council of the Alliance was held in Belfast, North Ireland, in 1933. The Fifteenth Council will be held in Montreal, Canada, in 1937.

REFORMED CHURCH IN AMERICA. Composed originally of settlers from the Netherlands, and known until 1867 as the Reformed Protestant Dutch Church in North America, the denomination has since become largely intermixed with

elements from many other nationalities. Its doctrinal standards are the Belgic Confession, the Heidelberg Catechism, the Canons of the Synod of Dort, and the Westminster Catechism. The form of government is of the Presbyterian type.

In 1933 the denomination reported 728 churches, 851 ministers, 86,720 families, and 158,981 communicants. In the foreign mission field, which included China, India, Japan, Arabia, and Iraq, there were employed 166 missionaries. The 220 domestic missionaries were engaged principally among the Indians of Nebraska, Oklahoma, and New Mexico, and the mountaineers of Kentucky. Contributions reported in 1933 included \$3,050,541 for congregational expenses, \$596,035 for denominational benevolence, and \$128,695 for other benevolent objects.

The church colleges are Hope, at Holland, Mich.; Central, at Pella, Iowa; and Northwestern Junior, at Orange City, Iowa, while theological seminaries are maintained at New Brunswick, N. J., and Holland, Mich. The official paper is the *Christian Intelligencer*. The Rev. Edward Dawson, D.D., of Passaic, N. J., who was elected president at the 1932 session of the general synod, continued in that office, the 1933 session being omitted for economic reasons. Headquarters of the denomination are at 25 East Twenty-second Street, New York City.

REFORMED CHURCH IN THE UNITED STATES. This church, earlier known as the German Reformed Church in the United States, traces its origin chiefly to the German, Swiss, and French Protestants who settled in America early in the eighteenth century. Samuel Guldin, generally acknowledged to be the first German Reformed minister in the United States, preached at Germantown, Pa., in 1718, and John Philip Boehm held the first recorded communion service at Falckner Swamp, Oct. 15, 1725. Both in doctrine and polity the denomination is in hearty accord with the other Reformed and Presbyterian churches. The Heidelberg Catechism is the basis of religious doctrine and Christian nurture.

The denomination reported as of Jan. 1, 1933, 7 synods, 59 classes, 1705 congregations, 1335 ministers, 345,704 communicant members, and 353,844 Sunday school pupils. In the three foreign mission fields, Japan, China, and Iraq, there were employed 86 missionaries and 430 native workers. There were also 210 home missions with a communicant membership of 24,240, the work being conducted principally among the Hungarians, Bohemians, Japanese of California, and Indians of Wisconsin.

The church has theological seminaries at Lancaster, Pa., Dayton, Ohio, and Plymouth, Wis. The principal colleges are Franklin and Marshall, at Lancaster, Pa.; Ursinus, at Collegeville, Pa.; Cedar Crest, at Allentown, Pa.; Hood, at Frederick, Md.; Catawba, at Salisbury, N. C.; and Heidelberg University, at Tiffin, Ohio. The official periodicals are *The Messenger*, *The Christian World*, *The Kirchenzeitung*, and *The Outlook of Missions*.

At the twenty-fourth triennial session of the general synod, held in Akron, Ohio, in June, 1932, the Rev. Henry J. Christman, D.D., of Dayton, Ohio, was elected president. The Rev. J. Rauch Stein, D.D., has served as stated clerk since 1908. Headquarters are in the Schaff Building, Philadelphia, Pa.

REFORMED EPISCOPAL CHURCH. A denomination formed in December, 1873, by Bishop

George David Cummins and associated clergymen and laymen who had withdrawn from the Protestant Episcopal Church. It is liturgical and evangelical and possesses the historic episcopate. The two synods are New York and Philadelphia, and Chicago, the former comprising churches from New York to Virginia, the latter Illinois and Ohio. (The Synod of Canada was transferred to the Free Church of England in 1930.) Statistics are published triennially, following the meeting of the general council, which will convene for the twenty-eighth session in St. Paul's Church, Philadelphia, Pa., May 27, 1936. The church paper, the *Episcopal Recorder*, has been published continuously in Philadelphia for over 110 years. Its theological seminary, also in Philadelphia, was founded in 1886. The foreign mission field is the Lalitpur district in India, with over 200,000 inhabitants. The home mission field is among the Negroes in South Carolina, with 36 parishes and missions. The president is Bishop Robert Westly Peach, D.D., of Philadelphia, and the general secretary, the Rev. Howard D. Higgins, Th.M., of New York City.

REFUSE DISPOSAL. See GARBAGE AND REFUSE DISPOSAL.

REGIONAL PLANNING. See CITY AND REGIONAL PLANNING.

REICHSTAG FIRE. See GERMANY; LAW.

RELIGIOUS DENOMINATIONS. See articles on respective churches and denominations.

RENSSELAER POLYTECHNIC INSTITUTE. A nonsectarian institution for the technical training of men in Troy, N. Y., founded in 1824. In 1933 there were 1367 students enrolled, as follows: Civil engineering, 303; mechanical engineering, 209; electrical engineering, 312; chemical engineering, 192; aeronautical engineering, 31; industrial engineering, 10; architecture, 60; biology, 45; business administration, 60; physics, 22; chemistry, 46; graduate students, 65; special students, 12. The teaching staff numbered 123. The productive funds amounted to \$8,700,000 and the income for the year to \$697,200. The gifts for endowment during the year amounted to \$206,000. The library contained 24,896 volumes and 24,527 pamphlets. President, Palmer C. Ricketts, E.D., LL.D.

REPARATIONS AND WAR DEBTS. The year 1933 was marked by the further disintegration of the reparation and war-debt structure erected by the peace treaties and by the war-debt settlements between the United States government and its debtors in Europe. The Lausanne Conference of 1932 had agreed upon terms for the final settlement of the Allied reparation claims upon Germany. But by the Gentlemen's Agreement signed at Lausanne July 2, 1932, the Allied powers pledged themselves not to ratify the reparation accord until they had reached a "satisfactory settlement" of their war debts to the United States (see 1932 YEAR BOOK). In the meantime the Hoover Moratorium was to be continued on German and non-German reparation and on the war debts which the various European governments owed one another.

No "satisfactory settlement" of the war debts owed to the United States government was reached during 1933. The five nations (France, Poland, Belgium, Estonia, and Hungary) which had defaulted on their war debt installments due Dec. 15, 1932 continued to default on the installments due June 15 and Dec. 15, 1933. On June 15, 1933, the list of defaulters was lengthened to include

Yugoslavia. Moreover, of the six governments paying war-debt installments in full on Dec. 15, 1932 (Great Britain, Czechoslovakia, Italy, Finland, Latvia, and Lithuania), five made greatly reduced "token" payments on their 1933 installments. Rumania, which had no installment due Dec. 15, 1932, followed the example of Great Britain and others in making a "token" payment on her June 15, 1933, installment. Finland was the only country owing war debts to the United States which paid in full during 1933. The United States received \$98,685,910 on total war-debt payments of \$123,682,421 due Dec. 15, 1932. On June 15, 1933, only \$11,369,592 was paid on a total of \$143,605,294. On Dec. 15, 1933, \$8,898,123 was paid on a total amount due of \$152,952,637. The accompanying tables show the amounts due and the amounts paid by the various debtor governments on June 15 and Dec. 15, 1933.

WAR-DEBT INSTALLMENTS: JUNE 15, 1933

Country	Amount due	Amount paid
Great Britain	\$ 75,950,000	\$10,000,000
France	40,738,568	.....
Italy	13,545,438	1,000,000
Belgium	6,825,000	.....
Poland	3,559,062	.....
Czechoslovakia	1,500,000	180,000
Rumania	1,000,000	25,000
Estonia	284,322	.....
Yugoslavia	275,000	.....
Finland	148,592	148,592
Lithuania	132,091	10,000*
Latvia	118,961	6,000
Hungary	28,260	.....
Total	\$143,605,294	\$11,369,592

* Payment deferred until June 23.

WAR-DEBT INSTALLMENTS: DEC. 15, 1933

Country	Amount due	Amount paid
Great Britain	\$117,670,765	\$7,500,000
France	22,200,926	.....
Italy	2,133,906	1,000,000
Belgium	2,859,454	.....
Poland	5,408,292	.....
Czechoslovakia	1,682,813	150,000
Estonia	435,408	.....
Finland	229,623	229,623
Lithuania	105,474	10,000
Latvia	180,705	8,500
Hungary	45,271	.....
Total	\$152,952,637	\$8,898,123

The tabulation in column 2, prepared by Secretary of the Treasury Morgenthau at the request of the U. S. Senate, shows the status of the war debts as of Jan. 4, 1934. It gives the total indebtedness of the several debtor countries and the amount of principal and interest thereon unpaid between July 1, 1932, when the Hoover Moratorium terminated as far as the United States was concerned, and Jan. 4, 1934.

DEBT NEGOTIATIONS. The governments of Great Britain and the other countries which paid their war-debt installments on Dec. 15, 1932, notified the Washington government that they desired a readjustment of their obligations before another installment became due. President Hoover took up the question with President-elect Roosevelt. After a meeting between the two at the White House on Jan. 20, 1933, it was announced that the British government had asked for a discussion of the war debts and that the new Administration would be glad to take up the matter early in March. Some diplomatic manœuvring for advantageous positions marked the interim before Mr. Roosevelt's inauguration. Mr. Roosevelt discussed the debts

STATUS OF WAR DEBTS OWED UNITED STATES: JAN. 4, 1934

FUNDED INDEBTEDNESS, JULY 1, 1932—JAN. 4, 1934

Countries which have made payments in full:

Country	Total indebtedness	Amounts unpaid according to contract
Finland	\$8,726,645.63	.....

Countries which have made payments on account of amounts due July 1, 1932—Jan. 4, 1934:

Country	Total indebtedness	Amounts unpaid according to contract
Czechoslovakia	\$ 165,283,195	\$ 2,852,898
Great Britain	4,636,157,358	176,120,246
Greece	32,583,338	1,379,690
Italy	2,008,103,288	13,687,010
Latvia	7,312,658	286,462
Lithuania	6,554,544	221,169
Rumania	63,871,783	1,048,750
Total	\$ 6,919,866,167	\$195,596,228

Countries which made no payments on account of amounts due same period:

Country	Total indebtedness	Amounts unpaid according to contract
Austria	\$ 23,757,934	\$ 84,767
Belgium	411,186,529	11,809,453
Estonia	17,784,695	989,985
France	3,960,772,238	82,308,312
Germany*	724,186,140	959,377
Hungary	2,051,938	114,628
Poland	222,560,466	12,317,829
Yugoslavia	61,625,000	525,000
Total	\$5,423,905,542	\$108,559,354

Total under funding agreements	\$12,352,498,355	\$304,155,582
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UNFUNDED INDEBTEDNESS

Country	Total indebtedness	Amounts unpaid according to contract
Armenia	\$ 20,813,416	\$ 20,813,416
Nicaragua	416,550	416,550
Russia	337,223,288	337,223,288
Total	\$ 357,953,254	\$357,953,254
Grand total	\$12,710,451,610	\$662,108,837

* Reichsmarks, converted at \$0.2382.

with Sir Ronald Lindsay, the British Ambassador, on January 29 at Warm Springs, Ga., and again on February 20 following the Ambassador's return from a hurried trip to London. The debt negotiations which had been formally opened between Secretary of State Hull and Ambassador Lindsay March 24, were continued by President Roosevelt and Prime Minister MacDonald during the latter's visit to Washington in the spring. At the same time the President discussed the position of the other European debtors with their special representatives sent to Washington for conferences on measures of world economic rehabilitation. No agreement was forthcoming, the negotiators apparently taking the view that it was impossible to isolate war debts from such other pressing questions as currency stabilization, tariffs, and other trade barriers.

Although the debt question had been excluded from the agenda of the World Economic Conference (q.v.) at American insistence, Prime Minister MacDonald in his opening address declared that war debts "must be dealt with before every obstacle to general recovery has been removed, and . . . must be taken up without delay by the na-

tions concerned." The spokesmen of Italy, Czechoslovakia, South Africa, and other nations joined in urging the United States to "fall in line" with the Lausanne reparation agreements and to postpone the June 15 payment until a settlement had been reached. These declarations had no direct effect upon the American debt policy, other than to provoke hostile replies in Congress. Accordingly the British government on June 13 notified Washington that it would make a partial payment of \$10,000,000 on June 15 "as acknowledgment of the debt pending a final settlement." The British government saved some \$2,800,000 on the \$10,000,000 debt payment by taking advantage of the U. S. Agricultural Adjustment Act under which the Treasury was authorized to accept silver at 50 cents an ounce in payment of war debts. The British accordingly transferred to the United States 20,000,000 ounces of silver purchased in India at a cost of about \$7,200,000.

The French note, reiterating that government's intention to default on the June 15 payment, stated that the reduction of French reparation claims upon Germany, made in the interests of world economic recovery, compelled the postponement of the installment due. It was made plain that France was ready to discuss a downward readjustment of the debt, as France did not intend "to break, unilaterally, engagements freely entered into. . . ." The other debtor countries followed the example of either Great Britain or France, as their interests dictated.

The Roosevelt Administration accepted the partial payments made as payments on account. The President set forth his attitude in a statement issued June 14 following receipt of the British note. He said that "inasmuch as the payment made is accompanied by a clear acknowledgment of the debt itself" he had "no personal hesitation" in saying that he did not characterize the resultant situation as a default. Regarding request for debt revisions, the government promised an early hearing but stated that Congress alone had power to revise existing agreements. To those governments which paid nothing and also to Italy, whose payment was considered "unsubstantial," the State Department sent sharp notes reproving their action.

With the June 15 installments disposed of, the war debt issue was not revived until September. Then a British delegation sailed for Washington in another effort to secure a revision. The delegation consisted of Sir Frederick Leith-Ross, economic adviser to the British government, Ambassador Lindsay, and T. K. Bewley, British Treasury expert. Negotiations continued in Washington from October 10 to November 7 when it was announced that no agreement had been reached. President Roosevelt issued a statement to the effect that the discussions had been discontinued due to the "unprecedented state of world economic and financial conditions" which made a permanent settlement of the British debt at that time difficult, if not impossible. Pending a clarification of the world situation such as to permit resumption of the negotiations, he announced his willingness to accept a payment of \$7,500,000 on account of the \$117,670,765 due by Great Britain on December 15. None of the other debtor nations entered into negotiations for revision in advance of the December 15 installment, on which date the United States received less than 6 per cent of the total amount due. Notes exchanged between the State Department and the debtor governments

were the same in tenor as those exchanged in connection with the June 15 installment.

REPEAL OF THE 18TH AMENDMENT.

For vote, see the different States under *Legislation*; PROHIBITION; UNITED STATES under *Administration*; REFERENDUM.

RÉUNION, RA'U'nyonn'. A French island colony in the Indian Ocean some 420 miles east of Madagascar. Area, 970 square miles; population (1931 census), 197,933. St. Denis, the capital, had 26,807 inhabitants in 1931; St. Paul, 22,679; St. Pierre, 22,048; St. Louis, 17,237. The chief port is Pointe-des-Galets. Sugar, rum, manioc, tapioca, vanilla, and essences are the principal productions. The island is administered by a governor assisted by a privy council and an elective council-general, and is represented in the French Parliament by a Senator and two Deputies.

RHODE ISLAND. POPULATION. The population of the State on Apr. 1, 1930, according to the Fifteenth Census, was 687,497, as against 604,397 in 1920. Providence, the capital, had (1930) 252,981 inhabitants.

AGRICULTURE. The following table shows the acreage, production, and value of the principal crops for 1933 and 1932:

Crop	Year	Acreage	Prod. Bu	Value
Hay (tame) . . .	1933	35,000	44,000*	\$757,000
	1932	34,000	41,000*	726,000
Potatoes	1933	2,000	370,000	388,000
	1932	2,000	320,000	176,000
Corn	1933	10,000	410,000	308,000
	1932	9,000	351,000	176,000

* Tons.

FINANCE. State expenditures in the year ended June 30, 1932, as reported by the U. S. Department of Commerce, were: for maintaining and operating governmental departments \$7,953,881 (of which \$483,699 was for local education); for interest on debt, \$845,158; for permanent improvements, \$4,376,369; total, \$13,188,515 (of which \$3,990,095 was for highways, \$1,199,770 being for maintenance and \$2,790,325 for construction). Revenues were \$13,141,394. Of these, property and special taxes furnished 36.8 per cent; departmental earnings and compensation to the State for officers' services, 4.8; sale of licenses, 41.8 (in which was included a gasoline sale tax that produced \$1,906,243). Funded debt outstanding on June 30, 1932, totaled \$21,930,000, of which \$6,224,000 was for highways. Net of sinking-fund assets, the debt was \$16,806,957. On an assessed valuation of \$1,382,189,158 the State levied in the year ad-valorem taxes of \$1,208,656.

EDUCATION. All public schools were reported to have been kept open, despite the fiscal difficulties of 1933, for their full normal daytime terms of instruction. According to the *Journal* of the National Education Association, no teachers had been discharged for reason of retrenchment, up to December, although fewer new teachers had been employed. The reopening of evening schools was in prospect, and a programme of education for adults was in preparation at the end of the year.

The number of persons of school age in the State, as reckoned for January, 1933, was 210,871; their ages ran from 4 to 21 years. For the academic year ended June 30, 1933, the number of students in public schools was stated as 124,095; of those in private and parochial schools, as 33,844. Of the public-school pupils, those in pre-

elementary classes numbered 5781; in elementary grades, 50,430; in junior high schools, 20,496; in senior high schools, 13,112; in primary schools, 13,511; in grammar schools, 11,921; in mixed schools, 1861; in four-year high schools, 4607; in special schools, 1508; in vocational schools, 758. The year's current expenditures for public-school education totaled \$9,433,186. Salaries of teachers, principals, and supervisors averaged \$1628.41 for the year.

CHARITIES AND CORRECTIONS. The chief of the central functions of the State, with regard to the care and custody of persons, under the system in operation in 1933, rested in the Public Welfare Commission. See *NEW INTERNATIONAL YEAR BOOK*, 1932. The institutions under the commission, with their populations of Nov. 1, 1933, were: State Hospital for Mental Diseases, 2259; State Prison and Jail, 665; Reformatory for Men, 97; Reformatory for Women, 34; State Infirmary, 966; Sockanosset School for Boys, 181 (delinquents); Oaklawn School for Girls, 35 (delinquents); Exeter School, 603 (mental defectives); State Home and School, 320 (neglected and dependent).

LEGISLATION. The regular annual session of the General Assembly convened on January 3 and adjourned on April 21. It created a State convention of 31 delegates to be elected by popular vote on May 1, who should declare the will of the State as to the proposed repeal of the Eighteenth Amendment of the Federal Constitution. Traffic in beer of the alcoholic strength of 3.2 per cent was made lawful. In the course of the nation-wide banking panic emergency measures were passed that empowered the State bank commissioner, with the Governor's approval, to halt banking business by declaring bank holidays and also to permit State banks to operate under a system of limited withdrawals; authorization was given for the issue of a form of bank scrip, with a view to furnishing a substitute for currency, which had become scarce in the emergency.

To provide for the needs of the destitute unemployed an issue of \$3,000,000 of State bonds was authorized, subject to approval at a special election on May 1. The Legislature provided that the State, in addition to canceling previous loans of money for poor-relief to localities, and to remitting certain State tax claims, should grant localities funds from the proceeds of its loan, up to \$2,500,000 in total, on condition that the localities thus benefiting should match the grants with appropriations of their own. The marginal \$500,000 of the total of the loan was to constitute a special reserve for other grants to municipalities in extreme cases of need. Racetrack betting under the pari-mutuel system was declared lawful, but Governor Green vetoed the measure to that effect. Reductions to a total of about \$1,000,000 were reported to have been made in the budget, as compared with that of the year before.

POLITICAL AND OTHER EVENTS. At an election on May 1 there were chosen by popular vote 31 delegates, all in favor of the repeal of the Federal Eighteenth Amendment; the delegates met in State convention on May 8 and voted the State's adoption of repeal as provided by the superseding amendment submitted by Congress. The popular vote for repeal was more than 7 to 1. The banks of the State suffered relatively little in the nation-wide banking panic. Their operations were suspended without bankruptcy on March 4 by the State's declaration of a legal holiday and,

subsequently, by the Federal closure of all banks. All commercial banks had reopened by March 15 and some days later the coöperative banks opened without restriction.

OFFICERS. The chief officers of the State, serving in 1933, were: Governor, Theodore Francis Green; Lieutenant-Governor, Robert E. Quinn; Secretary of State, Louis W. Cappelli; Attorney General, John P. Hartigan; Treasurer, Antonio Prince; Comptroller, Albert E. Godfrey.

Judiciary. Supreme Court: Chief Justice, Charles F. Stearns; Associate Justices, Elmer J. Rathbun, John W. Sweeney, John S. Murdock, J. Jerome Hahn.

RHODESIA, rô-dê-zhî-â or -zî-â. A British territory in south central Africa, reaching from the Belgian Congo and Tanganyika in the north to the Transvaal in the south. It is divided by the Zambezi River into Northern and Southern Rhodesia.

NORTHERN RHODESIA. The administration of this territory was taken over by the British Crown from the British South Africa Company on Apr. 1, 1924 according to the Order in Council of Feb. 20, 1924. With an area of some 288,400 square miles, mainly high plateau country, it had a population (1931) of 1,372,235 Africans and 13,846 Europeans. In 1932 there were 1,382,705 Africans and 10,553 Europeans. Livingstone is the capital.

Mining is the primary occupation, the total value of mineral production for 1932 was £2,562,489 of which copper represented £2,095,215; vanadium, £439,924; gold, £26,970. Tobacco, wheat, fruits, and maize are the principal agricultural crops. In 1932, imports were valued at £1,864,902 excluding specie and government stores; exports (excluding specie) totaled £2,675,248. In the same year, revenue amounted to £649,538; expenditure, £790,506; the public debt was £1,250,000.

The territory is administered by a governor assisted by a nominated executive council, and a legislative council. Governor in 1933, Sir R. Storrs.

SOUTHERN RHODESIA. Formerly under the administration of the British South Africa Company, this territory which consisted of Matabeleland and Mashonaland, voted in favor of responsible government in October, 1922 and on Sept. 12, 1923 was annexed to the British Crown. Total area, 150,344 square miles; total population (1931 census), 1,109,012 of whom 49,910 were Europeans. Salisbury, the capital, had 28,800 inhabitants; Bulawayo, 31,000.

The principal agricultural products were maize, tobacco, groundnuts, legumes, fodders, and fruits. In 1932 the export of citrus fruits amounted to 151,607 boxes. Livestock (1931): 2,582,500 cattle, 375,500 sheep, 67,900 swine. Mineral output in 1932 was: Gold, 574,000 fine ounces; silver, 115,000 fine ounces; coal, 483,000 short tons; asbestos, 16,000 short tons; chrome ore, 17,000 short tons.

In 1932, imports were valued at £4,272,127; exports, £5,387,251. There were 1348 miles of railway in operation, and a motor service system covering 1552 miles.

For the fiscal year ending Mar. 31, 1933, revenue amounted to £2,268,910; expenditure, £2,176,565; public debt, £6,547,690. Executive power is vested in a governor aided by an executive council, and an elected legislative council. Governor in 1933, Sir C. H. Rodwell. As a result

of the general election held in September, 1933 the Rhodesian party which had been in office 10 years was defeated by the Reform party headed by G. M. Huggins who became Prime Minister and Minister of Native Affairs. During 1933 the government purchased for £2,000,000 the mineral rights in Southern Rhodesia from the British South Africa Company.

RICE. The principal rice producing countries not including the United States, India, and China reported their yields for the crop year 1933-34 to the International Institute of Agriculture as follows: Japan 584,396,000 bu., Korea 161,727,000 bu., Formosa 74,779,000 bu., Italy 29,776,000 bu., and Egypt 6,014,000 bu. These estimates related to rough rice of 45 pounds per bushel. India reported the largest acreage, 74,994,000 acres, followed by Japan with 7,867,000 acres, and Korea with 4,160,000 acres. India produces annually about two and one-half billion bushels. Estimates on the large Chinese production are seldom available.

As reported by the Department of Agriculture the rice crop of the United States in 1933 was estimated at 35,619,000 bu. of 45 pounds rough. The rice area, 769,000 acres, was the smallest in 15 years. The average yield per acre was 46.3 bu., about the same as in 1932 and 1931. The average farm price, Dec. 1, 1933, was 77.9 cents a bushel giving the crop a total farm value of \$27,765,000 as compared with \$15,792,000 the preceding year when the corresponding average price per bushel was only 39.1 cents and the year's production 40,408,000 bu. The different rice producing States estimated their yields as follows: Louisiana 14,760,000 bu., Texas 7,473,000 bu., Arkansas 7,344,000 bu., and California 6,042,000 bu. The acreage harvested in these States was 369,000; 141,000; 153,000, and 106,000 acres respectively.

The rice and rice product exports of the United States for the fiscal year ended June 30, 1933, were recorded as 56,949,000 pounds of milled and brown rice, 41,809,000 pounds of rice flour, meal, screenings, and broken rice, and rough rice or paddy in quantity to make 7,295,000 pounds of cleaned rice. The imports for the same period consisted of 17,583,000 pounds of cleaned rice not including patna, 1,600,000 pounds of uncleaned or brown rice, 846,000 pounds of patna rice for use in canned goods and 1,639,000 pounds of rice flour, meal, and like products. Effective July 1, 1933, the entry into the United States of rice straw and rice hulls used for packing goods for shipment was prohibited to prevent the introduction of the Asiatic rice borer and other rice insects as well as foreign rice diseases.

RICE INSTITUTE. A coeducational institution for higher education in Houston, Texas, opened in 1912. The enrollment in the autumn of 1933 was 1317, and the faculty numbered 90. The plant equipment and productive funds of the institution were estimated at \$15,000,000, and the income from endowment for the fiscal year 1932-33 was in excess of \$600,000. The library contained approximately 110,000 volumes. President, Edgar Odell Lovett. Ph.D., Sc.D., LL.D.

RIFLE SHOOTING. See SHOOTING.

RIO GRANDE. See FLOOD CONTROL.

RIOUW-LINGGA. See NETHERLAND INDIA.

RIVERA, DIEGO. See PAINTING.

ROADS AND STREETS. Outstanding among the events of the year affecting country roads and city streets was an allotment of \$400,000,000

of Federal money for the permanent improvement of through highways, minor rural roads and city streets. This amount, which was nearly an eighth of the \$3,300,000 appropriation under the National Recovery Act (see UNITED STATES under *Administration*), was the only portion of that fund allotted to a specified purpose. In addition, \$50,000,000 was allotted for road construction in national forests and parks, Indian Reservations, and in the Public Domain. The money must be expended in two years. It is divided between the 48 States, Hawaii, and the District of Columbia as follows: seven-eighths in accordance with the Federal Highway Act, which gives equal weight to population, area, and rural highway mileage, and one-eighth on the basis of population only, except that a minimum of $\frac{1}{2}$ of 1 per cent must be given New Hampshire, Vermont, Rhode Island, Delaware, the District of Columbia, and Hawaii. Unlike the previous Federal-aid for highway construction, the several States do not have to match dollar for dollar of Federal funds. Another difference is that instead of being confined to the Federal Highway System (see earlier INTERNATIONAL YEAR BOOKS), which consists of through highways entirely outside of incorporated places, not more than half the \$400,000,000 shall be so used, while not less than a fourth must go for extensions of the system into and through municipalities and not more than a fourth for secondary or feeder roads until provision has been made for the satisfactory completion of at least 90 per cent of the initial limiting mileage of the Federal-aid System, which is 7 per cent of the States' certified rural mileage. The Act reserves to the Federal authorities in control the "right to require the construction of roads desired by the U. S. Railroad Coordinator (see RAILWAYS), to provide adequate year-round highway service in place of branch-line railroad service proposed to be abandoned." The act also requires "that the maximum of human labor be used in lieu of machinery wherever practicable and consistent with sound economy and public advantage"—which means much or little according to the interpretation of the qualifying words. On the basis already stated, Texas leads with an allotment of \$24,244,000; New York has \$22,330,000; Pennsylvania, \$18,891,000; Illinois, \$17,571,000; California, \$15,607,000. Notwithstanding this huge amount for road and street construction the total sum available for the purpose was less in 1933 than in immediately preceding years, taking into account the shrinkage in State and local appropriations and bond issues (see detailed analysis, Annual Report of the Association of State Highway Officials). One cause for this is large diversions to other purposes than highway construction of funds previously devoted to highways, particularly motor vehicle licenses and gasoline taxes. California, however, by a State-wide referendum vote on June 27, voted 3 to 1 against diverting from highway purposes \$17,000,000 of gas tax funds expected in the next two years. About the same time the Circuit Court of Sangamon County, Ill., enjoined the diversion of highway funds to other purposes, as an impairment of contract. Aside from the \$400,000,000 already mentioned, Federal-aid appropriations for State highway construction for the fiscal years 1917 to 1933 inclusive totaled \$1,274,000,000, besides which \$125,000,000 was appropriated for roads in the National Forests and other public lands. Of a total highway mileage of over 3,000,000 on Jan. 1,

1933, about 740,000 had been surfaced more or less permanently. The remainder was classed as "graded or unimproved." This does not include roads and streets within incorporated places. See annual and monthly reports of the U. S. Bureau of Public Roads for details of Federal-aid to highway construction. New books include Brown and Connor, *Low Cost Roads* (Chicago); Watson, *Street Traffic Control* (London).

ROBERTSON, FIELD-MARSHAL SIR WILLIAM (ROBERT), FIRST BARONET. A British soldier, died in London, Feb. 12, 1933. Born at Welbourne, Lincolnshire, Jan. 29, 1860, he enlisted in 1877 in the 16th Lancers, receiving his first commission as a lieutenant of the 3d Dragoon Guards, then stationed in India, in 1888. After serving as railway transport officer in the Miranzai and Black Mountain expeditions of 1891 he was assigned to the Intelligence Branch at Simla as staff captain and for his bravery with the Chitral Relief Force in 1895 was decorated with the Distinguished Service Order. On his return to England in 1897 Sir William attended the Staff College at Camberley (the first officer who had risen from the ranks to be admitted) and after his graduation the following year joined the Intelligence Department of the War Office. When Lord Roberts was made commander-in-chief of the British Forces in South Africa on the outbreak of the Boer War he was attached to his headquarters staff as deputy assistant adjutant-general. He not only participated in various battles but accompanied Roberts on his occupation of Bloemfontein and Pretoria.

Recalled to the Intelligence Department of the War Office in 1901, Robertson served during the next six years as assistant director of military operations, being promoted in 1903 to the rank of colonel. On his transfer to Aldershot in 1907 he was made assistant quartermaster-general and brigadier-general of the general staff. Three years later, when appointed commandant of the Staff College at Camberley, he was advanced to major-general. The imminence of the World War, however, obliged him in October, 1913, to return to the War Office as director of military training, but his services at the Staff College were recognized by his being dubbed Knight Commander of the Royal Victorian Order.

On the outbreak of the World War Robertson went to France as quartermaster-general of the British Expeditionary Force and in January, 1915, was named Chief of the General Staff, with the rank of lieutenant-general. Promoted to general in December of that year, he returned to London as Chief of the Imperial General Staff, directing in that capacity the British military operations on all fronts. In opposition to Lloyd George, Kitchener's successor as Secretary of State for War in the Asquith coalition cabinet and later Prime Minister, Robertson insisted on the concentration of the Allied forces against Germany on the Western Front, which he considered the most strategic point for winning the war, rather than their dispersion to outlying theatres like Mesopotamia, Palestine, and the Balkans so as to defeat the lesser of the Central Powers, Turkey and Austria. On account of his resentment of Lloyd George's interference in this respect he was relieved of his command after the establishment of the Supreme War Council in November, 1917, Sir Henry Wilson being named Great Britain's representative on the inter-Allied general staff. The early success of the German

offensive in the spring of 1918 substantiated his belief in the concentration of forces at a decisive point.

Transferred to the eastern command in February, 1918, Robertson succeeded Sir John French in June of that year as commander-in-chief of the troops in Great Britain. His last command was that of the British Army on the Rhine from April, 1919, to March, 1920. Created a baronet in 1919 and a field-marshal in 1920, he published after his retirement his autobiography, *From Private to Field-Marshal* (1921), and *Soldiers and Statesmen, 1914-1918* (1926). The latter was a bitter indictment of Lloyd George and members of his war cabinet. In his last years Sir William was an ardent peace advocate, declaring on his last lecture tour of the United States in 1931 that Europe was ready for peace and that it was the duty of statesmen to show the way. He was the first and only soldier who rose from trooper to the highest rank in the British army.

ROBINSON, JOSEPH ARMITAGE, A British theologian, died at Upton Noble, Somersetshire, May 7, 1933. Born about 1859, he was educated at Christ's College, Cambridge, of which he was fellow from 1881 to 1889, honorary fellow after 1905, and high almoner after 1906. Ordained a deacon in the Church of England in 1881 and a priest the following year, he served as vicar of All Saints Church, Cambridge, during 1888-92, prebendary of Wells Cathedral during 1894-99, and rector of St. Margaret's, Westminster's "lady-in-waiting," during 1899-1900. Appointed canon of Westminster Abbey in 1899, he succeeded to the deanery in 1902 and in this capacity arranged the coronation ceremonies of Edward VII, held on August 9 of that year. In 1911, previous to the coronation of George V, he was transferred at his own request to Wells Cathedral as dean. He resigned this incumbency in March, 1933.

Dr. Robinson's most scholarly research was done during 1893-99 when he was Norrisian professor of divinity at Cambridge. An authority on the Church of the second and third centuries, he wrote *The Philocalia of Origen* (1893); *Euthaliana* (1895); *Unity in Christ* (1901); *The Study of the Gospels* (1902); *Commentary on the Epistle to the Ephesians* (1903); *Commentary on the Athanasian Creed* (1905); and *Barnabas, Hermas, and the Didache* (1920). Among his devotional works were: *Some Thoughts on the Incarnation* (1903); *The Vision of Unity* (1908); *The Advent Hope in St. Paul's Epistles* (1911); *Holy Ground* (sermons, 1914); and *Giving and Receiving* (1928). Dr. Robinson's later works were of an antiquarian nature: *The Saxon Bishops of Wells* (1919); *St. Oswald at Worcester* (1919); *Apostolic Teaching of St. Irenaeus* (1920); *The Times of St. Dunstan* (1923); and *Two Glastonbury Legends* (1926). In 1932 he was created a Knight Commander of the Royal Victorian Order.

ROCHESTER, UNIVERSITY OF. A nonsectarian institution of higher education for men and women in Rochester, N. Y., founded in 1850. It consists of three schools—the college of arts and sciences, composed of a college for men and a college for women; the Eastman School of Music; and the school of medicine and dentistry. A school of nursing is maintained also in conjunction with the Strong Memorial Hospital, the property of the university. The enrollment for the autumn sessions of 1933, exclusive of extension division and special music students, totaled 1812, distributed as follows: Arts and science,

1091, of whom 663 were men and 428 women; music, 423; medicine and dentistry, 181; graduate students, 217. For the summer session, 400 were enrolled in the arts college and 262 in the music school. There were 1001 in the extension division. The faculty had 340 full-time members. The productive funds as of June 30, 1933 amounted to \$53,383,606, and the total resources, including land, buildings, equipment, and endowment, were approximately \$82,816,000. The construction of Cutler Union was completed during the year on the campus of the college for women at a cost of \$600,000. President, Rush Rhees, D.D., LL.D.

ROCKEFELLER, CENTER. See PAINTING.

ROCKEFELLER FOUNDATION, THE. An institution chartered in 1913 "to promote the well-being of mankind throughout the world." Its plan of work provides for cooperation toward the advancement of knowledge in the fields of public health, the medical sciences, the natural sciences, the social sciences, and the humanities. For work in these fields the Foundation during the year 1933 expended approximately \$15,000,000.

Public Health. Appropriations for the advancement of public health were given for research on yellow fever, malaria, hookworm disease, tuberculosis, undulant fever, yaws, and diphtheria; for the organization or maintenance of essential services of State and National health departments; toward the advancement of the work of the Health Organization of the League of Nations; and for the development of schools and institutes of hygiene and public health. The following institutions were included among those receiving the larger grants: the Institute of Hygiene and Public Health, Rome; the Institute of Hygiene and the Health Center, Bucharest; the London School of Hygiene and Tropical Medicine; the State Institute and School of Hygiene, Warsaw; the Institute of Public Health, Tokyo; and the School of Public Health, Zagreb, Yugoslavia.

The Medical Sciences. In the field of medical science the following institutions or organizations received grants for maintenance, for the development of specific departments, for endowment, or for special research projects: the China Medical Board, Inc., for maintenance of the Peiping Union Medical College; the University of Utrecht, for a building for the Institute of Comparative Physiology; the Johns Hopkins University Medical School, for research in the department of psychiatry over a four-year period; the Harvard Medical School and the Massachusetts General Hospital for development of teaching and research in psychiatry; the Washington University School of Medicine, for investigative work in neurophysiology over a five-year period; Dalhousie University, for development of teaching in public health and preventive medicine over a five-year period; and the University of Rochester, for special research in dental pathology. Among the other institutions aided were the University of Montreal, for development of the laboratories of its faculty of medicine; Yale University, for research in dental pathology; Albany Medical College, toward the organization of extension in medical education; Shantung Christian University Medical School, Tsinan, China, toward maintenance; University College, London, for building and equipment of laboratories of the department of physiology; and the University of Lyons, toward the maintenance of the teaching facilities of its faculty of medicine. The National Research Coun-

cil received a grant for the work of its Committee for Research in Problems of Sex; the Chinese Medical Association, toward its expenses over a period of three and a half years; Harvard University, for field studies of its Infantile Paralysis Commission; Columbia University, for studies of the common cold; and the Central Institute for the Deaf, St. Louis, for research work in neurology. The medical profession in the Soviet Union was aided through the subsidizing of medical journals, distributed under the direction of the Narkomsdrav.

The Natural Sciences. In the natural sciences, new appropriations were made toward research programmes, maintenance, apparatus and equipment, or general development, to the following universities, scientific organizations, and institutions: the California Institute of Technology, for research in chemistry and in biology; the University of Chicago, for research in biology; the National Research Council, for expenses in connection with editing *Biological Abstracts*, for a survey by the Committee on Effects of Radiation upon Living Organisms, and for a fund in aid of research to be used for individual grants; the Roscoe B. Jackson Memorial Laboratory, Bar Harbor, Maine, for research in mammalian genetics; the American Mathematical Society, for publication of results of scientific research, over a period of two years; the Marine Biological Institute, Amoy, China, toward its general budget over a three-year period; Lingnan University, Canton, China, for emergency aid in its departments of science; the Department of Scientific and Industrial Research, Dominion of New Zealand, for the work of the Apia Observatory, Western Samoa; the Massachusetts Institute of Technology, to continue aerological research; and the Jungfrauoch Scientific Station, for construction and equipment.

The Social Sciences. A large proportion of the Foundation's grants in 1933 in the field of the social sciences had direct or indirect bearing on the current economic situation and the various factors involving in improving conditions in the United States and abroad. Appropriations were made to the Social Science Research Council for support of the Commission of Inquiry on Nationalism and Internationalism, a study of unemployment reserves and relief, a study of the Tennessee River Valley under supervision of the Southern Regional Committee, and expenses of the Advisory Committee on Federal Statistical and Informational Services. The Brookings Institution, received a grant for studies of the government's financial policy and of the administration of the National Industrial Recovery Act and the Agricultural Relief Act of 1933. In Europe the Institute of Economic and Social Research of Paris was aided in its establishment and maintenance for a period not exceeding seven years, while the Secretariat of the League of Nations was requested to promote, over a five-year period, analytical research work of its Financial Section and Economic Intelligence Service. Appropriations were also made for statistical studies of relief cases under supervision of the Federal Emergency Relief Administration; to the American Municipal Association, for advisory service to municipalities; to Columbia University, for a study of the effects of sales taxes in the United States; to the University of California, for a field study of California barter groups; and to the League of Nations, toward a study of in-

ternational taxation problems, by its Fiscal Committee. In New York City the Committee on Use of Leisure Time, under the National Recovery Administration, received aid for public hearings; and the Industrial Relations Counselors, Inc., for a study of the administrative procedure of unemployment insurance.

For the advancement of knowledge in the social sciences, contributions were made toward the maintenance or research programmes of the following schools or departments of universities: to Columbia University, for research and field training in anthropology; to Western Reserve University, toward support of its School of Applied Social Science; to the University of California, toward the research programme of its Institute of the Social Sciences; to the University of Hawaii, for support of its programme in racial research, over a three-year period; to the University of Stockholm, toward its general social science research programme and for the development of the social science library; to the University of Louvain, Belgium, for development, over a seven-year period, of its organization for business cycle research; and to the London School of Economics and Political Sciences, for a general research fund.

Grants for research or maintenance were also made to the following institutions or organizations: to the Canadian National Committee for Mental Hygiene, for a programme of research in the social sciences and mental hygiene, over a period of four and a half years; to the Institute of Pacific Relations, for the work of its American Council; to the Institute of Economics and History, Copenhagen, for its general budget over a three-year period; to the Economic Foundation, for completion and publication of an international study of the history of prices; and to the American Geographical Society, toward the preparation and publication of a map of Hispanic America on the scale of 1:1,000,000.

The Humanities. In the field of the humanities, the Foundation made appropriations during 1933 to the following organizations or institutions: to the Oriental Institute, University of Chicago, for research and field work; to the American Council of Learned Societies, toward the development of a training centre for Far Eastern studies at the Library of Congress, and for administration and support of research projects; to the University of North Carolina, for creative work in the drama; to the Orthological Institute, London, for research in the Chinese and Japanese languages; to the International Committee of Historical Sciences, toward general expenses and the issuing of an International Bibliography of Historical Sciences; and to the Library of Congress, for the accumulation of source materials in connection with American history.

The executive officers of the Foundation in 1933 were: John D. Rockefeller, Jr., chairman of the board of trustees; Max Mason, president; Thomas B. Appleget and Selskar M. Gunn, vice-presidents; Alan Gregg, M.D., director for the medical sciences; Warren Weaver, director for the natural sciences; Edmund E. Day, director for the social sciences; David H. Stevens, director for the humanities; Frederick F. Russell, M.D., director of the International Health Division; Norma S. Thompson, secretary; Lefferts M. Dashiell, treasurer; George J. Beal, comptroller; and Thomas M. Debevoise, counsel. Offices are maintained at 49 West 49th Street, New York City.

ROCKWELL, ALPHONSO DAVID. An American physician, died at Flushing, N. Y., Apr. 12, 1933. Born at New Canaan, Conn., May 18, 1840, he received his M.D. degree from the University and Bellevue Hospital Medical College in 1864 and served during the latter part of the Civil War as assistant surgeon with the 6th Ohio Cavalry, attaining the rank of major. On establishing his practice in New York City about 1868, he was one of the first to use electricity in medical treatment, especially in cases of paralysis and epilepsy, publishing his views in *Electricity as a Means of Diagnosis* (1869), *Electrolysis and Its Application to the Treatment of Disease* (1871), and *Relation of Electricity to Medicine and Surgery* (1879). He held also from 1888 to 1892 the chair of electro-therapeutics at the New York Post-Graduate Medical School and Hospital and from 1904 until his retirement in 1912 was neurologist and electro-therapeutist at the Flushing Hospital.

Dr. Rockwell was a member of the commission of three appointed by Prison Commissioner Gerry to investigate and report to the New York State Legislature "the most humane and approved method of carrying into effect the sentence of death in capital cases." After experimentation on several dogs, four calves, and a horse in Edison's laboratory at West Orange, N. J., there was devised the electric chair which was used for the first time at Auburn State Prison on Aug. 6, 1890, when William Kemmler of Buffalo was electrocuted for murdering his sweetheart. The method of electrocution was later adopted by such States as New Jersey, Pennsylvania, Massachusetts, Ohio, Indiana, Nebraska, Kentucky, and North and South Carolina. Dr. Rockwell was president of the American Electro-Therapeutic Association in 1904. In 1920 he published his autobiography, *Rambling Recollections*.

ROMAN CATHOLIC CHURCH. The solemnities attending the celebration of the Holy Year Jubilee—the third Jubilee during the reign of Pius XI—the promulgation of a number of Bulls, Encyclicals, and letters, with several beatifications and canonizations were marked events of the year at Rome. The first of the manifestations on the part of the Pontiff was the Bull *Quod Nuper* published on January 6, in which the Holy Year Extraordinary was officially promulgated and the conditions prescribed for gaining the indulgences. On March 26, the Bull of announcement of the Holy Jubilee was again read in the entrances of the Patriarchal Basilicas, and on April 1, at noon, the Holy Door of the Vatican Basilica was opened by the Pope with all the solemnities of that most imposing rite. On April 6, he descended into the Vatican Basilica to assist at the Holy Hour of reparation, thus associating himself with the faithful who had been asked to do likewise through a letter to the Cardinal Vicar. The next day he again descended into the Vatican Basilica to make his first Jubilee visit. During Holy Week the Pope renewed the ceremonies which, since 1870, had been celebrated in the Sistine Chapel. Speaking to the Universal Church the Encyclical *Dilectissima Nobis*, published under the date of June 3, was a protest against the anti-Catholic laws voted in Spain. It denounced the evil work Spanish legislators have done not only against religion but also against the traditions of their country and the welfare of their people. At the Consistory on March 13, the Pope rejoiced at the development of the Hierarchy both in the countries

where it is regularly constituted, and in those of the Missions; he expressed his joy at the development of Catholic Action. He reviewed the principal world events of the last two and one-half years with more than customary outspokenness and vigor. He referred to "the critical international situation," deploring "the roar of fratricidal arms" both in the Old and in the New World and expressed his distress over the economic crisis which has thrown millions out of work, affording enemies of political, social and religious order an opportunity to speculate on their suffering. He was especially emphatic in his condemnation of "unjust nationalism" and distrust among nations. The events in Russia, Mexico, Spain, and some states of Central Europe, the Pope declared, showed how insidious was the iniquitous propaganda of the "enemies of God," actuated by violent hate against religion and the Catholic Church because they see in it the pillar of everything against which they are fighting. Six new Cardinals were created and two others "reserved in petto." The other Consistories during the year were those of October 16 and 19, and of November 10, for the consultation of the Sacred College and of the Episcopate for the canonization of the Blessed Bernadette Soubirous and of the Blessed Joan Antida Thouret.

On January 6, he wrote to the Polish Episcopate rejoicing at the celebration of a Study Week for the Reunion of the Dissidents from the Catholic Church. On January 13 he wrote to Henry de Verges, President General of the Conferences of St. Vincent de Paul, felicitations on the celebration of the first centenary of the foundation of this excellent work of charity. On March 12, he sent the General of the Jesuits the Brief *Paterna Caritas* with which he confirmed once more the Society of Jesus, after the adaptation it had made of its rules to the new prescriptions of the Codex of Canon Law.

The Pope's annual Christmas address on December 23 was made before the College of Cardinals and the Roman prelates. "Prayers" are needed in world affairs, he said, and: "Money is needed to wage war." Severely criticizing the sterilization programme of Germany, the Pope said the inconsistency of such practices in the light of religious teachings was clearly set forth in the papal decree of 1931 and in the encyclical "*Casti Connubii*." Declaring that the international situation is bound up "with uncertainties and distrust by the clashing interests of fruitless negotiation," the Pope said the best comment he could offer is, "nobody knows" what the outcome will be.

Five beatification ceremonies were held in the Vatican Basilica: April 30, that of the Blessed Mary of St. Euphrasia Pelletier, Foundress of the Sisters of the Good Shepherd; May 7, that of the Blessed Vincenza Gerosa, co-foundress of the Sisters of Charity of Brescia; May 14, that of the Blessed Gemma Galgani; May 21, that of the Blessed Joseph Pignatelli, of the Society of Jesus; May 28, that of Sister Catherine Laboure, who received the revelation of the "Miraculous Medal"; June 4, the Canonization of St. Andrew Hubert Fournet, Founder of the Daughters of the Cross, and on December 8 of Bernadette Soubirous, to whom the Virgin appeared at Lourdes.

On July 10 the Pope left Rome, and paid a visit—the first paid by a Pope since 1870—to Castel

Gandolfo, the beautiful summer estate by Lake Albano, 18 miles from the Eternal City, and on September 7 he again left the confines of Vatican City to visit Castel Gandolfo, where he gave some personal directions as to the work there and inspected the new site of the Vatican Observatory. The signing of the Lateran Treaty should produce a "luminous future," Pope Pius said on February 11 in ceremonies inaugurating the world's first ultra short wave telephone station as a part of the celebration marking the fourth anniversary of the treaty and the eleventh year of the Pope's reign. After speaking, the Pope posed for the first time for the talking movies. He conversed for six minutes before the cameras.

On December 17 the Pontifical Academy of Science awarded Prof. George Birkhoff of Harvard University the first prize, \$800, in a mathematical competition for a paper dealing with a system for the solution of differential equations. The award was made during exercises inaugurating the new Pontifical Hall of Science, at which Pope Pius declared that the Church "not only never has feared scientific truth but has always been its herald." He drew an allegorical picture of the Three Wise Men of the East paying homage to Christ in support of his contention that the Church and science have always been harmonious.

Diplomatic activity increased during the year. On March 11 the ratifications of the Concordat were concluded between the Holy See and the State of Baden. On June 5, the Concordat between the Holy See and the Austrian Republic was signed. On September 10, the ratifications of the Concordat between the German Reich and the Holy See were exchanged. The pontificate of Pius XI in 12 years has this record: 1922, Concordat with Latvia; 1924, Concordat with Bavaria; 1925, Concordat with Poland; 1927, Concordat with Lithuania; 1928, *Modus Vivendi* with Czechoslovakia and Conventions with Portugal for the Dioceses of India; 1929, the Lateran Pacts (Treaty, Concordat and Financial Convention); Concordat with Rumania, Concordat with Prussia; 1933, Concordat with Baden; Concordat with the German Reich; Concordat with Austria; institution of diplomatic relations between the Republic of Estonia and the Holy See. After an interval of three years a British Minister, Sir Robert H. Clive, was appointed to the Holy See in March.

Rome was crowded all during the year with Holy Year pilgrims from all over the world. There were many American pilgrims among them. On April 12, in an audience to fifty, headed by Michael Williams, the Pope said he was glad to give them a special welcome inasmuch as they were the first pilgrimage from the United States. Mr. Williams presented a letter signed by Cardinal Hayes of New York, Archbishop Curley of Baltimore, and several hundred prominent Americans, including Protestants, asking the papal blessing for the Maryland tercentenary. The Pope said he would be glad to aid the commemoration, and particularly thanked the Protestant signers for their coöperation. Taking occasion July 19 again to bless America, he described it as a most important part of the world, where the Church has such high interests and sees so much promise for the future. He gave this blessing while receiving in audience a group of 65 pilgrims from the Archdiocese of New York and the Diocese of Albany. He praised the eloquent demonstration of filial devotion given by the

Americans in making the pilgrimage notwithstanding the particularly difficult times. Forty pupils of New York Jesuits were received July 22. A blessing on the United States Navy was imparted on August 17 by the Pope after he had received in audience 80 cadets from the schoolship *Annapolis*. On December 4 he commissioned Postmaster General James A. Farley to take back to the United States "blessings and best wishes for President Roosevelt and for the entire American people, Catholic and non-Catholic." The Postmaster General received a gold Holy Year medalion as Pope Pius's gift. The Pope gave Mrs. Farley a rosary and three medallions for the Farley children.

THE CARDINALS. Cardinal Andrew Francis Fruhwirth, Chancellor of the Roman Church and former head of the Dominican Order, died February 9. He was the first non-Italian to be appointed to a diplomatic post, viz., Nuncio at Munich (December, 1927). Cardinal Bonaventura Cerretti, former auditor of the Apostolic Delegation at Washington, died May 8; and Cardinal Raphael Scapinelli, also Chancellor, died September 17. At the Consistory of March 13 the Pope created six cardinals, the first creations in more than two years: Pietro Fumasoni-Biondi, Apostolic Delegate at Washington; Jean Marie Rodrigue Villeneuve, Archbishop of Quebec; Angelo Maria Dolci, Apostolic Nuncio to Rumania; Theodore Innitzer, Archbishop of Vienna; Elia Della Costa, Archbishop of Florence, and Maruillo Fossati, Archbishop of Turin. The year closed with a membership of 55 in the Sacred College: 28 Italians and 27 non-Italians.

THE HIERARCHY. Monsignor Amleto G. Cicognani was appointed Apostolic Delegate to the United States March 20, and consecrated Titular Archbishop of Laodiosa, in Rome, April 23; The Most Rev. Rudolph A. Gerken, Bishop of Amarillo, Tex., was made Archbishop of Santa Fe, New Mexico, June 5. These new bishops were appointed: Dr. Elmer Ritter, Titular Bishop of Hippo and Auxiliary of Indianapolis, February 8; Mgr. John A. Duffy, Bishop of Syracuse, N. Y., April 26; Mgr. Philip Scher, Bishop of Monterey, Fresno, May 1; Dr. Ralph L. Hayes, Bishop of Helena, June 27; Dr. Gerald Shaughnessy, Bishop of Seattle, July 2; Rev. Charles H. Le Blond, Bishop of St. Joseph, Mo., July 24; Archbishop Edward Mooney, then Apostolic Delegate to Japan, was appointed Bishop of Rochester, N. Y., August 27; Mgr. James A. Walsh, Founder of the Maryknoll Missionaries, N. Y., was named a titular bishop, April 25; Mgr. James Ryan, Rector of the Catholic University, was named titular of Moora, August 22; Mgr. Bernard J. Kevenhoerster, O.S.B., was made first Prefect Apostolic of the Bahama Islands, November 20; Rev. James T. G. Hayes, a New York Jesuit, was made Bishop of Cagayan, Philippine Islands, March 12, and Joseph W. Trudel of Chicago, a White Father, Vicar Apostolic of Tabora, Central Africa, April 29. On December 21 the Pope created two new Canadian dioceses—Saskatoon and St. Johns, in Quebec. Monsignor Gerard Murray of Victoria, B. C., was appointed bishop of the Saskatoon diocese. Monsignor Philippo Bernardini of the Catholic University was appointed Apostolic Delegate to Australasia February 21. The annual general meeting of the Bishops of the United States was held at the Catholic University of America on November 15 and 16. At this meeting, the Cardinals, Archbishops, and Bishops from

all sections of the country received the reports of the Administrative Committee, N.C.W.C., and discussed matters of interest to the Church in the United States to-day. The Administrative Committee issued a "Statement on the Present Crisis" which reviews economic and social conditions and was signed by Archbishop Edward J. Hanna of San Francisco, chairman of the committee, Archbishop John T. McNicholas, O.P., of Cincinnati, Archbishop John G. Murray of St. Paul, Bishop Thomas F. Lillis of Kansas City, Bishop Joseph Schrembs of Cleveland, Bishop Hugh C. Boyle of Pittsburgh and Bishop John F. Noll of Fort Wayne. A renewed protest against "the sustained persecution of the Church in Mexico" was made in a statement by the chairman of the Administrative Committee on behalf of the Catholic Bishops of the United States. The protest asked "all our fellow citizens actively to interest themselves in the restoration in Mexico of religious freedom for its citizens," and referred to Pope Pius's encyclical on Mexico. On November 14 the Board of Trustees of the Catholic University of America composed of the four American Cardinals, the other Archbishops, a half-score Bishops and a number of Monsignori and laymen met and former Governor Alfred E. Smith of New York took his place as a member of the Board. These deaths occurred: Bishops Francis Gilfillan of St. Joseph, Mo., January 13; John F. O'Hern, Rochester, N. Y., May 22; William A. Hickey, Providence, R. I., October 4; Thomas W. Drumm, Des Moines, Iowa, November 24; Joseph Chartrand, Indianapolis, December 8; John J. Dunn, Auxiliary of New York, August 31; Edward Sheehan, titular of Calydon and a Lazarist missionary from Illinois, in China, September 8.

STATISTICS. Figures compiled in the Official Catholic Directory for 1933, put the Catholic population of the United States proper at 20,268,403, an increase of 32,012. The number of converts was 41,226, or 957 more than the previous year. The Hierarchy now numbers 16 Archbishops, 4 of whom are Cardinals, and 102 Bishops. The secular priests number 21,016, an increase of 1367, and the priests of Religious Orders 8766, an increase of 118. The churches increased 108, now totaling 18,260 and including 12,537 churches with resident priests and 5723 missions with churches. The number of seminaries increased by 9, the total being 181, and the seminarians 20,993, a gain of 1550. There are 195 colleges for boys, an increase of 27. Academies for girls total 656, a gain of 16. There are 966 high schools, 29 more than the previous year, with a total attendance of 158,352, a gain of 13,960. The number of parochial schools is 7462, a decrease of 52 from the previous years, and the attendance 2,170,102, a decrease of 107,089. The number of orphanages is 327, one less, and the number of orphans cared for 50,154, or 564 less than in 1932. There are 146 homes for the aged poor and the hospitals show a gain of five, the total being 650. According to the English Catholic Directory there are 2,244,580 Catholics in England and Wales, an increase of 34,250 in the year. The clergy number 3179 diocesan, an increase of 110, and 1639 regulars. The schools total 518 secondary and 1385 elementary with an increase of pupils of 6700. The churches and chapels total 2294.

Catholics in Scotland are estimated at 370,000. There are 23,357 Catholics in the British army,

or one eighth of the total force. The Catholic population of Canada is 4,283,388. Catholics in the Province of Quebec total 2,463,160; in Ontario, 744,740; in Manitoba, 187,693; in Saskatchewan, 233,979; in Alberta, 168,408; in British Columbia, 70,852; in Yukon, 687; in the Northwest Territories, 3932; in New Brunswick, 188,098; in Nova Scotia, 162,754, and in Prince Edward Island, 39,105. There are 1022 Canadians working in the mission fields of the world, 431 priests, 218 Brothers and 973 nuns. Of the priests and Brothers, 292 are working in North America, 173 in Asia, 158 in Africa and 26 in the Pacific Islands; of the Sisters, 557 in North America, 287 in Asia, 86 in Africa and 43 in the Pacific Islands. A new estimate of the Catholic population of the world gives the total of 363,764,793. There are 1092 Sees of the Latin rite, 278 in Italy, 87 in France, 56 in Spain, 28 in Ireland, 27 in Great Britain, 24 in Germany and 20 in Poland. The United States (not including the Philippines or other possessions) leads in the new world, 118; Brazil is next with 68, then Canada 36, Mexico 33, and Argentina 11. There are 43 Sees in the East Indies, 21 in Australia, 13 in Africa, 5 in Japan and 1 in China. The present state in the world of the Catholic Hierarchy follows: 7 suburbicarian Sees (that is, within the See of Rome); 10 residential patriarchates; 4 titular patriarchates; 207 residential metropolitan Sees; 37 residential archiepiscopal Sees; 900 residential episcopal Sees; 665 titular archbishoprics and bishoprics, 45 prelates and abbeys nullius; 263 vicariates apostolic; 105 prefectures, and 32 mission and districts sui juris. In the first ten years of the pontificate of Pope Pius XI there had been created 82 new archiepiscopal and episcopal Sees; 34 new vicariates apostolic had been constituted; 12 prefectures had been created and then raised to the rank of vicariates apostolic; 70 new prefectures had been created, 24 missions and districts sui juris. Germany has 24,235 priests, of whom 3507 are members of Religious Orders; 2800 are engaged in teaching and managerial capacities for Catholic associations and about 150 in charitable organizations. There are 9804 Catholic parishes and 3507 pastorates. In Sweden out of a population of 6,000,000 only 4000 are Catholics and there are only 18 priests to care for their spiritual needs. The country has few Catholic schools.

In 1933 the members of the Society of Jesus throughout the world increased from 22,337 to 22,936. There are 10,166 priests, 7889 scholastics and 4881 Brothers. The Italian Assistancy (including Central Brazil as well as Italy itself) has 832 priests, 610 scholastics, and 509 Brothers. The German Assistancy (including Southern Brazil, Austria, Holland, and Hungary) has 1425 priests, 904 scholastics, and 838 Brothers. The French Assistancy has 1670 priests, 793 scholastics, and 513 Brothers. The English Assistancy (including Australia, Belgium, Canada, and Ireland) has 1826 priests, 1375 scholastics, and 530 Brothers, the numbers in England being 472, 269, and 127. The American Assistancy has 1931 priests, 2067 scholastics, and 505 Brothers. The Slav Assistancy (Czechoslovakia, Yugoslavia, and Poland) has 412 priests, 537 scholastics, and 395 Brothers.

Of 52 cases before the Tribunal of the Sacred Rota in the juridical year 1931-32 involving causes relating to marriage only 17 received a

sentence which recognized the nullity of these marriages. In 33 cases the validity of the marriage was recognized.

The Catholic Church conducts 15,700 hospitals, with a personnel of 135,000 Religious throughout the world. There are besides 134,000 other charitable institutions of a similar nature, demanding the service of 70,000 employees. The number of other organized charities is reported as 236,000 served by 350,000 Sisters and 32,000 Brothers, besides 120,000 professional employees. The number of voluntary charity workers is said to reach a total of 6,665,000. There are 638 Catholic hospitals in the United States proper and 23 in the insular possessions of the United States, and 157 in Canada; 418 of the Catholic hospitals in the United States have received unconditional approval of the American College of Surgeons to date; 51 of the hospitals in Canada have received this recognition. An estimate places the total number of Sisters serving hospitals in this country at 11,365. A similar estimate places the number in Canada at 2983. Fifty-three per cent of the Sisters serving in Catholic hospitals are registered nurses, while about 15 per cent are pursuing studies leading toward a higher degree.

THE MISSIONS. The Society for the Propagation of the Faith received during 1932, \$707,633.18 from collections in the various American dioceses for distribution among the missions. The United States contributed \$391,336.50 to mission activity in 1933, according to a report of the American Board of Catholic Missions. The report covers 94 dioceses. The Catholic population of China is 2,563,425, an increase of 32,582 over the previous year's figure. The number of conversions was 57,027, the largest number recorded since 1925. The ecclesiastical divisions increased from 107 to 114. Three of the new missions were placed in charge of native Chinese clergy, and there are now 17 vicariates or prefectures with Chinese superiors. There are 2195 foreign as compared with 1553 native priests, the latter figure showing an increase of 49. The new regional seminaries were opened and there are now 6420 Chinese studying for the priesthood.

There are 98,143 Catholics in Japan proper, exclusive of Formosa and Korea. Foreign priests there number 240; native Japanese priests 59. Foreign Missionary Brothers 88; native Brothers 120; foreign missionary Sisters 551, and native Sisters 245; Japanese seminarians 290. The number of boys attending the mission schools are 2527; girls 7596. The enrollment at the Catholic university of Tokyo was 650. On June 11 the Pope consecrated five natives of the Far East, at St. Peter's, one Annamite, one East Indian, and three Chinese. The new bishops are G. B. Tong, Annamite coadjutor to the Apostolic Vicar of Phat-Diem, in Indo-China; Father Attipetty, Indian, coadjutor to the Archbishop of Verapoly, in India; Joseph Fan, Apostolic Vicar of Tsing, Shansi, China; Matthew Ly, Apostolic Vicar of Yachow, China, and Joseph Tsaoei, Apostolic Vicar of Yungnien, Hupei, China.

The celebration of the centenary of the founding of the Society of St. Vincent de Paul, May 20-22, brought to Paris 7000 members representing 27 nations. At the beginning of the year 1933 the number of conferences had increased to 18,186. The number of visitors surpassed 186,000. The total annual expenditure for charitable work is more than 220,000,000 francs. The number of conferences organized in 1932 was 636 or more than

in any year since the organization of the society. There are conferences all over the world. In the United States, where the work was established in 1846, 2350 active groups affiliated with the Superior Council of New York have 30,000 active members. The society in the United States has sent upwards of \$18,000,000 to bring relief to approximately 1,000,000 needy persons during the last 10 years. The society gave assistance to 225,000 families consisting of approximately 1,000,000, made 4,310,000 visits to such families, and 339,000 visits to hospitals, prisons, etc., and assisted 61,863 persons to find employment. The amount contributed personally by members of the St. Vincent de Paul Society during the decade was \$1,217,609. The amount entrusted to the Society for the relief of the poor was \$18,836,751, and the amount distributed was \$18,496,657.

EDUCATION. A total of 2,582,000 students began the 1933-34 scholastic year in 10,594 Catholic institutions of learning in this country, according to an estimate made by the Department of Education of the National Catholic Welfare Conference. This estimate is based on the following enrollments reported in the 1932 survey of Catholic colleges and schools: Elementary, 7942 schools, 58,684 teachers, 2,193,000; Secondary, 2250 schools, 14,307 teachers, 250,000; Normal, 46 schools, 564 teachers, 9000 pupils; College, 174 schools, 7768 teachers, 110,000 pupils; Seminary, 182 schools, 1907 teachers, 20,000 pupils; Totals, 10,594 schools, 83,230 teachers, 2,582,000 pupils. There are nearly 25,000 students enrolled in Catholic schools of nursing in the United States and Canada. Of the total number, 20,996 are in the United States, while 3909 are in Catholic schools in Canada. The number of Sisters enrolled in the Catholic schools of nursing is 580 in the United States and 140 in Canada, giving an average of about two Sisters per school in each of the two countries. Of the 385 Catholic schools of nursing in the United States, 370, or 97 per cent, have merited the recognition of the American College of Surgeons, while in Canada 58 or 76 per cent of the Catholic schools of nursing have received either the unconditional or conditional approval of this same body. One hundred and nine of the Catholic schools of nursing in the United States, or 28.3 per cent, have effected educational affiliations with universities and colleges, while 28 schools in Canada, or 36.9 per cent have similar cooperative relations.

An American Jesuit, the Rev. Vincent A. McCormick of New York, on December 29, was made Rector of the Gregorian University in Rome, one of the oldest and most important educational institutions of the Order. It was founded in 1545 and has 1500 students from all over the world. He is the first American to hold the office.

ASSEMBLAGES. For the first time in the history of Calcutta the Blessed Sacrament was carried through the streets of that city in a procession held January 26. Thousands of Catholics took part in the demonstrations. Preparations began in January for the 32nd International Eucharistic Congress to be held in Argentina, October 10-14 at Buenos Aires. Georgetown University initiated a season of special programmes commemorative of the Tercentenary of the founding of Maryland on November 23. The fifty-first annual national convention of the Knights of Columbus was held at Chicago, August 15. The fifty-eighth national convention of the Ancient Order of Hibernians and of the Ladies' auxiliary was held during the

week of July 18 in Chicago. Sixty thousand persons attended the Pontifical High Mass celebrated at 6 o'clock Sunday afternoon, July 16, at Lourdes to commemorate the seventy-fifth anniversary of the last apparition of the Blessed Virgin. The Mass was celebrated in the open air on the place in front of the Basilica of the Rosary by Bishop Mennechet at Soissons. Cardinal Verdier presided, surrounded by twenty-two Archbishops and Bishops, among whom were six Chinese Bishops recently consecrated at Rome.

The nineteenth National Conference of Catholic Charities, one of the greatest gathering of welfare workers ever held in the United States, met in New York, September 29-October 4. Every State was represented and the delegates included civic and clerical leaders and 400 Sisters from 35 religious bodies engaged in philanthropic work. At the banquet concluding the meeting, President Roosevelt, two members of his cabinet, and the Governor of New York attended. The President made an address as did also Archbishop Cicognani, the Apostolic Delegate to the United States, and Cardinal Hayes.

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ROMANCE LANGUAGES AND LITERATURE. See PHILOLOGY, MODERN; FRENCH LITERATURE; ITALIAN LITERATURE; SPANISH LITERATURE.

ROME, ANCIENT. See ARCHAEOLOGY.

ROOSEVELT, FRANKLIN D. See UNITED STATES under *Administration*.

ROSENWALD FUND, JULIUS. See UNIVERSITIES AND COLLEGES.

ROSICRUCIAN ORDER. An international fraternity, known as the Ancient, Mystic Order Rosæ Crucis, whose name is derived from the emblem, a cross with a single rose in its centre, adopted by Johann Valentin Andreae, erroneously regarded as the restorer of the order in Germany in the seventeenth century. (For details as to

traditional origin and reestablishment of the order in North America, see the NEW INTERNATIONAL YEAR BOOK, 1932, page 733.) In 1933 the Rosicrucian Order in North America had throughout its jurisdiction of the United States and its dependencies, Canada, the West Indies, and the Central American states nine grand lodges, 136 local lodges, and three colleges. At the congress held in San Jose, Calif., in July, 1933, the delegates voted to found a Rose Croix University, similar to the European institutions. The purpose of this university will be for research and special personal instruction in those arts and sciences usually classified as arcane but lying distinctly within the fields of physics and chemistry. The organization conducts also much public welfare work and contributes to the advancement of the fine arts and sciences, especially through archaeological excavations in Egypt whereby there is brought back to various Rosicrucian museums some of the art of that land.

On the death of Charles Dana Dean in July, 1933, Clement Le Brun of Nice, France, was chosen grand master of the Rosicrucian Order in North America. Dr. Le Brun, a member of the International Council and one of the highest officers of the French organization, was selected for this honor in order that a closer relationship might exist between the brotherhoods of North America and of France. H. Spencer Lewis has been imperator or chief executive of the North American order since its reestablishment in 1909. Headquarters of the Supreme Council of the Grand College of Rites are in San Jose, Calif.

ROTARY CLUBS. Organizations established for the purpose of developing the highest ideal of unselfish service and of making practical application of that ideal to the business and professional life of the individual members, to organizations of which they may be members, and to the communities and countries in which they live. Membership in the clubs is limited to one representative of each business, profession, or institution in the community.

The twenty-fourth annual convention of Rotary International was held June 28-30, 1933, in Boston, Mass. There were 8456 Rotarians and members of their families present, representing Rotary clubs in 57 geographical regions. On Nov. 1, 1933, Rotary International consisted of 3619 clubs, with an approximate membership of 147,000. There were 2443 clubs in the United States, 112 in Canada, 382 in Great Britain and Ireland, and 682 in other parts of the world.

Officers elected for 1933-34 were: President, John Nelson, Montreal, Quebec, Canada; first vice-president, Ed. R. Johnson, Roanoke, Va., U. S. A.; second vice-president, Maurice Duperey, Paris, France; third vice-president, Herbert Schofield, Loughborough, England; secretary, Chesley R. Perry, Chicago, Ill., U. S. A.; treasurer, Rufus F. Chapin, Chicago, Ill., U. S. A. Headquarters of Rotary International are at 211 West Wacker Drive, Chicago, Ill., U. S. A., with a branch office at 74 Bahnhofstrasse, Zurich, Switzerland.

ROUMANIA. See RUMANIA.

ROUND-TABLE CONFERENCES. See INDIA.

ROUX, r60, PIERRE PAUL EMILE. A French bacteriologist, died in Paris, Nov. 3, 1933. Born at Confolens, Department of Charente, Dec. 17, 1853, he studied medicine at Clermont-Ferrand and at the University of Paris, where from 1874 to 1878 he acted as clinical aide in the Faculty

of Medicine. In 1878 he entered the laboratory of Pasteur, becoming assistant director in 1883. Transferred to the Pasteur Institute as head of service in 1888, he was made assistant director in 1893 and director in 1904. He assisted Pasteur in various experiments, including those concerning the etiology of various infectious diseases, such as anthrax, tetanus, and syphilis, and the preventive treatment of hydrophobia. The researches which he conducted with Nocard regarding pneumonia resulted in the discovery about 1880 of the pneumonia microbe or pneumococcus.

Dr. Roux was best known, however, for his studies with Yersin of the diphtheria bacillus, known from its first discoverers as the Klebs-Löffler bacillus, and isolation of the diphtheric toxin. In 1896 he was elected to the Academy of Medicine and in 1899 to the Academy of Sciences of the Institute of France, receiving from the latter the prix Osiris of \$20,000 in 1903. He received also the Grand Cross of the Legion of Honor in recognition of his work as president of the Higher Council of Public Hygiene in Paris and as chief scientific adviser to the French government. At the time of his death Dr. Roux was editor of the *Annales de l'Institut Pasteur* and professor at the School of Higher Studies in Paris. He wrote *La Microbe médical, La Vaccination, Découverte du sérum antidiphtérique, Méthode d'injection du sérum antitétanique, and L'atténuation des virus.*

ROWING. Despite the cancellation for one year of the famed intercollegiate regatta at Poughkeepsie on the Hudson, the 1933 rowing season was an active one with many regattas being held. Rowing as a sport is unproductive of gate receipts and as such is a drain on the exchequers of the colleges fostering the spring sport. Because of this and because the gate receipts of the previous fall for football had fallen to a new low, the Poughkeepsie regatta was cancelled, mainly on the suggestion of Cornell.

For all this, the University of Washington's eight-oared crew earned what honors there were. The huskies outrowed California's band of Olympic winners in the first race of the season, on the Estuary in April, and then in July won the new intercollegiate regatta at Long Beach, Calif. This new regatta, sponsored by the Los Angeles Chamber of Commerce, presented crews from Washington, California, Yale, Cornell, University of California, Southern Branch and the second Harvard crew.

The lone four-mile race of the season was the annual Harvard-Yale regatta on the Thames at New London, won by a powerful Harvard crew for the third year in a row in a thrilling race. Cornell and Syracuse both announced abandonment of rowing at the time the Poughkeepsie regatta was called off, but both mustered eights in the spring. Two colleges joined the small band of rowing institutions—Manhattan College and Rutgers University.

In the East Yale had the finest sprint crew, winning the Blackwell and Carnegie Cups. Navy and Princeton both had fast eights with Pennsylvania close behind them.

In England the university race went to Cambridge for the tenth consecutive year, a longer stretch than either Cambridge or Oxford ever accomplished before in the century-old records of that famous race.

One of the sensations of the season was the Kent School eight from Kent, Conn. After an un-

beaten season in the east, in which the boat led all scholastic rivals and several freshman eights, the schoolboys journeyed to England and won the Thames Challenge Cup in the Henleys on the Thames in July. Kent finished a strikingly successful campaign with a decisive triumph in the British race and became the second American crew to win this ancient cup, Brown and Nichols School, Boston, having done so in 1929.

In club rowing, the fine Penn Athletic Club crew added to its three years of victories by taking the national eight-oared title again. It firmly proved itself the most remarkable of modern day club crews. Bill Miller retained his national single sculls title, although Bobby Pearce of Australia was again recognized as the world's greatest sculler of the time. Pearce rounded off his remarkable amateur career by turning professional and winning that championship late in the summer.

ROYCE, SIR (FREDERICK) HENRY. A British automotive engineer, died at West Wittering, Sussex, Apr. 22, 1933. Born in 1863, he early became interested in electricity while acting as a telegraph messenger in London and after serving his engineering apprenticeship with the Great Northern Railway assisted in the installation of the first electric-lighting system of the streets of London. In 1882 he was appointed chief electrical engineer in the installation of electric lighting in the streets of Liverpool, and in 1884 founded in Manchester the mechanical and electrical engineering firm of Royce, Ltd., which subsequently produced the Royce two-cylinder automobile. In 1906 Sir Henry founded with the Hon. C. S. Rolls, one of the early patrons of motoring in England and president of C. S. Rolls and Co. of London, Rolls-Royce, Ltd. Their most famous product, the Rolls-Royce automobile, became synonymous with perfection in manufacturing detail. The "Silver Ghost," a side-valve engined chassis of 40-50 h.p. which Sir Henry designed in 1907, maintained this reputation of quality for the Rolls-Royce automobile for almost two decades. In 1925 it was superseded by the "Phantom," also of 40-50 h.p. with an overhead valve engined chassis.

Sir Henry designed some of the engines which made aviation history. Among these was the 360 h.p. twin-engine "Eagle VII" used in the Vickers-Vimy Bomber biplane which carried Sir John Alcock and Sir Arthur Whitten Brown on June 14, 1919, from St. Johns, Newfoundland, to Clifton, Galway, Ireland, in 16 hours and 12 minutes, winning thereby the *Daily Mail* prize of \$50,000 for the first non-stop transatlantic flight. On Sept. 7, 1929, Flight Lieutenant H. R. D. Waghorn established at Spithead in a Supermarine monoplane Royce S-6 the speed record for seaplanes of 531.2 kilometers (330.7 miles) per hour over a 100-kilometer course. The Rolls-Royce engines enabled Sir Malcolm Campbell to set a new world's record for automobile racing of 253.968 miles per hour over a mile course at Daytona Beach, Fla., in February, 1932, and Kaye Don to set a new world's motorboat speed record of 119.75 miles per hour over a mile course on Loch Lomond in July, 1932. Sir Henry was made an officer of the Order of the British Empire in recognition of the efficient aid rendered by the Rolls-Royce aero engines in helping to win the World War. In 1930 he was created a baronet.

RUANDA-URUNDI. See under CONGO, BELGIAN.

RUBBER. World production of rubber in 1933, as determined by the Rubber Division of the U. S. Department of Commerce, amounted to 848,029 long tons, or 20.3 per cent greater than the production in 1932, and about 56,000 long tons in excess of the production in 1931. The 1933 production of the leading rubber countries of the world is shown in the accompanying table.

WORLD PRODUCTION, 1932 AND 1933
[Long tons]

	1932	1933
British Malaya	385,713	406,035
Ceylon	48,973	62,978
India and Burma	3,721	4,527
Sarawak	6,960	10,874
British North Borneo	4,664	7,556
Siam	3,451	7,765
Java and Madura	61,312	73,851
Sumatra East Coast	79,837	91,602
Other Netherland East Indies	85,871	151,827
French Indo-China	13,883	18,394
Amazon Valley	6,126	9,883
All other	1,816	2,737
Total	702,327	848,029

The rubber absorption by the leading import countries of the world for the years 1931, 1932, and 1933 is indicated in the table below, though comparative figures for Australia, Belgium, and Italy are not available for each year. Increased requirements in the United States made up for the greater part of the year's increase in production and was in excess of 90,000 tons more than the 1932 demand and more than half of the importations to all countries. British absorption declined slightly, though it would appear that Australian consumption had offset that shrinkage. The rapid advance in the rubber absorption of Japan brings that country into third place among the consumers of rubber; and increased shipments to Germany bring it to a position rivaling that of France.

CRUDE RUBBER ABSORPTION OF PRINCIPAL
MANUFACTURING COUNTRIES
[Long tons]

	1931	1932	1933
United States	352,047	184,255	405,687
United Kingdom	76,583	84,639	79,504
Australia	7,649	.....	13,534
Belgium .....	.....	.....	11,166
Canada	25,261	19,000	19,322
Czechoslovakia	7,717	9,463	10,402
France	46,466	60,000	61,953
Germany	39,683	41,000	54,120
Italy .....	.....	.....	19,341
Japan	43,483	53,000	66,831
U. S. S. R.	30,671	25,000	29,830

The consumption of rubber in the manufacture of tires and tire sundries in the United States in 1933, compiled by the statistical department of the Rubber Manufacturers Association and comprising about 90 per cent of the industry, indicated a large increase in output over the past two years and slightly greater than that of 1930. The table on page 730 covers consumption by long tons over the past three years.

The production of tires and tire sundries, however, while slightly greater in rubber consumption than that of 1930, did not show corresponding returns to the manufacturers. Values were still low. In 1930 the consumption of 280,989 long tons was valued in finished product at \$518,786,000; the 1933 production was valued at \$301,271,000, little better than the 1932 valuation of \$292,201,000.

The consumption of rubber by other rubber

CRUDE RUBBER CONSUMED IN THE MANUFACTURE OF TIRES AND TIRE SUNDRIES
[Long tons]

	1933	1932	1931
Automobile and Motor Truck Pneumatic Casings . . .	286,790*	194,570*	212,361
Automobile and Motor Truck Pneumatic Tubes	87,230	32,371	40,008
Motorcycle Tires (Casings and Tubes) . . . . .	.....	.....	254
Bicycle Tires (Single Tubes, Casings, and Tubes) . . .	1,844	1,102	924
Aeroplane Casings and Tubes . . .	68	52	88
Solid and Cushion Tires . .	1,821	1,889	2,978
All other Solid Tires . . .	274	204	303
Tire Sundries and Repair Materials	4,464	3,288	3,600
Total Tires and Tire Sundries	282,491	233,476	260,516

* Includes motorcycle tires.

products in long tons from the same statistical source is shown below:

CRUDE RUBBER CONSUMED IN OTHER RUBBER PRODUCTS
[Long tons]

	1933	1932	1931
Mechanical Rubber Goods . .	25,298	14,917	17,985
Boots and Shoes	17,718	12,482	11,289
Insulated Wire and Insulating Compounds	2,754	2,276	3,678
Druggist Sundries, Medical and Surgical Rubber Goods . .	2,012	1,730	1,614
Stationers' Rubber Goods . .	1,274	1,140	1,229
Bathing Apparel	1,148	941	831
Rubber Clothing	854	848	914
Automobile Fabrics	807	444	655
Other Rubberized Fabrics . .	3,970	2,692	2,478
Hard Rubber Goods	1,166	923	1,020
Heels and Soles	14,882	10,366	8,989
Rubber Flooring	827	958	1,060
Sporting Goods, Toys, and Novelties	1,419	1,545	2,121
Miscellaneous, not included in any of the above items . . .	6,186	4,717	4,572
Total	80,315	55,974	58,433

The value of these products also reflected the general depression. Though consumption in 1930 was but 60,441 long tons, the value of the finished products of that year was \$284,342,000. Values dropped in 1931 to \$209,650,000; in 1932 to \$146,270,000, and despite greatly increased production for 1933, values rose only to \$179,207,000.

Stocks of rubber on hand at the close of the year totaled 652,928 long tons, of which the United States inventory included 373,030 tons and that afloat for United States and European ports amounted to 106,208 long tons. Stocks in England totaled 86,505 long tons and on hand in the East Indies 87,185 long tons.

Sales of rubber products manufactured in Canada of \$41,000,000 in 1933 were slightly higher than in 1932, according to the annual report of the Rubber Association of Canada whose membership comprises 90 per cent of the entire industry. The four years' decline of \$49,800,000 or 59 per cent in sales was halted in 1933 when operations resulted in an increase of \$18,600 over 1932. Domestic tire sales was the only item in 1933 showing a decline as compared with 1932, the decline being \$854,000. On the other hand, export tire sales in 1933 were \$255,000 higher than in 1932. Throughout most of Canada the winter weather was so severe and prolonged that it was of much benefit to sales of rubber footwear. Some of the important 1933 sales increases over 1932 were \$288,000 for rubber soles and heels; \$184,000 for rubber belting, hose, packing, and

other mechanical goods; and \$154,000 for drug rubber sundries and specialties. See CHEMISTRY, INDUSTRIAL OR APPLIED.

RUMANIA. A constitutional monarchy of southeastern Europe. Capital, Bucharest. Reigning sovereign in 1933, Carol II.

AREA AND POPULATION. Rumania has an area of 113,887 square miles. The population in 1932 was estimated at 18,426,000 (18,025,237 at the 1930 census). Living births in 1932 numbered 662,049 (35.9 per 1000 inhabitants); deaths, 399,346 (21.7 per 1000); marriages, 175,137 (19.0 per 1000). Populations of the chief cities (1930) were: Bucharest (București), 631,288; Chișinău (Kishinev), 117,016; Cernați (Czernowitz), 111,122; Iași (Jassy), 102,595; Galați, 101,148; Cluj (Klausenburg), 98,650; Timișoara, 91,866.

EDUCATION. Enrollment in the Rumanian schools was: Primary (1930-31), 1,973,949; secondary (1929-30), 161,502; university (1929-30), 37,604. The four universities are at Bucharest, Iași, Cluj, and Cernați.

PRODUCTION. Three-fourths of the population is engaged in agriculture. In 1932 arable land totaled 31,283,000 acres; pasture, 9,836,000 acres; trees, shrubs, etc., 1,367,000 acres; forest, 17,851,000 acres. Livestock in 1931 included 4,079,000 cattle, 12,356,000 sheep, 3,221,000 swine, 425,000 goats, 2,001,000 horses, mules, and asses, and 189,000 buffaloes. The chief crops in 1932 (thousands of units, bushels except as indicated), with 1931 figures in parentheses, were: Wheat, 55,536 (135,290); rye, 10,512 (13,962); barley, 67,382 (64,964); oats, 44,276 (46,175); corn, 235,934 (238,704); potatoes, 61,287 (67,981); sugar beets (metric tons), 309 (310); beet sugar (metric tons, in 1932-33 and 1931-32), 66 (52); wine (gallons), 158,502 (231,109); tobacco (pounds), 15,432 (24,926); alfalfa and clover (metric tons, 1931), 909. The value of agricultural production in 1932 was 47,609,000,000 lei, of which 25,361,000,000 lei, or 53.2 per cent, represented cereal crops.

Manufacturing statistics for 1931 showed 152,000 wage earners, 498,000 horse power employed, and a production value of \$198,928,000. Mine and factory production in 1931 was: Petroleum, 49,127,000 barrels (54,160,000 in 1932); coal, 287,000 metric tons (202,000 in 1932); lignite, 1,632,000 metric tons (1,469,000 in 1932); natural gas, 48,807,000 cubic feet; salt, 562,178,000 pounds; iron ore, 61,907 metric tons; gold, 88,125 troy ounces; silver, 114,268 troy ounces; pig iron, 25,894 metric tons; copper, 383,600 pounds; alcohol, 794,000 gallons; beer, 11,690,000 gallons. Lumbering is an important industry.

COMMERCE. Rumanian imports in 1932 were valued at 11,953,135,000 lei (\$71,719,000), compared with 15,754,600,000 lei (\$93,740,000) in 1931. Exports were valued at 16,654,563,000 lei (\$99,927,000), against 22,196,945,000 lei (\$132,072,000) in 1931. Conversions to dollars were made at the average annual exchange rate of \$0.00595 in 1931 and \$0.00597 in 1932. In 1932, Germany furnished 23.7 per cent of the total imports by value; France, 14.1; Czechoslovakia, 12.2; Italy, 11.0; and the United Kingdom, 10.8 per cent. Of the total exports, the United Kingdom took 14.0 per cent; France, 13.0; Germany, 12.3; and Italy, 10.6 per cent. The chief imports in 1931 were cotton yarns, iron manufactures, machinery, cotton piece goods. The leading exports were petroleum products, wheat, barley, corn, and building timber.

Total imports for 1933 amounted to 11,592,000,000 lei and exports to 14,101,000,000 lei, leaving a favorable balance of 2,509,000,000 lei. United States statistics for 1933 showed exports to Rumania valued at \$1,695,866 (\$1,260,327 in 1932) and imports from Rumania of \$402,787 (\$921,091 in 1932).

FINANCE. The budget for the calendar year 1931 closed with a deficit of 9,722,000,000 lei (expenditures, 33,962,000,000 and receipts, 24,240,000,000 lei). The 1932 fiscal year covered the period from Jan. 1, 1932, to Mar. 31, 1933, and subsequent fiscal years ran from April 1 to March 31. The 1932 period ended with a deficit of 922,000,000 lei (revenue, 25,157,000,000 lei; expenditure, 26,079,000,000 lei). The budget for the fiscal year 1933-34 called for expenditures of 36,280,000,000 lei and revenues of 33,934,000,000 lei, the anticipated deficit being 2,356,000,000 lei. The public debt on Dec. 31, 1931, amounted to 179,326,600,000 lei (foreign debt, 162,182,400,000; domestic, 17,144,200,000). On Apr. 1, 1933, the total was reported at 156,192,000,000 lei. The paper leu (\$0.0060 at par) exchanged at \$0.0078 in 1933.

COMMUNICATIONS. The state railway network in 1932 comprised 6968 miles of line. In the same year it carried 24,416,000 passengers and 20,628,000 metric tons of freight (commercial and military), gross receipts being equivalent to \$48,786,000 (at par). Highways extended 66,212 miles in 1931 (36,458 miles of macadam). From May to September, inclusive, the government operated air services on the lines Bucharest-Galati-Chişinau-Iasi-Czernowitz and Bucharest-Constanta-Balcic. In the 1932 season the lines carried 1231 passengers and 33,244 pounds of freight; mileage flown was 123,000 miles. Steam vessels of 100 tons or more in the merchant marine on June 30, 1933, had an aggregate gross tonnage of 74,000. The tonnage cleared from the Danube ports in 1931 was 1,553,211 tons (1,999,875 tons in 1930); at Constanta, 1626 vessels of 4,382,431 tons (1565 vessels of 3,841,555 tons in 1930).

GOVERNMENT. The Constitution of Mar. 28, 1923, vested executive power in the King and a council of ministers, the King having a suspensive veto over laws passed by parliament. Legislative power rested in a parliament of two chambers—a chamber of deputies, with 387 elected members, and a senate of 200 elected and about 50 *ex officio* and appointed members. The term of elected deputies and senators was four years. Premier at the beginning of 1933, Dr. Alexander Vaida-Voevod (National Peasant). For changes in 1933, see *History*.

HISTORY

INTERNAL POLITICS. The National Peasant party, which had regained power in Rumania in 1932 due to the inability of Premier Jorga to meet the country's economic problems, was in turn overthrown in 1933. Julius Maniu, leader of the party, had accepted the premiership Oct. 20, 1932, after three years of retirement from political life caused by his break with King Carol in 1930. It again proved difficult for him to work with the King, to whose military and other associates Maniu objected. Early in January, 1933, the Minister of Interior sought to oust the Bucharest prefect of police and the commandant of the national gendarmerie, who owed their positions to the King. Carol opposed the Minister's action and the latter's resignation was followed on January 12 by that of the entire Maniu Cabinet.

Contrary to expectations, the National Peasant party remained in control. A new ministry was formed January 14 by Alexander Vaida-Voevod, a National Peasant leader who had preceded Julius Maniu in the premiership. With the exception of M. Maniu and Minister of Interior Mihilache, all the former cabinet members were retained. The new ministry was confronted with numerous difficulties, the chief of which were the continuance of the economic depression and the widespread unrest resulting from poverty and hardship. Communism was reported to be gaining ground among the workers and the secret police on January 28 announced the discovery of a widespread Communist espionage organization. At the same time the government was harassed by the activities of a strong Fascist party, called the Iron Guard. This group was actively anti-Semitic and engineered numerous attacks upon the Jews (see Jews under Rumania). Labor troubles and Iron Guard activities led the government to impose martial law in sections of the country for a period of about six months beginning in February.

The Vaida-Voevod Ministry was charged with undue tolerance toward the Iron Guard and this, together with its failure to improve the economic situation, led to the resignation of the government on November 12. The King now turned from the National Peasants to his former enemies, the National Liberals, and commissioned their leader, Ion Duca, to form a cabinet. The new ministry, as announced November 15, was composed mainly of Liberals, the sole holdover from the previous cabinet being Dr. Nicholas Titulescu, the Foreign Minister. The new government immediately called an election for December 22. Under the peculiar Rumanian electoral system, giving two-thirds of the seats in the Chamber to the party polling the largest popular vote, the Liberals secured complete control of Parliament. They captured 293 out of 387 seats in the Lower Chamber and 176 out of 200 elective seats in the Senate.

Meanwhile a series of raids and riots by the Iron Guard led the ministry on December 9 to issue a decree declaring the organization illegal, removing its candidates from the electoral lists, and prohibiting all its activities. More than 3500 members of the Iron Guard were arrested. Premier Duca paid with his life for this attack upon reaction. He was assassinated at the railway station in Sinaia December 29 by a young member of the Iron Guard, who boasted that he had shot the Premier because of the latter's friendship for the Jews. The police, in rounding up 1400 other members or sympathizers of the Iron Guard, uncovered alleged evidence of a plot to assassinate all officials considered responsible for the dissolution of the organization. Immediately after Premier Duca's death, martial law was proclaimed in the chief cities and a rigid press censorship instituted. The King entrusted Constantine Angelescu, Minister of Public Instruction and deputy leader of the Liberal party, with the task of carrying on the government.

ECONOMIC MEASURES. The increasing difficulty of meeting external debt payments culminated on Feb. 18, 1933, in an agreement with French and British bondholders for the suspension of sinking-fund payments from Jan. 1, 1933, to Mar. 31, 1935, on a number of long-term loans. This measure proved insufficient to relieve the strain on Rumania's financial structure. Accordingly on Aug. 14, 1933, a complete moratorium was declared on all payments due abroad by the state, the

autonomous funds, and the various monopolies. The total amount involved was about \$24,900,000 annually. This action, taken without consulting the foreign creditors, aroused much resentment among foreigners holding Rumanian securities. The government mollified these creditors in part by reopening negotiations and concluding an agreement on Oct. 26, 1933, for the payment of about 25 per cent of the coupons due.

On Jan. 28, 1933, the Rumanian government reached an agreement with the Council of the League of Nations for League assistance in the financial rehabilitation of the country. It provided for the appointment of a financial adviser and other experts by Rumania on nomination of the League Council to supervise the fiscal reforms and other measures to which the Rumanian government agreed. Up to the end of 1933, neither the experts nor the financial adviser had been appointed.

The Rumanian supreme court having declared unconstitutional the Agrarian Debt Conversion Law of April, 1932, the government on Apr. 14, 1933, passed new legislation for the relief of farmers. Provision was made for a five-year moratorium with 1 per cent interest on the debts of small landowners and for a two-year moratorium with 3 per cent interest for larger landowners. The government also appropriated 900,000,000 lei to provide an export bounty on high quality wheat. To redress the adverse balance of payments the government by the decree of July 1, 1933, established a board to control imports and payments in foreign currencies, and to arrange reciprocal tariff benefits with other countries. In November the board imposed import quotas on goods from countries, including the United States, with trade balances unfavorable to Rumania. The quotas limited imports from these countries to 30 per cent of the value of the 1931 imports from the same countries. Imports in excess of this percentage were to be permitted only on the basis of compensating exports.

FOREIGN RELATIONS. Rumanian diplomacy, under the able guidance of Foreign Minister Nicholas Titulescu, was unusually active during 1933. The definite accomplishments of the year were: (1) the conclusion at Geneva on February 16 of a new Little Entente pact providing for closer political and economic collaboration between Rumania, Czechoslovakia, and Yugoslavia; (2) the conclusion on July 4 at London of a non-aggression pact with the Soviet Union, which contained a definition of aggression; (3) the conclusion on October 17 at Ankara, Turkey, of a Turko-Rumanian treaty of friendship. These moves were designed to strengthen Rumania and its allies against the threat of forcible territorial revisions by Germany and Hungary, to free the Little Entente from dependence upon the great powers, and to eliminate causes of dissension in the Balkans and central Europe. In line with this latter policy, Rumania and Yugoslavia made determined efforts to establish friendly relations with Bulgaria and even to add Bulgaria to the Little Entente. Up to the end of the year this effort met with only moderate success. See *LITTLE ENTENTE*; *UNITED STATES OF EUROPE*; *BULGARIA*, *HUNGARY*, *YUGOSLAVIA*, *ITALY*, *AUSTRIA*, and *GERMANY* under *History*; *BESSARABIA*.

RURAL SCHOOLS. See *EDUCATION IN THE UNITED STATES*.

RUSSELL SAGE FOUNDATION. An institution created by Mrs. Russell Sage as a me-

morial to her husband. The initial endowment was \$10,000,000, to which \$5,000,000 was added by her will. Its purpose is "for the improvement of social and living conditions in the United States of America."

The foundation's regular departmental work may be classified chiefly under the heads of delinquency and penology, family welfare, and charity organization, industrial relations, handicrafts, library on social work and social conditions and problems, recreation and community centres, remedial loans and consumers credit, social statistics, social service and relief, social surveys, social work publicity, southern highland conferences and improvement, publications including the *Social Work Year Book*, and general administration.

Nearly 50 per cent of the foundation's income, however, is expended in grants to other agencies with kindred purposes. Among the fields of activity in which these agencies are particularly interested are child welfare; city and regional planning and the improvement of housing; the survey, study, coordination, and planning of community social work programmes; improvement of country life; penology and the prevention of delinquency; family welfare; public health; education and training for social work; social welfare publications; race relations; the social sciences in general; and unemployment relief. The foundation makes available to such agencies, and to other social welfare organizations, free use of its conference rooms and halls for organization or public meetings. During 1933 these halls were used by 66 different organizations and special groups, for a total of 367 separate meetings.

The foundation has undertaken, as a special service during the present emergency period, to make available to all workers and interested citizens the best thought and experience obtainable in treating relief problems, emphasis being placed upon the prevention and improvement of unwholesome conditions. It has also followed the policy of assisting in the support of certain types of civic and social work whose continuation might otherwise be jeopardized, or their effectiveness diminished by forced budget reductions or by overshadowing campaigns for emergency relief.

The departments of the foundation have cooperated actively in other types of work dealing with aspects of the present unemployment situation, in which their experience seemed to be of special value. These have included improvement of public statistics relating to employment; the systematic collection of statistics of relief work in the United States; experimental sampling studies in cities of the amount and distribution of unemployment, in an effort to develop detailed methods for use in similar local unemployment surveys; and the collection, study, and spread to communities throughout the United States of information as to outstanding pieces of work in organizing and administering relief. In addition there have been the study and evaluation of various self-help movements and programmes for subsistence gardening; assistance, personally and by publication, in planning educational campaigns to inform and interest the public regarding the needs of the unemployed and methods of coöperation in helping them; and investigating and making available information concerning various recreational projects designed to teach the constructive use of leisure time to sustain the morale of those out of work, and to prevent possible delinquency in which the unprecedented compulsory

free time of the unemployed might prove a factor.

The foundation's trustees are: Lawson Purdy, vice-president and treasurer; John M. Glenn, secretary; Lindsey Bradford, Johnston de Forest, Frederic A. Delano, John H. Finley, Mrs. Frederic S. Lee, Mrs. Finley J. Shepard, and Harold T. White. Shelby M. Harrison is general director. Headquarters are at 130 East Twenty-second Street, New York City.

RUSSIA. See UNION OF SOVIET SOCIALIST REPUBLICS.

RUSSIAN FILMS. See MOTION PICTURES.

RUSSIAN SOCIALIST FEDERATED SOVIET REPUBLIC. See UNION OF SOVIET SOCIALIST REPUBLICS.

RUTGERS UNIVERSITY. A nonsectarian institution of higher learning in New Brunswick, N. J., founded under the name of Queen's College in 1766. The university consists of the following schools and colleges: Arts and sciences, engineering, agriculture, pharmacy, chemistry, education, and New Jersey College for Women. The registration for the autumn of 1933 was 2444, of whom 956 were registered at the college for women. Of the 298 members of the faculty 174 were professors and 123 instructors. The endowment funds amounted to \$4,204,600, and the income for the year, exclusive of the State agricultural experiment station, amounted to \$2,750,146. Lands, buildings, and endowments had a total valuation of more than \$19,579,506. The library contained 175,000 volumes. President, Robert C. Clothier, LL.D.

RUTHENIA. A Province of Czechoslovakia. See CZECHOSLOVAKIA under *Area and Population*.

RYAN, JOHN D(ENIS). An American capitalist, died in New York City, Feb. 11, 1933. Born at Hancock, Mich., Oct. 10, 1864, he received a public school education and for several years after 1889 was employed as a traveling salesman in the West for the Crew-Levick Oil Co. of Philadelphia. In this capacity he met Marcus Daly, the developer of the Anaconda Mining Co. In 1901, at Daly's request, he went to Butte, Mont., where he organized the Daly Bank and Trust Co., serving as its vice-president and subsequent president. Three years later he was made managing director of the Montana subsidiaries of the Amalgamated Copper Co. and in 1906 was elected to the presidency of the Amalgamated's largest subsidiary, the Anaconda Copper Mining Co. (formerly the Anaconda Mining Co.). On the death of Henry H. Rogers in 1909 Mr. Ryan became president of the Amalgamated and the following year merged into the Anaconda the company's Montana subsidiaries. In 1915 the Amalgamated was dissolved, and he returned to the presidency of the Anaconda, holding after 1919 the office of chairman of the board of directors.

Under Mr. Ryan's direction the Anaconda Copper Mining Co. was developed into the largest producer of copper in the world, controlling directly, or indirectly through its subsidiaries such as the International Smelting Co., the production before the financial crash of 1929 of more than 1,000,000,000 lbs. of copper annually. Its chief subsidiary, the American Brass Co., was the largest fabricator of copper products in the world. The company exploited also the deposits of gold, silver, lead, and zinc found in the vicinity of Anaconda, and after the establishment of other plants at Great Falls, Mont., Tooele, Utah, East Chicago, Ind., and Miami, Ariz., proceeded to mine or manufacture such products as lumber, coal, oil,

sulphuric acid, zinc oxide, and arsenic. In the foreign field it held copper, zinc, and coal holdings in Poland, Mexico, and Chile. Mr. Ryan served as chairman of the board of the Andes Copper Mining Co. and of the Chile Copper Co., both of which had numerous subsidiaries in South America. After 1912 he was president of the Montana Power Co., which controlled nearly all the electric light and power resources of the State and through which another of the Anaconda's subsidiaries, the Butte, Anaconda, and Pacific Railway, was electrified. The success of the latter venture in 1913 led to the expansion of railway electrification in the Northwest.

On the entry of the United States into the World War Mr. Ryan was appointed director of the department of military relief of the American National Red Cross and later served on its war council and central committee. In April, 1918, President Wilson appointed him director of the bureau of aircraft production and chairman of the aircraft board. After the merger of that bureau and the bureau of military aeronautics in August, 1918, he was made Second Assistant Secretary of War and director of the Air Service of the United States Army, there being spent under his direction more than \$1,000,000,000 for the production of training and combat aeroplanes and Liberty motors. He resigned these posts after the signing of the Armistice and the following year resumed his duties with the Anaconda Copper Mining Co. In recognition of his interest in Roman Catholic philanthropies, Mr. Ryan was made in 1923 a Knight of the Papal Order of St. Gregory the Great.

RYE. The 1933 production of 27 countries reporting to the International Institute of Agriculture not including the Soviet Republics and the countries of the southern hemisphere was estimated at 1,005,289,000 bu., or 2 per cent above the crop of 1932 and 8.5 per cent above the average annual yield for the five years 1927-31. The acreage of these countries, 44,750,000 acres, was only slightly below that of the preceding year and 2.5 per cent below that of the five-year average. The production of the leading countries other than the United States was reported as follows: Germany 343,581,000 bu., Poland 251,565,000 bu., Czechoslovakia 82,104,000 bu., and France 36,718,000 bu. The total European crop not including the Soviet Republics was reported as 969,492,000 bu., which was 4.9 per cent above the preceding year's crop and 12.6 per cent above the average annual yield for the five years 1927-31. For the Soviet Republics an acreage of 63,003,000 acres or 2 per cent below the five-year average was reported. The Canadian crop was placed at 4,725,000 bu., which was 66.6 per cent below the five-year average and 47.1 per cent below the yield in 1932. Argentina reported a yield of 10,078,000 bu., as compared with 12,992,000 bu. in the crop year 1932-33.

The 1933 production of rye of the United States, according to estimates published by the Department of Agriculture, was 21,184,000 bu., compared with 40,639,000 bu. in 1932. The acreage harvested was only 2,352,000 acres while in 1932 it was 3,344,000 acres. The small crop of the year was due to drought in North Dakota and South Dakota, a smaller acreage sown in the principal rye producing States, and a large acreage abandoned on account of winter injury. The yield of rye averaged 9 bu. per acre compared with 12.2 bu. in 1932. The average farm price on

Dec. 1, 1933, was 55.4 cents, making the value of the crop \$11,737,000 or \$2,664,000 more than the much larger crop of the preceding year when the corresponding price was only 22.3 cents per bushel. The crops of the leading States among 33 reporting rye production were recorded as follows: North Dakota 3,712,000 bu., Minnesota 3,638,000 bu., Wisconsin 2,260,000 bu., Nebraska 1,712,000 bu., and Pennsylvania 1,606,000 bu. These States produced over 60 per cent of the country's crop.

For the fiscal year ended June 30, 1933, the exports of rye by the United States amounted to 311,000 bu., as compared with 852,000 bu. for the preceding year.

SAAR BASIN. A part of the German Rhineland, the coal mines of which were awarded to France for 15 years by the Treaty of Versailles as compensation for destruction of coal mines in the north of France by Germany. In 1935 the inhabitants of the Saar Basin will decide their future nationality by a plebiscite. Area, 573 square miles; population (1931 estimate), 805,274. The principal city is Saarbrücken with 125,020 inhabitants in 1927. Production for 1932 in metric tons was coal, 10,438,049 tons; coke, 1,685,000; pig iron, 1,349,493; steel, 1,463,429; rolled steel, 994,447. The Saar is governed by a commission of five members nominated by the League of Nations. See GERMANY under *History*.

SABIN, CHARLES HAMILTON. An American banker, died near Southampton, L. I., N. Y., Oct. 10, 1933. He was born at Williamstown, Mass., Aug. 24, 1868. On his graduation from the Greylock Institute at South Williamstown in 1885, he entered the flour commission business in Albany, N. Y. His future career, however, was determined by his employment four years later as a clerk by the National Commercial Bank of Albany so as to help the bank's baseball team win a game over a rival institution. He was associated from 1891 to 1898 with the Park Bank of Albany and from 1898 to 1902 with the Albany City National Bank, rising with the latter to the position of cashier and becoming on its consolidation with the National Commercial Bank vice-president and general manager.

Elected president in 1907 of the National Copper Bank of New York, sponsored by John D. Ryan (q.v.), president of the Anaconda Copper Mining Co., Mr. Sabin held that office until its merger three years later with the Mechanics and Metals National Bank. He served for a short time in 1910 as vice-president of the reorganized Mechanics and Metals National Bank and then was elected vice-president and director of the Guaranty Trust Co. of New York. Under his presidency from 1915 to 1921 the deposits of the latter institution increased four-fold, making it during the high-water mark of war prosperity the largest trust company in the world. After 1921, with the exception of the year 1929 when he was vice-chairman, he held the office of chairman of the board of directors of the Guaranty Trust Co.

Mr. Sabin's power in the banking field was illustrated in October, 1916, when a report he gave to the press that the German government was urging President Wilson to use his good offices to effect peace caused a wave of selling on the New York Stock Exchange and an ensuing decline of 1.33 points in the shares of 50 railroads and industrial concerns. His principal philanthropy was the Boys' Club of New York, of which he was president and through which he hoped to see pro-

vided worth-while outlets for the adolescent's energy. Like his wife, he was an ardent advocate of prohibition repeal and served as treasurer of the Association against the Prohibition Amendment.

SAFETY AT SEA. The number of persons saved or rescued from peril at sea by the U. S. Coast Guard during the fiscal year 1933 was 6492, according to the annual report of the U. S. Secretary of the Treasury. This number was 1278 in excess of the year 1932 and the largest in the history of the Coast Guard. The total number of persons on board vessels that were assisted by the Coast Guard was 33,716 or 2869 more than in the previous year. Instances of assistance rendered number 14,652, compared with 13,739 in 1932. Fifteen hundred and forty-nine vessels were seized or reported for violation of law (2359 in 1932), and fines and penalties amounting to \$244,558 were imposed for violations of law (\$300,756 in 1932).

Among the accidents during the year the most notable were:

January 4. The French liner *L'Atlantique*, 42,512 tons, caught fire in the English Channel. Sixteen lives were reported lost.

January 16. The steamship *Hain Ningtan* foundered in Hangchow Bay with a loss of 300 lives.

January 20. The British freighter *Exeter City* foundered at sea; 4 lost; 22 rescued by S.S. *American Merchant*.

March 12. The motorship *Unimak Native* wrecked in a gale in the Aleutian Islands, 13 lives lost.

May 6. Three of a crew of 33 rescued after 5 days in open boat from the Soviet salvage steamer *Rouslan* reported sunk off Spitzbergen.

May 27. The S.S. *George M. Coz* grounded in Lake Superior and sunk, 125 on board were rescued.

July 7. The French steamship *Nicolas Paquet* was wrecked near Tangiers, crew of 117 and 26 passengers saved in life-boats.

July 14. An overcrowded launch on the Volga River capsized; 70 drowned, captain sentenced to death.

October 1. A Japanese excursion boat capsized off Misumi, 70 rescued, 80 missing.

October 7. The Greek freighter *Annoula* sank off Cape Lookout, 20 lost.

October 20. The Japanese steamship *Yashima Maru* sank in a typhoon, 54 lost, 53 rescued.

October 24. The S.S. *Tronoh* sank in a storm off Singapore; 28 lost, 9 rescued.

November 15. The S.S. *Saxilby* sank off Valentia, Ireland; crew of 29 took to lifeboats but were not found.

November 17. Japanese steamer *Seiten Maru* sank with crew of 300 off Loochow Island.

December 2. The Dutch tanker *Gelinik* sank in the Black Sea; 13 lost, 7 rescued.

December 25. The schooner *Monica Hartery* overturned on the high seas; all on board were lost.

SAGHALIEN. See SAKHALIN.

ST. CHRISTOPHER-NEVIS. See LEEWARD ISLANDS.

SAINT GAUDENS. See SCULPTURE.

ST. HELENA. A British colony in the South Atlantic some 1200 miles west of the west coast of Africa, consisting of the island of St. Helena (47 square miles) and its dependency the island of Ascension (34 sq. miles). Population (1931 census), 4183 of whom 188 were on the island of Ascension. The principal exports are fibre, tow, twine, and rope. Jamestown is the capital and chief port. Governor in 1933, Sir S. P. Davis.

ST. JOHN'S COLLEGE. A college of liberal arts and sciences for men in Annapolis, Md., founded as King William's School in 1696. The enrollment for the first half-year of 1933-34 was 238. There are 26 faculty members. The endowment fund as of July 1, 1933, amounted to \$232,724, and the income for the year ending June 30 was \$303,910. The library contained 27,000 volumes. President, Douglas H. Gordon.

ST. LAWRENCE UNIVERSITY. An institution for the higher education of men and women at Canton, N. Y., founded in 1856. The registration for the autumn term of 1933 was 723. The faculty numbered 54 members. The endowment funds amounted to \$4,921,001, and the income for the year was \$252,466. The law school of the University, with separate funds, is located in Brooklyn, N. Y. Its enrollment for the autumn term of 1933 was 1367. The library contained approximately 55,000 volumes. President, Richard Eddy Sykes, D.D.

ST. LAWRENCE WATERWAY. See UNITED STATES under *Administration*; NEW YORK under *Political and Other Events*; CANALS; WATER POWER.

ST. LUCIA, lū'shī-ā or lōo-sē-ā. A British insular colony in the Windward Islands (q.v.) group of the West Indies. Area, 233 square miles; the population was 61,135 on Jan. 1, 1933. Castries, the capital, had 5899 inhabitants. Port Castries has one of the best harbors in the West Indies and is a coaling station. The principal products are sugar, cacao, copra, and lime. For 1932, imports were valued at £165,269; exports, £135,496; revenue, £130,207; expenditure, £96,278; public debt, £162,595 for which the sinking fund amounted to £44,028.

ST. PIERRE AND MIQUELON, mīk'ē lōn'. Two small groups of islands belonging to France, situated near the southern coast of Newfoundland, and named from their two largest islands. Area of St. Pierre group, 10 square miles; Miquelon group, 83 square miles. Total population (1931), 4321. St. Pierre is the capital and chief town.

SAINTSBURY, GEORGE EDWARD BATEMAN. A British critic and literary historian, died at Bath, Jan. 28, 1933. Born at Southampton, Oct. 23, 1845, he was educated at King's College School, London, and at Merton College, Oxford. After acting as senior classical master at Elizabeth College, Guernsey, during 1868-74 and as head master at Elgin Educational Institute during 1874-76, he settled in London as a journalist and miscellaneous writer, contributing principally to the *Academy* and *Saturday Review*. Called to the University of Edinburgh as professor of rhetoric and English literature in 1895, he held that chair with distinction until his retirement in 1915.

The range of Professor Saintsbury's reading in classical, mediæval, and modern literature was immense, while the sheer bulk of his work, original and editorial, was a monument to a literary enthusiasm which imparted remarkable zest, vitality, and readableness to his surveys of these fields and criticism of their outstanding representatives. Among these were *Primer of French Literature* (1880); *A Short History of French Literature* (1882); *Elizabethan Literature* (1887); *Essays in English Literature, 1780-1860* (1st series, 1890; 2d series, 1895); *Essays on French Novelists* (1891); *Nineteenth Century Literature* (1896); *The Flourishing of Romance and the Rise of Allegory* (1897); *Sir Walter Scott* (1897); *A Short History of English Literature* (1898); and *Matthew Arnold* (1899). His monumental *History of Criticism* (3 vols., 1900-1904); *Minor Caroline Poets* (3 vols., 1905-21); and *History of English Prosody* (3 vols., 1906-10) were followed by *The Later Nineteenth Century* (1908); *A Historical Manual of English Prosody* (1910); *History of English Criticism* (1911); *History of English Prose Rhythm* (1912); *The English Novel* (1913); *A First Book of English Literature*

(1914); *A History of the French Novel* (2 vols., 1917-19); and *A Consideration of Thackeray* (1931).

One of the most delightful connoisseurs of wines, Professor Saintsbury wrote *Notes on a Cellar Book* (1920), while in such miscellaneous works as *A Scrap Book* (1922), *A Second Scrap Book* (1923), *Collected Essays and Papers* (4 vols., 1924), and *A Last Scrap Book* (1924) he expressed his impatience with Modernism and nostalgia for the Victorian Age. He was president of the English Association in 1909, and in 1911 was elected a Fellow of the British Academy.

ST. THOMAS. See SÃO THOMÉ AND PRÍNCIPE; VIRGIN ISLANDS.

ST. VINCENT. A British island colony in the Windward Islands (q.v.) group of the West Indies. Area, 150.3 square miles; population (1931 census), 47,961 of whom 2173 were white; the estimated population for 1932 was 49,065. Kingstown, the capital, had 4269 inhabitants in 1931. The chief products are arrowroot, cotton, copra, rum, and syrup. In 1932, imports were valued at £149,289; exports, £97,299; revenue, £72,073; expenditure, £67,903; public debt, £93,543 for which the sinking fund amounted to £5816. St. Vincent is under the governor of the Windward Islands but has its own executive council and legislative council.

SAKHALIN, sā'kà-lēn'. An island off the eastern coast of Siberia and north of Japan. The portion north of 50° N. latitude belongs to the Soviet Union and has an area of some 13,934 square miles and an estimated population (1930) of 22,500. For the Japanese portion of the island see KARAFUTO.

SALES TAX. See TAXATION.

SALMOND, AIR CHIEF MARSHAL SIR (WILLIAM) GEOFFREY (HANSON). A British soldier, died in London, Apr. 27, 1933. Born near Dover, Kent, Aug. 19, 1878, he attended Wellington College and the Royal Military Academy at Woolwich. In 1898 he joined the Royal Artillery, and for his services in the relief of Ladysmith and the operations at the Tugela River during the Boer War received the Queen's medal with seven clasps. Aside from service at the British legation in Peking during the Boxer Rebellion and further training at the Staff College at Camberley during 1911-12 his career was uneventful until the outbreak of the World War. Having joined the Royal Flying Corps in 1913, he accompanied Maj.-Gen. Sir David Henderson to France as staff officer. In 1915, however, after commanding Squadron No. 1, he was recalled by the Air Ministry to command in Egypt the Fifth Wing of the Royal Flying Corps. In 1916 he was named commander of the Royal Flying Corps in the Middle East (Saloniki, Egypt, and Mesopotamia) with the rank of brigadier-general. In that capacity he directed the bombing from the air of the Turkish Army in Palestine as it retreated northward from the advancing Allied forces under Allenby; the campaign culminated in the capture of Jerusalem on Dec. 9, 1917. In recognition of this exploit he received the Distinguished Service Order in 1917 and was made a Companion of the Bath in 1918 and a Knight Commander of St. Michael and St. George in 1919.

Appointed Air Vice-Marshal in 1919, Salmond was a passenger on the first aeroplane to fly from England to India, the object of his trip being the inspection of units of the Royal Flying Corps in India. In 1922 he became Director-General of Sup-

ply and Research in the Air Ministry and as a member of its Air Council during the next five years was responsible for the development of the light aeroplane. His next command was that of Air Officer commanding the Royal Air Force in India where he carried out through air patrol of the Northwest frontier the Government of India's policy of "control without occupation." Having been made Air Marshal in 1929, he assumed on his return to England in 1931 the post of Air Officer commanding-in-chief of the Air Defense of Great Britain. On the retirement of his brother, Sir John Salmond he was named in April, 1933, Chief of the Air Staff.

SALONIKA, GREECE. See RECLAMATION.

SALVADOR, sál'vá-dör' (EL SALVADOR). A Central American republic. Capital, San Salvador. AREA AND POPULATION. Salvador has an area of 13,176 square miles and a population estimated on Dec. 31, 1933, at 1,688,000 (1,437,365 at 1930 census). Persons of mixed Spanish and Indian blood numbered 1,000,000 or more. The population in 1933 was 38.8 per cent urban and 61.2 per cent rural. In 1932 the birth rate was 40.9 per 1000 inhabitants; the death rate, 21.9. The population of the chief cities (1930) was: San Salvador, 89,281; Santa Ana, 41,210; San Miguel, 17,569; Santa Tecla, 20,958; Sonsonate, 15,737.

EDUCATION. In 1932, there were 1046 public primary schools, with 54,437 pupils; 97 private primary schools, with 6234 pupils; 49 secondary schools (4 public and 45 private), with 1558 pupils; and one National University, with 350 students.

PRODUCTION. Coffee is the chief crop, furnishing 95 per cent of the value of all exports in 1931. Other products are sugar, henequen, balsam, indigo, cotton, rubber, corn, rice, and beans. Dye and cabinet woods are the chief forest products. The livestock census of 1930 showed 328,000 cattle, 355,00 swine, and 66,000 horses, mules, and asses. Coffee production in the 1932-33 season was 117,040,000 pounds (84,816,000 in 1931-32). For the year ended Oct. 31, 1933, exports were 822,848 bags, or 276,921 bags more than in the previous season. The value of coffee exports in the calendar year 1932 was \$6,433,000 (\$10,579,000 in 1931). Gold and silver are mined in small quantities. Sugar grinding, coffee cleaning, and the manufacture of shoes and textiles are the main industries.

COMMERCE. Provisional returns for 1932 showed general imports (including bullion and specie) of \$5,009,000 (\$7,271,000 in 1931) and exports of \$5,531,000 (\$11,081,000 in 1931). In colones (1 colon equals \$0.50 at par) the figures were: Imports, 12,484,000 in 1932 (14,007,000 in 1931); exports, 13,962,000 in 1932 (22,726,000 in 1931). Conversions to dollars were made at average exchange rates. Besides coffee, the chief exports were sugar, cotton, henequen, balsam, indigo. Cotton fabrics, wheat flour, lumber, and machinery were leading imports. In 1931 the United States supplied 50.4 per cent of the total imports; United Kingdom, 12.1; Germany, 8.7. Of the 1931 exports, Germany took 28.5 per cent; United States, 15.1 per cent. Imports from the United States (1933) were valued at \$2,320,377 (\$2,289,155 in 1932); exports to the United States, \$2,107,850 (\$1,143,495 in 1932).

FINANCE. Provisional budget returns for the calendar year 1931 showed revenues of 17,638,050 colones and expenditures of 18,766,857 colones; for 1932, revenues of 16,889,264 and expenditures

of 17,294,470 colones. For the fiscal year ended June 30, 1933, closed accounts placed receipts at 18,471,064 colones and expenditures at 17,682,096 colones. The budget for the fiscal year 1933-34 estimated receipts at 17,932,531 colones (\$6,133,000) and expenditures at 17,909,751 colones (\$6,125,000). The public debt on Dec. 31, 1932, totaled 46,830,068 colones (internal, 12,204,168; external, 34,625,900). In May, 1933, the government agreed with a Bondholders' Protective Committee to pay interest in its foreign debt from July 1, 1932 to Jan. 1, 1935, but to suspend sinking fund payments. The colon exchanged at an average of \$0.395 in 1932.

COMMUNICATIONS. Salvador has 375 miles of railway lines, of which 285 miles are operated by the International Railways of Central America. In 1932 all lines carried 786,936 passengers and 219,627 tons of freight. Highways extended 1476 miles, of which 353 miles were motor roads. The Pan American Airways, link San Salvador with most of the other American capitals.

GOVERNMENT. The Constitution vests executive power in a President elected for four years and legislative power in a single chamber of 42 Deputies, elected for one year by popular suffrage. President in 1933, Gen. Maximiliano H. Martínez, who was appointed Provisional President on Dec. 4, 1931, by a military directorate following the successful *coup d'état* of December 2 against the constitutional régime of President Arturo Araujo. On Feb. 5, 1932, Congress declared him constitutional head of the state and confirmed him in office for a four-year term.

HISTORY. The government of Salvador during 1933 secured the adoption of a series of financial and economic measures designed to meet the agricultural crisis and particularly to aid the coffee industry which is the country's chief source of wealth. A decree of June 17, 1933, established a new temporary subsidiary coin, the silver colon, with a par value of 50 cents U. S. currency, and provided for the coining of 5,000,000 colones of such coins. The new coins were to be legal tender at par (2 colones for 1 gold peso) for all customs duties, taxes, and payments to the government, while for private obligations they were to be accepted at par up to 30 per cent.

This new currency was to be paid for with part of the proceeds of the coffee export tax and was to form part of the funds of a credit institution established for the promotion and protection of agriculture. Two other complementary measures were the Coffee Defense Law of July 28, 1933, and the decree for the establishment of the Bank of El Salvador, authorized by the Legislative Assembly on the same date. The Coffee Defense Law placed the cultivation, production, cleaning and sale of coffee under the protection and supervision of the state, acting through a commission. The bank act authorized the Bank of El Salvador, among other things, to provide credits for the purchase and sale of agricultural products on a reciprocity or barter basis, to grant loans on crops, to discount, rediscount and sell agricultural paper maturing within one year, etc. It was empowered to issue bank notes and later was to become the sole bank of issue.

Another measure passed by the legislature provided for the establishment of an Exchange Control Board to fix rates and regulate all exchange operations. By a decree of June 3, 1933, provision was made for the distribution of public lands to the poor under a homestead system. These mea-

ures were all passed previous to the adjournment of the National Legislature shortly after the middle of October. None had been placed in effective operation before the end of the year.

The Martínez government in Salvador was unsuccessful in its efforts to secure recognition from the United States government during 1933. The governments of the United States and of Guatemala, Honduras, and Nicaragua held that President Martínez was ineligible to hold executive office in Salvador under the Central American treaty of 1923, which forbade recognition of any Central American government gaining power by force. Costa Rica, however, had denounced the 1923 treaty, effective in January, 1934, when recognition of the Martínez government by Costa Rica was practically assured. Meanwhile, in spite of the action of the State Department in Washington, numerous Latin American and European governments had extended recognition to the Martínez régime.

SALVATION ARMY. THE. A world-wide organization with international headquarters in London, England, whose sole purpose is the "salvation of mankind from all forms of spiritual, moral, and temporal distress." The movement was first organized as a mission in the East End of London in 1865 by William Booth, a minister of the New Connexion Methodists. It spread rapidly throughout England and in 1880, as the Salvation Army, was extended to the United States. Incorporation took place in New York City in 1899. The government is military in character and in 1933 was under the command of Gen. Edward J. Higgins. The higher command is divided into territories, each territory usually being a separate country, or colony, led by a commissioner and subdivided into divisions consisting of corps, posts, and institutions under the direction of officers of varying ranks.

In 1933 the Salvation Army was active in 84 countries and colonies, where it preached the Gospel in 75 languages. There were in its service, 26,355 officers and cadets, 9527 persons without rank, wholly employed, 163,571 local officers and bandsmen, 65,298 songsters, 34,087 corps cadets, and 15,467 corps and outposts in operation. Its social institutions and agencies numbered 1599 and its day schools, 973. It published 131 periodicals, with an average circulation of 1,717,157 copies per issue.

The message of the Salvation Army in the United States for the year 1933 was very appropriate—"All else may have failed! Try religion." Under that arresting slogan it conducted a nationwide campaign, bringing home to countless numbers of people the fact that the one panacea for the world's ills is found in spiritual peace. As to its emergency relief work, the army found little diminution in the demands made upon it by the sufferers from unemployment and kindred social ills, but thanks to generous public support it was able to continue this work throughout the year. It was called by President Roosevelt and his advisers into consultation on many aspects of the new national programme and modified its own relief programme to suit the changes caused by Federal and State legislative action.

There were in the United States, in 1933, 1716 corps and outposts, 4701 officers and cadets, 15,878 local senior officers and bandsmen, and 14,342 local junior officers and bandsmen. Converts during the year numbered 122,301. Among the social institutions were 90 men's hotels and 16

residential hotels for young women, accommodating a total of 9589. Men's industrial homes numbered 116 with accommodation for 4152 persons; children's homes 10, with accommodation for 822 persons; women's homes and hospitals 36, with accommodation for 2711 persons; and dispensaries 10, with a total of 25,700 patients. During the year 11,128 families were visited, while Thanksgiving and Christmas dinners were distributed to 709,904 persons. In addition 39,360 prisoners were assisted by the Salvation Army on discharge and situations were found; 16,718,922 persons were afforded temporary relief outside social service centres and hotels; 54,299 children and 7791 mothers received summer outings; and 331,043 men and women found employment through the army's 82 free employment bureaux.

The national headquarters of the Salvation Army in the United States are at 120 West Fourteenth Street, New York City. Evangeline Booth, daughter of William Booth, the founder, is the commander-in-chief. The territorial commissioners in 1933 were: John McMillan (eastern); William McIntyre (central); Benjamin Oramas (western); and Alexander Damon (southern).

SAMOA. A group of 14 islands in the Southern Pacific, about 4000 miles southwest of San Francisco. The islands east of 171 W. longitude belong to the United States; those west of that line are administered by New Zealand under a mandate of the League of Nations.

AMERICAN SAMOA. American Samoa comprises the islands of Tutuila, Tau, Olosega, Ofu, Aunuu, and Rose Island. The Naval Station at Pago Pago, Tutuila, is the seat of government. The harbor at Pago Pago is considered the best in the South Seas. With a total area of about 60 square miles, the islands had a population on May 31, 1933, of 10,773, an increase of 501 over the previous year. The death rate was 16.92 per 1000 inhabitants in 1932-33 (20.02 in 1931-32). There were 21 public schools, with 2229 pupils in 1933, an increase of 111 pupils over the previous year. English is the language of instruction in public schools. Production of copra, the main export product, has declined due to competition of the Manchurian soy bean. In 1932-33, 602 tons of copra were exported at a price of about \$32 per ton, a price 36 per cent less than in the previous year. Governmental revenue in 1932-33 was estimated at \$108,800 and expenditure at \$88,686. Of the revenue, \$23,294 was raised by the tax on freehold property and leases, the taxpayers numbering 2214.

The islands are under the jurisdiction of the U. S. Navy Department and are administered by the Governor of the U. S. Naval Station at Pago Pago. Governor in 1933, Capt. G. B. Landenberger, U. S. Navy. There is a native advisory council to the Governor, called the Fono, which meets annually. The 1933 Fono recommended a change in existing regulations to give residents of three-quarters Samoan blood the landowning rights and other privileges previously reserved to full-blooded Samoans. Tuitale, District Governor of the Western District of Samoa, died in May, 1933.

WESTERN SAMOA. The Territory of Western Samoa, as the islands under New Zealand's control are officially named, include the two large islands of Savaii and Upolu, with areas of 700 and 430 square miles, respectively. The population of all islands on Dec. 31, 1931, was 46,023 (42,296 natives, 2883 Europeans and half-castes,

714 Chinese contract laborers, and 130 other islanders). Apia, the chief port and administrative centre, is on Upolu. In 1931 there were some 14,000 pupils in 41 schools. Copra, cacao, and bananas are the chief products. Revenue for the year ended Mar. 31, 1932, was £109,040; expenditure, £128,936. Imports in 1931, £164,950; exports, £194,447. Vessels entering and clearing Apia in 1931 numbered 138 of 113,006 tons. Western Samoa is administered by the New Zealand Ministry of External Affairs, the Administrator in 1933 being Brig.-Gen. H. E. Hart, appointed April, 1931. There was a renewal during 1933 of the long-standing conflict between the mandatory authorities and the Mau, a native Samoan league organized to secure greater autonomous powers. In November seven chiefs of the Mau were imprisoned on charges of sedition. The trial on a similar charge of O. F. Nelson, a white trader sympathetic toward the Mau, took place in Apia shortly afterward. Nelson had recently returned to Western Samoa after having been banished for five years for previous anti-administration activities.

SÁNCHEZ CERRO, LUIS M. A Peruvian soldier and president, died by assassination in Lima, Apr. 30, 1933. Born at Piura, Aug. 12, 1889, of Indian parentage, he attended the Military School of Chorrillos and on his graduation in 1910 served with various infantry and engineering regiments. In 1914 he took part in the uprising whereby President Guillermo Billinghurst was ousted, and the following year was sent as military attaché to the Peruvian embassy in Washington. On his return in 1916 he spent several months exploring the Amazon basin and then resumed his military life with the 11th Regiment at Arequipa. For his participation in the revolt against the Leguía government in 1922 he was imprisoned on the island of Taquila in Lake Titicaca. On his release he joined the 4th Regiment in the military district of Madre de Dios but was deported in 1924 on account of his revolutionary agitation. His service during the next five years with the Italian and French armies in Morocco gave him a valuable knowledge of military tactics.

Permitted to return to Peru in 1929, Sánchez Cerro assumed command of the 3d Regiment of Engineers at Arequipa with the rank of lieutenant-colonel and the following year staged the coup which terminated President Leguía's 11-year régime. The provisional government of which he was president was unable, however, to remedy Peru's serious economic and financial difficulties, and he was obliged to resign in March, 1931. After spending a few months in France he returned in July to begin his campaign for the presidency and in October was elected to that office. His régime as regularly elected president was no less trying than his term as provisional president. Only for a few months in 1932 when there was tension between Peru and Colombia over the possession of the port of Leticia on the upper Amazon was there a whole-hearted support of his government. His principal opponents were the Aprista or Apra (Alianza Popular Revolucionaria Americana) party which charged that the election of October, 1931, was unfairly conducted and demanded the appointment of a junta to take over the government and call new elections. A systematic boycott of the party ensued, with the imprisonment or deportation of thousands of its members. An attempt to assassinate him was made in March, 1932, when he was attending a church

in Lima. A year later another political terrorist, Abelardo Hurtado de Mendoza, succeeded and in turn was slain by the Civil Guard which had been assigned to protect the President while he reviewed 20,000 troops recently recruited on account of the growing hostile feeling between Peru and Colombia.

SAN FRANCISCO. See AQUEDUCTS; BRIDGES.

SANITARY ENGINEERING. See GARBAGE AND REFUSE DISPOSAL; SEWERAGE AND SEWAGE TREATMENT; WATERWORKS AND WATER PURIFICATION.

SAN MARINO, sän mī-rē'nō. A tiny independent republic situated near the southwest coast of the Adriatic and encircled by Italian territory. Area, 38 square miles; population (1932), 13,948. San Marino, the capital, had 2000 inhabitants. The republic is governed by a council of 60 members, elected by popular vote, two of whom are appointed every six months to act as regents.

SANTO DOMINGO. See DOMINICAN REPUBLIC.

SAORSTAT ÉIREANN. See IRISH FREE STATE.

SÃO THOMÉ, sou'n tō-mē, AND **PRINCIPE**, prēn'sē-pē. Two islands in the Gulf of Guinea, some 125 miles from the coast of Africa, constituting a province of Portugal. Total area, 364 square miles; total population (1921), 59,055.

SARAWAK, sà-rā'wāk. An independent state forming the northwestern part of the island of Borneo, under British protection. Area, 50,000 square miles; population, 475,000. The chief towns are Kuching, the capital, with 25,000 inhabitants; Sibü (Fort Brooke); and Miri. In 1932, imports totaled S\$9,698,808; exports, S\$13,573,872; revenue, S\$4,210,558; expenditure, S\$4,277,278 (Straits dollar averaged \$0.4040 in 1932). Rajah in 1933, Sir C. V. Brooke.

SASKATCHEWAN, säs-käch'ē-wōn. A province of Western Canada between Alberta and Manitoba. Area, 251,700 square miles; population (1931 census), 921,785. Regina, the capital, had 53,209 inhabitants in 1931; Saskatoon, 43,291; Moose Jaw, 21,299. Living births during 1931 totaled 21,331; deaths, 6066; marriages, 5700. There were 221,331 students in the 4777 elementary schools in 1931; the University of Saskatchewan had 1459 undergraduates for 1930-31.

Agriculture is the leading occupation; the estimated gross annual agricultural output for 1932 was valued at \$109,649,000, of which field crops from a total of 22,333,900 acres represented \$80,046,900 including 202,000,000 bushels of wheat valued at \$60,600,000 and 107,400,000 bushels of oats valued at \$11,814,00. Livestock (1931 census): 997,426 horses; 1,188,884 cattle; 281,013 sheep; 949,055 swine; 11,518,707 head of poultry. The total value of all livestock in 1931 was \$98,008,978 (\$196,485,201 in 1921). Pelts of fur-bearing animals taken in 1931-32 were valued at \$1,043,739.

Mineral production for 1932 was valued at \$1,025,167 of which coal (875,432 tons) represented \$1,211,539. According to preliminary figures for 1933, gold production was valued at \$667,907 (\$20.67 per fine ounce); silver, \$309,819 (\$0.3758 per ounce). In 1931 the 768 manufacturing establishments had 6061 employees, a capital investment of \$68,547,866, and a value of output of \$44,265,151 gross and \$21,724,533 net. For the fiscal year ended Apr. 30, 1931, revenue amounted to \$14,346,010; expenditure, \$18,202,677. The bonded indebtedness on Apr. 30, 1932 was \$112,060,761.

Executive power is vested in a lieutenant-governor, and a legislative assembly of 63 members elected for five years. Saskatchewan is represented in the Dominion Parliament at Ottawa by six Senators, and 21 members in the House of Commons. Lieutenant-Governor in 1933, H. E. Munroe; Premier, J. T. M. Anderson (Conservative).

SATURN. See **ASTRONOMY**.

SAUDI ARABIA, KINGDOM OF. See under **ARABIA**.

SAULT STE. MARIE, CANALS AT. Traffic through the canals at Sault Ste. Marie in Michigan and Ontario indicated a remarkable stride toward recovery. Although neither in number of transits nor in tonnage did it reach the traffic of 1930 when 16,818 vessels carrying almost 55,000,000 net tons were reported, the year's total far exceeded the 1932 totals and almost reached the totals for 1931. In 1933 the report of the combined traffic through the canals, as compiled under the direction of Maj. R. C. Crawford, Corps of Engineers, U. S. Army, showed 12,100 vessel passages with a registered net tonnage of 34,370,300 tons. In 1932 the vessels numbered 8679 carrying 17,250,905 tons; in 1931, 13,056 vessels with 35,917,044 tons.

The total freight carried during 1933 amounted to 40,307,893 short tons, showing an increase of 97 per cent over that for 1932. Passenger traffic increased slightly, with 20,943 in 1933 and 20,241 in 1932. Of the freight the greatest increase was in iron ore, with 22,226,025 short tons, an increase of 516 per cent over the 3,607,119 short tons in 1932. Cargoes of wheat declined 4 per cent during the year, with 198,698,290 bu. as against 207,224,044 bu. in 1932; oil dropped by 2098 short tons to 487,486 short tons. All other cargoes showed gains, rising from less than 1 per cent in flour to 394 per cent in structural steel and pig iron. The major items with 1933 totals and the percentage of gain over 1932 are as follows: Flour, 7,118,520 bbls, a gain of 0.3 per cent; grain, 39,821,163 bu., a gain of 1 per cent; stone, 219,956 short tons, a gain of 4 per cent; soft coal, 7,958,524 short tons, a gain of 11 per cent; salt, 32,106 short tons, a gain of 37 per cent; hard coal, 307,573 short tons, a gain of 64 per cent; lumber, 142,322 M. ft. board measure, a gain of 83 per cent; copper, 47,310 short tons, a gain of 163 per cent; structural steel and pig iron, 240,870 short tons, a gain of 394 per cent.

The United States Canal was opened April 19 and closed December 14, a season of 240 days. The Canadian Canal was opened April 20 and closed December 1, a season of 226 days. The greater amount of the freight, 30,543,685 short tons, was east-bound, and of this amount 28,794,768 short tons passed through the United States Canal and 1,748,917 short tons through the Canadian Canal. Of the 9,764,208 short tons west-bound, 9,238,673 tons passed through the United States Canal and 525,535 tons through the Canadian Canal. Of the total vessels, 253 were sailing vessels as against 335 in 1932.

SAXONY. The name applied to three divisions of the former German Empire: The Republic of Saxony (formerly Kingdom of Saxony); the former Grand Duchy of Saxony (now part of Thuringia); and the Prussian Province of Saxony. See **GERMANY** under *Area and Population*.

SCABIES ERADICATION. See **VETERINARY MEDICINE**.

SCANDINAVIAN LITERATURE. This review includes a few books of 1932 as well as those of 1933 and is divided into Danish, Norwegian, and Swedish literature.

DANISH. *Poetry.* Valdemar Rørdam's *Huset ved Volden* (The House by the Dam) shows a strong love for the old cultural ideals and traditions of Denmark. The poems in Johannes Wulff's *Sange fra Jorden* (Songs from Earth) vary from light numbers written in a humorous vein to hymns expressive of exalted religious feeling. In Hulda Lütken's *Lænken* (The Chain) we see the conflict between the urge of womanhood and that of the artistic and poetic temperament.

Fiction. In Henri Nathansen's *Mendel Philipssen & Søn* (Mendel Philipssen and Son), the story of a business house and at the same time of a family, the patriarchal traditions of the Jewish race and the solidarity of the Jewish family are pointed to as models for the rest of the world. *Lokomotivet* (The Locomotive) is Emil Lycke's strongest work to date. His thesis seems to be that literature is untrue and unreal and that therefore a practical career is more useful than that of the writer. Gudmundur Kamban's *Quod felix*, which completed the Skalholt series, is an historical novel of unusual power. In *Vikivaki* which, although in many respects an excellent work, is somewhat below the author's usual standard, Gunnar Gunnarsson entered a new field, that of the psychic.

Miscellany. In *Revolutionære Profiler* (Profiles of Revolutionists), Ad. Stender-Petersen endeavors to explain the Russian revolution through the character and personality of its leaders. Frederik Weilbach's *Frederik II's Italienrejser* (Frederick IV's Journeys to Italy) gives an account of the Danish king's several trips to Italy and their influence on Danish architecture, art collections, etc. In his work on *William Blake*, Vilhelm Grønbech interprets the English writer as a poet, an artist, and a mystic.

NORWEGIAN. *Poetry.* Norwegian literature suffered a great loss in the death of Olaf Bull.—In his latest collection, *Det levende livet* (The Full Life), Stein Backe expresses a resignation and happiness which have been acquired through struggle. Vilhelm Krag's *Digte* (Poems), written in a lyric vein, impresses one as a series of personal confessions.

Fiction. *Masken* (The Mask), written in the sombre realistic style peculiar to Oskar Braaten, seems to express the author's conviction that one cannot entirely escape the influence of heredity. In *Franziska kommer hjem* (Franciska Comes Home), Katharina Gjesdahl depicts the varying and adventurous life of her heroine from the early days when she leaves home to the time when she is drawn back to the place of her childhood. *Fugl Fønix* (Bird Phoenix) by Kristian Elster stresses the tragic fact that each generation is misunderstood and condemned by the succeeding one and that any attempt at an understanding between the two is futile.

Science, Criticism, etc. Hans Hansen's book on *P. Chr. Asbjørnsen* discusses not only the artistic, but also the practical side of the great writer. In *Kulturkrisen og kapitalismen* (for which one might venture the English title "The Great Crisis and Capitalism") Ingjald Nissen subjects the present world crisis to a psycho-sociological investigation. Arnold Ræstad's *Danmark, Norge og folkeretten* (Denmark, Norway, and the Law

of Nations) treats the relations of these two countries during the last six centuries in the light of international law.

SWEDISH. Poetry. In *Under öppnad himmel* (Under an Opened Heaven), a collection of poems of high artistic quality, Nils Bolander shows on the one hand a strong sense of pathos, and on the other, a strong religious faith. Pär Lagerkvist's *Vid lägereld* (By the Camp Fire) is expressive of a meditative mood and a love of nature. It shows occasional traces of the author's earlier fondness for experimenting with words and desire for a "film" style. Bertil Malmberg's *Illusionernas träd* (The Tree of Illusions) expresses a sense of isolation and a dissatisfaction with the modern lack of idealism. Eva Wessel, who made her début with *Kvall* (Evening), in addition to giving evidence of deep feeling, shows herself a thorough master of poetic form, especially in her use of the folk-song forms and motifs.

Fiction. In *Godnatt, jord* (Good Night, Earth) Ivar Lo-Johansson, one of to-day's master realists, takes care to show all phases, even the revolting ones, of peasant life. The hero of Thore Ericson's *John Steen i Himmelsvik* (John Steen in Himmelsvik) is a foundingling who attains wealth and social position beyond those of his fellow townsmen, and yet finds that he has failed to acquire the one thing that could make him happy, companionship. In addition to telling a touching and interesting story, the author gives a clear economic and cultural picture of Sweden during the last third of the nineteenth and the beginning of the twentieth century. Ella Boström, on the other hand, goes back to pre-Mosaic times in *Horisonstaden* (The City on the Horizon), which treats the double theme of Achnaton's romantic love for Nephertiti and his endeavor to give his people a new religion based on enlightenment and brotherly love. Some of the shorter stories of the year show the influence of American novelistic technique. Of these may be mentioned, Walter Ljungquist's *Ombyte av tåg* (Change of Train), a touching story of two childhood friends who, after years of separation, meet at a railroad station; and Signe Engström's *Midsommarafton* (Midsummer Eve), an excellent picture of an old Swedish estate which proves unable to keep out the economic worry incident to our modern industrial system.

Miscellany. In *Mörkt och ljus* (Dark and Light) Gustaf Strindberg tells some interesting episodes from his work as a physician in America. In *Egyptiska profiler* (Egyptian Profiles) Dagmar Berg gives some interesting pictures of Egyptian life as she has observed it during her sojourn in Cairo. (See also PHILOLOGY, MODERN.)

SCAPINELLI DI LÈGUIGNO, RAPHAEL, CARDINAL. A Roman Catholic prelate, died at Vatican City, Rome, Italy, Sept. 17, 1933. He was born at Modena, Apr. 25, 1858, and after his ordination to the priesthood in 1881 taught for a time in a seminary at Reggio. Becoming attached to the secretariat of the Vatican, he was later named secretary to Mgr. Vincenz Vannutelli, the Papa Nuncio in Lisbon, and in 1907 served as Apostolic Delegate in Madrid. At the Vatican he held successively the posts of consulting secretary to the Commission on Canon Law, secretary to the Commission for the Administration of the Vatican's Property (which entailed also the office of vice-prefect of the Holy Apostolic edifices), and secretary to the Holy Congregation for Ec-

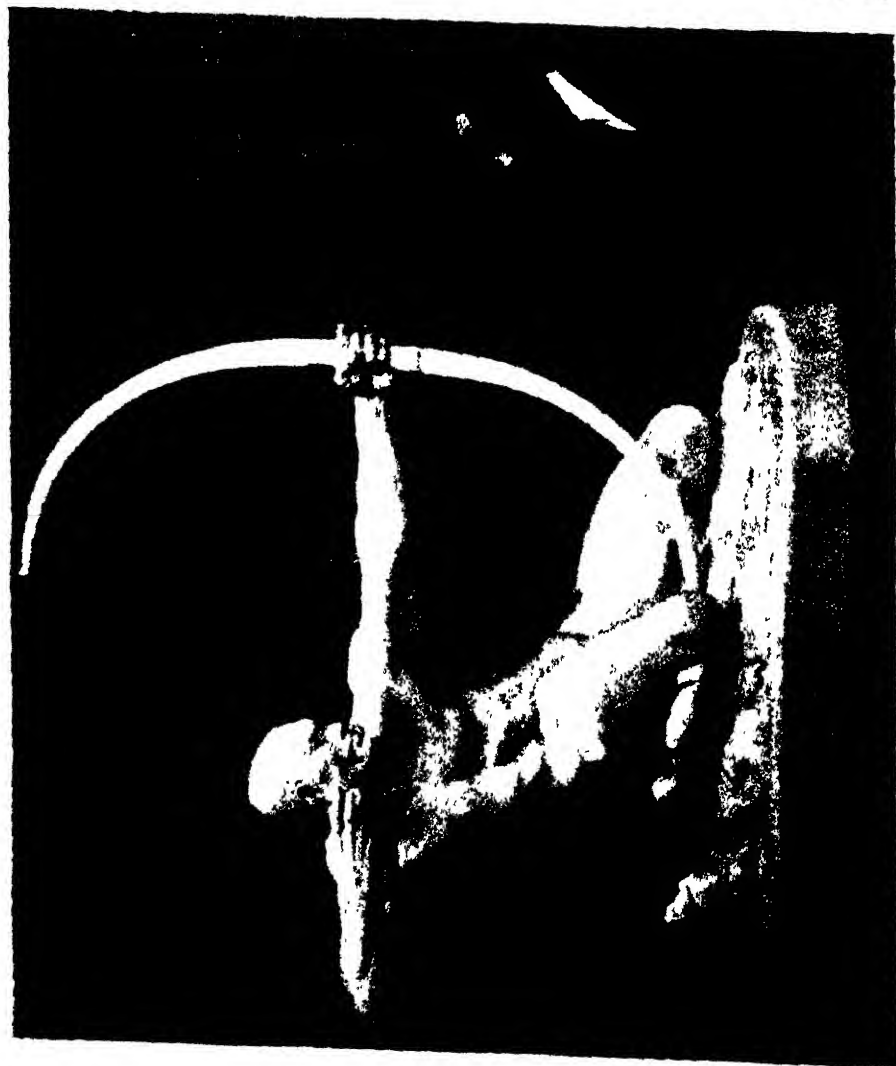
clesiastical Affairs. While serving as special Apostolic Nuncio to Vienna during 1912-16, he was created cardinal-priest and pronuncio (in 1915) by Pope Benedict XV. On the death of Cardinal Vannutelli in 1930 he was named by Pope Pius XI Apostolic Datary, in which capacity he conferred the non-consistorial benefices.

SCHILLINGS, Max von. A German composer and orchestral conductor, died in Berlin, July 24, 1933. He was born at Düren, Apr. 19, 1868. While pursuing his studies at the Gymnasium of Bonn he studied music with Brambach and Von Köigs-löw. After three years of further study at the University of Munich he settled there as a teacher and in 1903 received the title of Royal Professor of Music. In connection with the Wagnerian opera performances at Bayreuth he distinguished himself as director of rehearsals in 1892 and as chorus master 10 years later. On removing to Stuttgart in 1908 he was appointed musical assistant to the intendant of the Stuttgart Court Theatre, later becoming conductor of the Court Orchestra and Opera and serving as general music director at the Stuttgart Court Theatre from 1911 to 1918. Von Schillings was called to Berlin as director of the Prussian State Opera in 1919 but was removed from this post six years later following a dispute with the Prussian Minister of Culture. After refusing an appointment as professor of music in the Prussian Academy of Fine Arts he served as conductor for the German Grand Opera Company on its tour of the principal cities of the United States in 1929-30. In March, 1933, after the ascendancy of the National Socialist party, he was named director of the Berlin Civic Opera to replace Karl Ebert.

As a composer Von Schillings showed decided talent, but unfortunately allowed himself to be strongly influenced by Wagner, thus sacrificing his individuality. His operas *Der Pfeifertag* (1899) and *Mona Lisa* (1915), however, were well received in Germany until 1930. In 1923 *Mona Lisa* was presented at the Metropolitan Opera House, New York City, with his wife, Barbara Kemp, in the title rôle. He wrote also the operas *Ingwelde* (1894) and *Moloch* (1906); the symphonic fantasias, *Meergruss* and *Seemorgen*; a hymn-rhapsody for mixed chorus and orchestra, based on Schiller's *Dem Verklärten*; and about 40 songs. Among his best works were Schiller's *Kassandra* and *Das Eleusische Fest*, Spitteler's *Glockenlieder*, and Wildenbruch's *Das Heldenlied* arranged as recitations, with illustrative accompaniment for piano or orchestra. He wrote also a symphonic prologue to Sophocles's *Edipus Rex* and incidental music to Aeschylus's *Orestes* and the first part of Goethe's *Faust*. Knighthood was conferred on him by the King of Württemberg in 1912, and in 1932 he was elected president of the Prussian Academy of Fine Arts.

SCHOOLS. See EDUCATION IN THE UNITED STATES, the paragraphs on Education under the various countries, and the States of the United States.

SCIALOJA, VITTORIO. An Italian jurist, died in Rome, Nov. 19, 1933. Born in Turin, Apr. 24, 1856, he studied law at the University there and in Florence and Rome, and in 1879 became professor of law at the University of Camerino. He was called to the University of Siena as professor of Roman law the following year, and after 1884 held the same chair at the University of Rome. Scialoja's political career dated from 1904 when he was elected to the Senate. He served as Min-

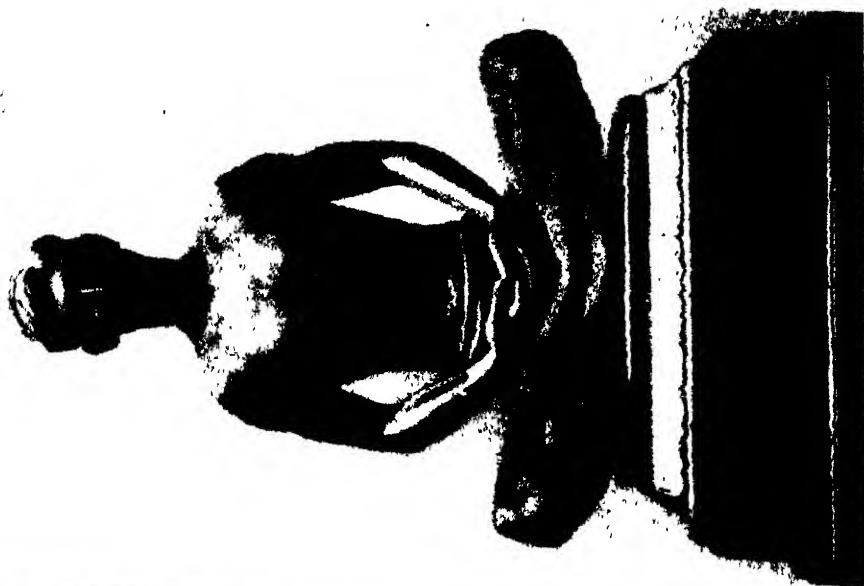


Kelstone

"THE ARCHER"

Robert F. P. Amendola standing beside his sculpture which was awarded the Prix de Rome

SCULPTURE



Copyright, Malvina Hoffman, Field Museum, Chicago

"KASHMIRI PRAYING"

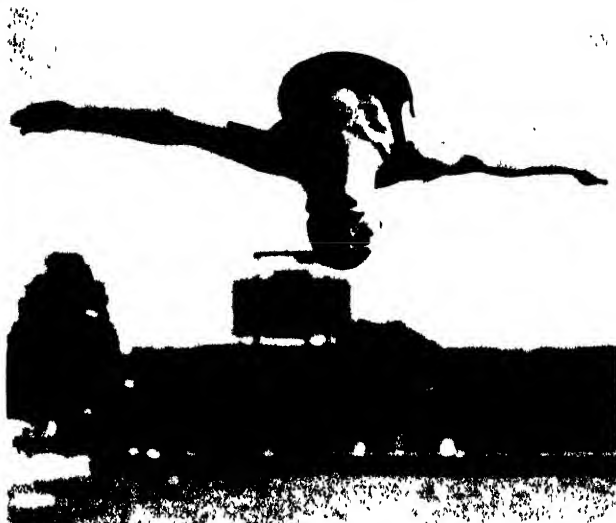
Bronze by Malvina Hoffman



Rotofoto

HELEN JACOBS

American National Women's Tennis
Champion



Wide World

DOROTHY POYNTON

American expert diver



Keystone

THE KENTUCKY DERBY

Col E. R. Bradley's Broker's Tip nosing out Head Play, owned by Mrs. Silas Mason, within a jump of the finish. Jockey Fisher on Head Play (left) was "grasping Meade's saddle-cloth," according to the Associated Press, while Meade was "clutching Fisher's shirt at the shoulder."

SPORTS

ister of Justice during 1909-10, and in the wartime coalition cabinet of Paolo Boselli (1916-17) was Minister of Propaganda. As Foreign Minister under Premier Nitti during 1919-20 he was a member of the Italian delegation to the Paris Peace Conference where he assisted President Wilson in framing the covenant of the League of Nations. He was also chief of the Italian delegations to the Locarno Conference and the sixth Assembly of the League of Nations, and from 1925 to 1931 represented Italy on the Council of the League of Nations. At the time of his death Scialoja was president of the Reale Accademia dei Lincei and of the International Institute for the Unification of Private Law. He translated into Italian during 1893-98 Savigny's monumental *System des heutigen römischen Rechts*.

SCOTLAND. See GREAT BRITAIN.

SCOTLAND, CHURCH OF. See PRESBYTERIAN CHURCH.

SCOTTSBORO CASE. See ALABAMA under *Political and Other Events*; LAW.

SCULPTURE. In June, seventy works of sculpture in bronze and stone by Malvina Hoffman representing types of the principal divisions of the human species, modeled from carefully selected living subjects, was opened in the Field Museum, Chicago, with beautiful placement in the Chauncey Keep Memorial Hall devoted to the races of mankind. To secure the subjects for these, the sculptor traveled practically around the world and visited many out of the way places. The commission provided for 100 works, of which only 30 have not been completed. This sculpture is said to be unique both as a scientific and an artistic achievement. No other museum in the world possesses a comparable series of studies in physical anthropology. Leading authorities have pronounced these works "the finest racial portraiture that the world has yet seen." Highly civilized peoples as well as the most primitive tribes are represented, and yet while scientifically correct the works are artistically superior. Thus science and art are brought into close relationship. Chauncey Keep, in whose honor the hall was named, was a member of the museum's board of trustees for fifteen years preceding his death in 1929. A bequest of \$50,000 left to the museum by Mr. Keep was applied to carrying out this project, and the balance of the cost, exceeding \$150,000 was received in contributions from Marshall Field of New York, Mrs. Stanley Field, and Mrs. Charles Schweppe of Chicago.

Eight caryatids by Augustus Saint-Gaudens were given appropriate placement in the Albright Gallery, Buffalo, during the latter part of the summer of 1933. When John J. Albright of Buffalo donated at the beginning of the century the funds for this art gallery, Augustus Saint-Gaudens was commissioned to design eight caryatids for the two porches which were to project from the north and south wings on the east front of the new building. After their completion in 1907 it is said that financial complexities arose which prevented their becoming the permanent possession of the Albright Gallery. At the time of Saint-Gaudens' death disagreements arose between Mr. Albright and the sculptor's executors which delayed indefinitely their installation. In 1932, a year after the death of Mr. Albright, it became necessary to offer them for sale. A campaign for their purchase was organized and gifts of \$25,000 saved these works for the building for which they were intended.

Under the auspices of the Fairmount Park Art Association the first International Exhibition of Sculpture to be held in this country was set forth in the Philadelphia Museum of Art from May 14th to September 15th. The exhibition comprised 300 pieces representing the work of 91 American and foreign sculptors and was set forth on the East Terraces and in the Great Stair Hall of the Museum.

The Roosevelt Inaugural Medal issued in March, 1933, was the work of Paulanship. A portrait head of Roosevelt in low relief was on the obverse and a full-rigged sailing vessel—the old Constitution conventionalized—on the reverse. Copies in gold were struck for the President and Vice-President; copies in silver for members of the new Cabinet and 2500 in bronze were offered to the public at the nominal price of \$2.50. Mr. ManSHIP also designed and modelled the official medal for the Century of Progress Exposition.

The Society of Medallists issued during 1933, for their members and others, medals by C. Paul Jennewein and Gaetano Cecere.

A commotion was caused in New York in the early part of 1933 by the banishment, under edict of "Roxy," from the Roxy Music Hall, Radio City, of three pieces of sculpture, "The Spirit of the Dance" by Zorach, "Eve" by Gwen Lux, and "Goose Girl" by Robert Laurent. These works were ejected because they did not meet with the approval of the Music Hall's director, who claimed that they were neither beautiful nor appropriate for Music Hall display.

An interesting and most successful experiment in the use of polychrome sculpture in terra cotta, a pediment of the Pennsylvania Museum, Philadelphia, was completed by the sculptor, C. Paul Jennewein, executed by the Perth Amboy Atlantic Terra Cotta Company, and installed.

NECROLOGY. Among the sculptors of note who died were: Moses Dykaar, James E. Kelly, Maxwell Miller and Nana Matthews Bryant.

For bibliography, see the article on PAINTING.
SEISMOLOGY. It is well known that the earth's axis of rotation is not absolutely fixed within the earth and as a result of this the poles wander over an area whose radius is about 40 feet. Nagaoka has considered the change in the elements of inertia during the period immediately before great earthquakes, when it has been observed that the course of the poleshift becomes straight. The change in these elements may take place just before a great earthquake by a simple displacement of a portion of the crust. The change in velocity of the poleshift may give a hint to prediction, though the locality cannot be stated, as there seems to be no connection between the place of disturbance and position of the pole. Observation of the poleshift is made on the assumption that there is no change in the direction of the force of gravity, but of this there is no certainty. Nagaoka has observed a similar relation between the poleshift and volcanic eruptions.

From a detailed study of the seismograms and records from 90 stations of the earthquake which occurred near Vladivostok on Feb. 20, 1931, Scrase calculated the focus to be 360 kilometers below the surface. This is an abnormally deep focus, one of the deepest that has ever been computed. Most of the records show the anticipated characteristics of well developed, singly-reflected echoes, and the time intervals between these and direct waves provide reliable data for the computation of the depth of the focus. The surface

waves are feebly developed and a much greater proportion of the energy is carried by the body waves than is the case in normal shocks. There is no trace at all of very long Love waves.

C. Davison, who has previously done considerable work on determining possible periodicities of earthquakes, has recently published several papers on this subject. He finds that there is a 42-minute period and divides earthquakes having aftershocks into three classes: (1) those in which the main aftershocks first occurred at some multiple of 42 minutes after the initial shock; (2) those in which aftershocks occurred at $(21 + 42n)$ -minute intervals; (3) those in which no regularity of the aftershocks was found. The time required for primary waves to travel the diameter of the earth is 21 minutes; this accounts for the intervals stated above. Davison has also discussed an eleven year period of earthquake frequency and shows that this period agrees closely with the corresponding sunspot cycle. In addition he has discussed a period of 18.6 years which coincides with the nutation period of the earth. See EARTHQUAKES.

NECROLOGY. Rev. Frederick L. Odenbach, S.J., March 15.

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SELANGOR. See FEDERATED MALAY STATES. SENATE BANKING COMMITTEE. See BANKS AND BANKING; UNITED STATES.

SENEGAL, sèn'è-gôl'. See FRENCH WEST AFRICA.

SERBIA. See YUGOSLAVIA.

SEVENTH DAY ADVENTISTS. See ADVENTISTS.

SEWERAGE AND SEWAGE TREATMENT. Federal loans under the National Recovery Act (q.v.) helped check the decline in sewerage and sewage disposal construction but more aid of this kind was in sight for 1934 than was actually given in 1933. Large projected expenditures in this field, with the expectation of Federal aid, were authorized in November by the voters of *Columbus* (Ohio) and *San Francisco*. At *Columbus* nearly \$8,500,000 of bonds were voted for sewers and sewage treatment, the old sewage-works having been outgrown years ago. *San Francisco* voted \$2,625,000 for sewer construction and for two treatment works to protect municipal beaches. Work was continued on the large activated-sludge plant on Ward's Island, *New York City*. Projected extensions to the activated-sludge plant at *Milwaukee* included changes in design considered desirable after experience in operating the existing plant. (For description of these changes and for a summary of five years' operating results, see *Engineering News-Record*, July 27, and Nov. 16, 1933.) At *Essex, England*, four small sewage-works, serving as many parts of the city, were displaced by a single activated-sludge plant. One of the displaced works included a Cameron septic tank, the first of its kind. After its installation in 1896 this type of tank was built in great numbers throughout the world; then

changed by Travis to a two-story tank, which, in turn, was improved by Imhoff to the type of sedimentation and sludge-digestion tank bearing his name, which, in turn, swept over the world, outside Great Britain. Then came the activated-sludge process, about 1915, which, in the last few years has come rapidly into use. Most of the plants of the new type now in use in England are smaller than those in the United States but a large plant is now being built for a group of towns in the county of *Middlesex, England*, to displace many small works of various kinds scattered through the district. Ultimately this plant will serve 2,000,000 people but owing to the small per capita water consumption in English cities its final capacity will be only 80,000,000 gallons (Imperial) a day, or 96,000,000 gallons, United States standard. To gather the sewage from the various towns 67 miles of branch and main sewers, from 21 to 153 inches in diameter, are being built; besides which there will be two 11-ft. outlet sewers to carry the treated sewage to the tidal waters of the Thames. The cost of the complete works will be £3,250,000, or some \$16,000,000, a considerable part of which is being met by unemployment relief grants from the British government.

On February 7, a Federal district court in Wisconsin held that *Milwaukee* is infringing United States patents on the activated-sludge process granted in 1917, 1918, and 1921, to Walter Jones, of Stourbridge, England. A similar suit against the *Sanitary District of Chicago* is pending. Delay, because of lack of funds, in carrying out the orders of the United States Supreme Court (see INTERNATIONAL YEAR BOOKS for 1929 and 1930) to the effect that the sewage of the district just named might be treated to a degree that would permit a large decrease in the volume of water diverted from Lake Michigan through the Chicago Drainage Canal and the Des Plaines and Illinois rivers to the Mississippi, led the court to order the State of Illinois to see that necessary money is provided. On December 8, the Federal Public Works Administration (see UNITED STATES under Administration) allotted the district nearly \$33,000,000 in addition to a previous grant of \$8,000,000 toward the completion of the works ordered by the court. These allotments are conditioned upon certain action by the district, including the collection of charges to industrial plants for trade wastes delivered by them to the disposal system; for which legislation must be obtained.

Working-scale experiments with drying and burning sludge, begun in August, 1932, by the Sanitary District of *Chicago* were continued in 1933. After partial dewatering by sedimentation aided by ferric chloride, the sludge is put through a vacuum dryer and drying furnaces and is then used as a fuel to dry still other sludge. Ultimately the district must dispose of 650 tons of sludge every day. (See *Municipal Sanitation*, July, 1933.) An incinerator with a capacity of 50 tons a day to burn the material removed by the sewage screening plant of *Los Angeles*, the largest plant of its kind in the world (see INTERNATIONAL YEAR BOOK for 1931), was contracted for early in the year. The screenings will be partly freed from water before they are burned.

Only 19 cities of Russia had sewerage systems in 1917 and but 32 in 1928. Under the first five-year plan of the Union of Soviet Socialist Republics the number was 69. (See "Results of the Five-Year Plan on Sanitation in Russia," by

Isodor Mendelsohn, in *Municipal Sanitation* for October, 1933.

See "Chemical Sewage-Treatment Methods, Reviewed and Appraised," *Engineering News-Record*, Dec. 7, 1933, for an account of new processes under treatment.

SHAN STATES. See **BURMA**.

SHEEP. See **LIVESTOCK**.

SHERRERD, MORRIS REBESON. An American civil engineer, died in Newark, N. J., Oct. 20, 1933. Born in Scranton, Pa., Dec. 16, 1865, he was graduated from Rensselaer Polytechnic Institute in 1886 and began his career with the Beach Creek Railroad as an assistant engineer. After service with the Ontario, Carbondale and Scranton Railroad he became supervising engineer on construction for the Public Improvement Committee at Troy, N. Y. In 1892 he removed to Peoria, Ill., to serve as assistant city engineer but three years later returned to Troy in the same capacity. He was also engineer and superintendent of the water department of Newark, N. J., during 1895-1905. Appointed chief engineer for the Department of Public Works of Newark in 1905, Mr. Sherrerd held that office until 1926 when he became consulting engineer. He had served also as chief engineer for the New Jersey Water Supply Commission during 1907-16, and as chief engineer for the North Jersey District Water Supply Commission during 1916-26. The latter project involved the construction at a cost of approximately \$26,000,000 of a cooperative water system for eight New Jersey cities (Newark, Kearny, Montclair, Bloomfield, Glen Ridge, Passaic, Paterson, and Clifton), 100,000-000 gallons of water per day being supplied from the Wanaque and Pequannock watersheds.

In 1929 Mr. Sherrerd became connected with the New Jersey Water Policy Commission as chief engineer. He was also a member of the Technical Advisory Board of the Port of New York Authority and of the Committee on the Regional Plan of New York and Its Environs. Prominent in engineering societies, he served as president of the American Water Works Association, the American Society for Municipal Improvements, and the New Jersey Sanitary Association, as well as chairman of the engineering advisory committee of the New Jersey League of Municipalities. He was a former member of the board of directors of the American Society of Civil Engineers.

SHIPBUILDING. Exclusive of shipbuilding in Russia, from which complete information was not available, and exclusive of warships, the output of ships during 1933 represented a total of 489,016 tons, the lowest output ever recorded by *Lloyd's Register of Shipping*, from whose annual summary this article is taken. This is almost exactly one-third less than the total output, 726,591 tons, of 1932.

The total steam tonnage launched—116 vessels of 141,738 tons—includes five vessels of 19,090 tons to be fitted with steam turbines, and nine vessels of 11,358 tons, which will have a combination of steam reciprocating engines and turbines. Of the total steam tonnage, about 21,000 tons refer to steamers fitted for burning oil fuel under the boilers. The tonnage of vessels launched in which internal combustion engines are to be employed amounts to 337,821 tons, which compares with 268,690 tons launched in 1932, 920,495 tons launched in 1931, 1,582,994 tons in 1930, and 1,269,888 tons in 1929.

Of the 330 vessels launched in the world during

the year, 13 are of between 4000 and 6000 tons, 25 between 6000 and 10,000 tons, and four only above 10,000 tons each. The following are the four vessels:

	Tons	Built in
<i>Président Doumer</i>	12,700	France
<i>Marguerite Finaly</i>	12,426	Italy
<i>Robert F. Hand</i>	12,197	Germany
<i>Cordillera</i>	12,051	Germany

During 1933, excluding vessels of less than 1000 tons, 12 vessels of 82,675 ton were launched which have been built for the carriage of oil in bulk. Of these, 11 vessels of 81,595 tons are motorships. The total number and tonnage of vessels built on the Isherwood system of longitudinal framing launched during the year was six of about 42,000 tons, excluding those of less than 1000 tons. All are built for the carriage of oil in bulk.

In only one country was an output of 100,000 tons or more recorded during 1933, namely Great Britain and northern Ireland, 133,115 tons. Next in order come Japan (72,290 tons), Sweden (60,860 tons), Germany (42,195 tons), Holland (35,899 tons), France (34,073 tons) and Denmark (34,016 tons).

GREAT BRITAIN. The tonnage launched during 1933 was 54,679 tons, less even than that for 1932, and is the lowest recorded since the first issue, in 1888, of *Lloyd's Register Shipbuilding Returns*. The output represents 27.2 per cent of the world's output during 1933, as compared with 25.8 per cent in 1932, 31.1 per cent in 1931, 51.2 per cent for 1930, 54.5 per cent for 1929, 53.6 per cent for both 1928 and 1927, and 58 per cent in 1913. The tonnage launched in England and Wales amounts to 53,595 tons; in Scotland, 65,720 tons; and in Ireland, 13,800 tons.

The returns for 1933 show that only seven vessels exceeding 5000 tons each were launched. The largest vessel was the twin screw motorship *Port Chalmers*, of 8535 tons, built on the Tyne. Only two other vessels, each a motorship of 6900 tons and launched at Belfast, exceeded 6000 tons. Six vessels, of 2041 tons, were launched for the carriage of oil in bulk, all being for British registry. They comprise one steamer, three motorships, and two non-propelled barges, one of the last named being an all-electrically-welded vessel of 720 tons. No oil tankers of 1000 tons or upwards were launched. The tanker tonnage represents less than 2.0 per cent of the total output for the year 1933. Of the tankers, two, of 1478 tons, are built on the Isherwood system of longitudinal framing. In two other vessels, of 4750 tons, the longitudinal framing system is in part employed. The larger vessel of these, *Arcwear*, of 4200 tons, is the first vessel launched in which the new Isherwood "Arcform" design of hull has been adopted. The tonnage of steamers fitted for burning oil fuel, launched during the year, amounts to approximately 5000 tons. Three vessels with a total tonnage of 5190 tons were launched which will be fitted with steam turbines. In two of these vessels, of 4320 tons, reduction gearing is employed.

The tonnage of vessels fitted with internal combustion engines launched during 1933 amounts to 47,825 tons, which is 36.4 per cent of the total steam and motor tonnage launched during the year. Two Diesel-electric tugs, the first electrically propelled vessels built for towing purposes in Great Britain and Ireland, were also launched.

JAPAN. The output for the year, 74,290 tons,

showed an increase of 19,866 tons as compared with the total for 1932. The steamer tonnage launched—three vessels of 9107 tons—includes one, of 8100 tons, fitted with geared steam turbines. The 1933 figures comprise 27 motorships, of 65,273 tons, including four vessels of about 7500 tons each. The motorship tonnage accounts for 87.9 per cent of the output for the year, and includes a number of fishing vessels and other small craft.

SWEDEN. The figures for 1933—60,860 tons—are 17,860 tons greater than those for 1932, and consist entirely of motorships. Eleven vessels launched in Sweden were for owners in other countries.

GERMANY. During the year 43 vessels of 42,195 tons were launched. As compared with the output for 1932, the present figures show a diminution of 38,604 tons, and are the lowest annual figures recorded for this country. The figures include four steamers—an icebreaker of 836 tons, and three trawlers, two of which are fitted with combined reciprocating engines and low pressure turbine. The total comprises 39 vessels of 40,150 tons to be fitted with oil engines. The two largest, the *Robert F. Hand* and the *Cordillera*, referred to before, exceed 12,000 tons each. The first named is an oil tanker built on the longitudinal framing system. Almost the whole of the remainder of the ships launched in this country consists of fishing vessels, many being fitted with auxiliary oil engine power.

THE NETHERLANDS. The total tonnage launched during 1933—35,899 tons—was 9667 tons higher than the 1932 figures, but was still less than that recorded for any year since 1901 with the exception of last year. The figures do not include craft exclusively intended for river navigation, the total tonnage of which vessels often reaches a high figure. The tonnage launched includes four motorships of about 6500 tons each and one of 4700 tons. Otherwise, the output mostly consists of small craft.

FRANCE. The output for the year—34,073 tons—was 55,237 tons less than that for 1932. Included in the total is the largest ship launched in the world during 1933, the twin screw motorship *Président Doumer*, of about 12,700 tons, already alluded to, launched at La Ciotat. The steamers include one of 5800 tons, fitted with geared turbines, and this vessel, together with two others of 3947 tons, is fitted for burning oil fuel. The motor tonnage—mostly small craft apart from the *Président Doumer* and a fishery research vessel of 1240 tons—includes two tenders with Diesel-electric drive.

DENMARK. The tonnage launched during 1933—34,016 tons—was 11,603 tons more than last year's low total. The steamers launched included six, of about 1400 tons each, fitted with combined reciprocating and turbine engines. The motorship tonnage included an oil tanker of 8500 tons, which was the largest vessel launched in the country during the year, and a train ferry of 2560 tons.

SPAIN. The output for 1933—18,044 tons—exceeded by 6912 tons that for 1932. The motorship tonnage, of 16,052 tons, was composed of three oil tankers, two being of 6276 tons each. All three, and one steam tanker, of 1080 tons, are constructed on the bracketless longitudinal framing system.

ITALY. The total figures for this country—16,560 tons—show a decrease of 30,881 tons compared with those for 1932, and are the lowest recorded since 1897. The three vessels included in

the returns are all motorships, and include the twin screw vessel *Marguerite Finaly*, 12,426 tons, launched at Monfalcone. This vessel is an oil tanker, and is constructed on the bracketless longitudinal framing system. One other motorship, of 4013 tons, was also built on the Adriatic Coast.

UNITED STATES. The output for the year 1933, viz., 10,771 tons, showed the large diminution of 132,788 tons from the total launched in 1932, and was the lowest recorded for the United States by *Lloyd's Register*. All the tonnage launched was built on the Atlantic Coast, and includes nine non-propelled barges. Only two steamers, of 2006 tons, and three motorships, of 1607 tons, were launched. All the non-propelled barges and two of the motorcraft are to carry oil in bulk, four of these vessels, of 3117 tons, being built on the longitudinal framing system. Of the tanker tonnage, nine vessels, of 5885 tons, are electrically welded craft.

SHIPPING. At the end of the fiscal year, June 30, 1933 according to the annual report of the Bureau of Navigation and Steamboat Inspection, the merchant marine of the United States comprised 24,865 vessels aggregating 15,060,157 gross tons, the figures including 642 vessels of 190,803 gross tons built during the previous twelve months. The total indicates a reduction of 288 vessels of 797,498 gross tons from the previous year accounted for by the scrapping of a large tonnage by the U. S. Shipping Board.

Of the total number 747 vessels of 3,923,165 gross tons were engaged in foreign trade and 1250 vessels of 5,420,725 tons in coastwise trade. Foreign trade, which reached its greatest volume in 1921—10,699,596 gross tons—has thus fallen off 63 per cent. Though coasting trade, exclusive of that on the Great Lakes, has increased in the same period by 2,976,279 gross tons, the total seagoing tonnage has decreased 3,800,152 gross tons.

On June 30, 1933, the laid-up seagoing tonnage of the United States aggregated 607 vessels of 2,497,639 gross tons, as against 831 vessels of 3,603,426 gross tons on June 30, 1932. World tonnage laid up, as estimated by *Lloyd's Register of Shipping* for 1932, was 12,000,000 tons as against 15,000,000 tons of the previous year; but the shrinkage was accounted for by the increased scrapping of old ships rather than by absorption into operation. The report indicates that more than 3,333,000 tons of shipping had been broken up or otherwise disposed of, and it was estimated that the total of the world's shipping would shortly decline to the 1927 level of 65,000,000 tons, compared with 70,000,000 tons in 1931.

The actual number of vessels of 100 gross tons and upward throughout the world, as recorded in *Lloyd's Register*, 1933-34, is 31,700. The gross tonnage is 87,920,185. Of the total number 29,515, comprising 66,627,524 gross tons, are steam and motor vessels, leaving only 2185 sailing vessels of 1,292,661 gross tons. Great Britain still retains the lead in ownership with 10,233 vessels of 21,819,687 gross tons. The United States is in second place with 3485 vessels over 100 gross tons, aggregating 13,357,799 gross tons. Japan passed Norway for third place by raising its ownership from 1904 vessels to 2019 and increasing the gross tonnage from 4,225,014 to 4,258,159 in 1933. Norway, in fourth position, declined in ownership from 2008 to 1970, with a corresponding decline in tonnage from 4,166,839 gross tons to 4,079,540 gross tons.

SHOE INDUSTRY. The production of footwear, other than rubber, in the United States in 1933 showed an increase of 11.8 per cent over that of the previous year and of 9.7 per cent over that of 1931. According to statistics on production of boots, shoes, and slippers compiled by the U. S. Bureau of Census the total production for the year was 350,381,737 pairs as against 313,289,854 pairs in 1932. The production of men's dress and work shoes increased 19.2 per cent; boys' and youths' 10.2 per cent; women's 14.7 per cent; infants' 18.7 per cent; barefoot sandals and all other footwear 8.4 per cent. The production of misses' and children's shoes decreased 1.2 per cent. All-fabric shoes (satin, canvas, etc., excluding footwear with fabric uppers and rubber soles) decreased 24.4 per cent, and part leather and part fabric shoes decreased 20.7 per cent. The accompanying table shows total production by pairs as compared with 1932.

<i>Kind</i>	<i>1933</i>	<i>1932</i>
Boots, shoes, and slippers, total	350,381,737	313,289,854
High and low cut boots and shoes, (leather), total	291,265,362	255,790,035
Men's		
Dress	63,770,741	51,583,118
Work	25,049,886	22,909,658
Boys' and youths'	19,943,822	18,100,132
Women's	130,742,290	118,948,757
Misses' and children's	33,180,175	33,599,982
Infants'	18,578,448	15,653,393
Athletic*	1,315,880	1,111,212
Part-leather and part-fabric	1,485,327	1,874,052
All-fabric (satin, canvas, etc)*	4,637,255	6,132,362
Slippers and moccasins for house wear, total	40,648,351	38,211,968
All leather	10,910,778	8,502,674
Part leather, felt, etc.	29,737,573	29,709,294
Barefoot sandals and all other footwear	11,029,562	10,170,225

* Excludes footwear with fabric uppers and rubber soles

SHOOTING. Walter Beaver, Berwyn, Pa. electrician, succeeded Arthur Sheffield, postal clerk, as winner of the Grand American Handicap, richest trapshooting prize, in the Grand American tournament at Vandalia, O., in August, 1933. In the regulation 100 targets Beaver disposed of all his rivals with the exception of seventeen-year-old Ned Lilly of Stanton, Mich., who tied him with a score of 98, posted before Beaver went to the firing line. To tie the 98 Beaver hit twenty-four of the last twenty-five targets and then had a perfect count on the twenty-five targets in the shoot-off. Lilly, however, won the North American championship with 199 out of 200 and also the National Junior title with a perfect score of 100. The Grand American open went to E. C. Woodward of Houston, Tex.; the class AA crown to E. Torges of Wales Center, N. Y.; class A to H. C. Krout of Maryland Line, Ind.; the class B honors to R. Finnel, of Akron, O.; the class C laurels to F. W. Gustites of Balboa, C. Z.; the title in class D to W. F. Kern of Springfield, Ill.; and class E honors to J. M. Imes of Chicago. M. Canterino of New York took the Vandalia open, and the North American for women fell to Miss Alice Crothers of Chestnut Hill, Pa. John R. Taylor of Newark, O., captured the North American professional crown.

The world's amateur trapshooting championship fell to Joseph F. Hiestand of Hillsboro, O., who shattered 497 of 500 targets at Yorklyn, Del. in August to succeed S. M. Crothers to the title. The latter gunner proved he was still in the running by winning the national amateur doubles at

Travers Island, N. Y. with a score of 172 out of 200. J. H. Kretchman of Hamilton, Ont. won the national amateur at the same meeting.

Skeet shooting, eight-year-old offspring of trapshooting, increased in popularity, attracting many hunters who prefer it because it is more of an approximation of real game shooting conditions. The Great Eastern States crown for men was won by Glenn B. Watts, of Lynbrook, L. I. Mrs. Anna May Vance of Waban, Mass. took the honors for women. Harry C. Hathaway of Dighton, Mass. won individual honors in the Eastern States championships, team honors going to the Waltham, Mass. Gun Club, and women's honors to Mrs. Sidney R. Small of Detroit. Vern Marlow of Culver City, Calif., won the Western open crown, and Charles Pickle of Austin, Tex. took the Southwestern States championship.

United States rifle teams scored victories in all four international matches in which they competed. In the Dewar Trophy match the United States won, with Great Britain second, Australia third and South Africa fourth. The United States team won the International Railwavmen's Match with Great Britain second and Canada third. Great Britain was also second in the Fidac match and the Rhenische-Westphalian matches, with Belgium third in the former and Germany third in the latter. T. P. Samsoe of Perth Amboy, N. J. won both the Camp Perry small-bore rifle event and the national small-bore championship. The national individual short range small-bore test was taken by Thurman Randle of Dallas, Tex. with a perfect score of 400. Walter R. Walsh of Union City, N. J. captured the .22-calibre pistol championship of the United States.

SHORT RADIO WAVES. See PHYSICS.

SIAM. An independent monarchy in southeastern Asia. Capital, Bangkok; sovereign in 1933, King Prajadhipok.

AREA AND POPULATION. With an area of 200,234 square miles, Siam had a population on July 15, 1929, of 11,506,207 (9,207,355 in 1920). The 1929 total included 10,493,304 Siamese, 445,274 Chinese, 379,618 Indians and Malays, 60,668 Cambodians, 4880 Burmese, 1920 Europeans and Americans, 295 Japanese, and 120,248 others. The estimated population on Mar. 31, 1930, was 11,684,000. The registration area of Bangkok contained 550,000 inhabitants in 1932.

EDUCATION. Primary education is compulsory for children between the ages of 7 and 14, and includes two years of vocational training, mostly in agriculture, if the pupils do not proceed to a secondary school. Children in the governmental and local schools in 1932 numbered 676,717 (412,235 boys and 264,482 girls); in private schools, 51,788 (33,696 boys and 18,092 girls). Secondary education covers a period of eight years; there were 16,322 pupils enrolled in 1932. Over 86 per cent of the local schools and 50 per cent of the government schools are situated in the monasteries. Chulalankarana University at Bangkok has faculties of medicine, arts and science, and engineering and a civil service school.

PRODUCTION. In 1929, 83.05 per cent of the population was engaged in agriculture, 1.10 per cent in fishing, and 2.19 per cent in industrial pursuits. Rice is the chief crop and is both the main diet of the people and the chief item of export. The yield in 1932-33 was estimated at 4,830,000 tons (4,036,238 tons in 1931-32). The exportable surplus in 1932-33 was about 1,760,000 tons of rice and rice products, and the value was \$4,200,-

660 bahts (1 baht = \$0.4423 at par). Other products in 1931-32 were: Rubber, 132,793 piculs (picul = 133.3 pounds); tobacco, 118,937 piculs; pepper, 52,827 piculs; coconuts, 152,837,870 nuts. Exports of leading products in 1932-33 were: Rubber, 57,692 piculs valued at 396,692 bahts; teak, 37,719 cubic tons, valued at 3,312,029 bahts; copra, 92,566 piculs, valued at 491,445 bahts; tobacco, 6019 piculs; pepper, 10,537 piculs; stick-lac, 54,890 piculs. Tin is the chief mineral produced, although gold, coal, zinc, manganese, copper, lead, antimony, wolfram, etc., are found. Tin output in 1932 (provisional) was 9400 metric tons (12,700 in 1931); exports in 1932-33 were valued at 14,303,900 bahts. Effective Jan. 1, 1934, the International Tin Committee fixed the tonnage of metallic tin exportable from Siam annually for three years at 9800 tons. Rice milling is the chief manufacturing industry.

COMMERCE. For the year ended Mar. 31, 1933, Siam's exports were valued at 152,552,494 bahts (134,206,840 bahts in 1931-32) and her imports at 89,497,423 bahts (99,908,837 bahts in 1931-32). Foodstuffs, cotton textiles, gunny bags, tobacco and its products, kerosene, beer, wine and spirits, and bullion and coin were the chief import items. The chief sources of imports in 1932-33 were Hong Kong, 15,378,647 bahts; United Kingdom, 12,256,780 bahts; Netherland India, 11,541,713 bahts; Singapore, 11,364,718 bahts; and Japan, 9,798,372 bahts. Exports went principally to Hong Kong, 52,959,913 bahts; Singapore, 34,264,948 bahts; Penang, 23,669,944 bahts; and Japan, 9,015,061 bahts. The United States supplied imports valued at 2,158,099 bahts and took exports to the value of 153,325 bahts.

FINANCE. The budget estimates for the fiscal year commenced Apr. 1, 1933, placed revenues at 72,428,424 bahts and expenditures at 72,415,415 bahts. The preceding fiscal year ended with a surplus of about 2,000,000 bahts, with revenues of 74,500,000 bahts and expenditures of 72,500,000 bahts. Capital expenditures totaled 4,000,000 bahts. There was a substantial budget deficit in 1931-32.

On Mar. 31, 1933, the £1,916,000-balance due on the 7 per cent sterling loan of 1922 was paid off, 30 years in advance of maturity, after which there still remained about £2,700,000 in the Debt Redemption Fund. With the retirement of the 1922 loan, the national debt was reduced to £8,568,000, all held in London. The unit of currency is the baht (par value, \$0.4424), which exchanged at an average of \$0.435 in 1930-31 and at \$0.426 in 1931-32. On May 11, 1932, Siam's currency was linked with sterling at the rate of 11 bahts to the pound.

COMMUNICATIONS. On Mar. 31, 1932, there were 1860 miles of railway lines, all state owned, which during the year ended on that date carried 3,631,181 passengers and 1,091,451 tons of freight, with gross earnings of 10,755,874 bahts. The Aerial Transport Company of Siam in 1931 inaugurated a twice-weekly passenger, mail, and express service in northeastern Siam, with Korat as the base of operations. The Dutch Air Mail operated a weekly service between Amsterdam and Batavia, via Siam. There was direct wireless telephone communication between Bangkok and London and Berlin.

GOVERNMENT. Siam's absolute monarchy was overthrown by a *coup d'état* on June 24, 1932, and a new Constitution was adopted on Dec. 10, 1932. It provided for a limited monarchy, with

the King exercising executive power through the Executive Committee, legislative power by and with the advice and consent of the National Assembly, and judicial power through courts duly established by law. The Executive Committee, which took over most of the King's former powers, consisted of 15 members; heads of administrative departments were directly responsible to it. The National Assembly consisted of 70 members, one half elected by popular vote and one half nominated. The first popular election of members of the Assembly took place in November, 1933, and the Assembly convened in December, 1933. See *History*.

HISTORY. The new course upon which the Siamese ship of state was launched by the overthrow of the absolute monarchy in 1932 proved stormy during the ensuing year. In 1932, the King, the princes, and the conservatives generally had yielded without a struggle to the practically bloodless *coup d'état* executed by a group of young revolutionaries supported by powerful army officers. But in 1933 the conservatives made two separate attempts to regain control of the government, one of which resulted in sanguinary and costly civil strife.

The civilian leader of the 1932 revolt was a young patriot named Luang Pradit. Phya Bahol was the military leader. In establishing their new government, they remained in the background, bestowing the high ministerial posts upon persons who had taken no part in the revolution. Dominant figures among the new Ministers were Phya Manopakarana, Finance; Phya Srivisar Vacha, Foreign Affairs; Vice-Admiral Phya Rajawangsan, Defense. These men were regarded as liberals, but they raised strenuous objections to plans for the economic reorganization of the country submitted by Luang Pradit and his idealist adherents. The conflict came to head on Apr. 2, 1933, when the Ministers, acting through the King, banished Luang Pradit from the kingdom, suspended the new Constitution, and organized a new State Council headed by Phya Manopakarana and other conservative Ministers of the old Council. The King's manifesto, announcing the change, accused Luang Pradit and his group of attempting to establish a Communist society. The conservative coup was effected without the use of force.

The new conservative régime proved short-lived. On June 20 Phya Bahol led the army, navy, and the radical civilians in another bloodless *coup d'état*. The Council of State was deposed and the Constitution was restored. General Bahol, assuming the executive power, gave assurances that his administration had no communistic tendencies, that it would remain loyal to the King, and that there would be no change in the government's fiscal policy. However, General Bahol revoked the banishment of Luang Pradit and the young radical leader returned to Bangkok, where he was reported to have been appointed Minister of the Interior.

These developments produced the second conservative attempt to regain power. The new revolt was led by Prince Bovaredej, a member of the royal family and former Defense Minister. On October 12, he seized the airdrome at Don Muang, and rallied to his support a strong section of Siam's air force and the garrisons of Korat and other northern districts. Marching upon Bangkok, the rebels were met on the outskirts of the city by loyal troops and defeated

after heavy fighting in which air fighting played a spectacular and important part. By October 16, the rebels were in retreat from the capital, having lost some 500 killed and 1000 wounded. Don Muang airdrome was recaptured on October 19. About a week later Prince Bovaredej, who had aspired to replace King Prajadhipok, fled by airplane from the country. Guerrilla fighting in the northeastern part of the country continued for some time. Martial law was lifted on November 22.

While a special military court was trying persons arrested in connection with the uprising, elections to the National Assembly were held and the Assembly convened for the first time in December.

SIBERIA. A general term applied to the vast area of northern Asia extending from the Ural Mountains to the Pacific and from the Arctic Ocean to Manchuria, Mongolia, and Soviet Central Asia. Siberia is divided, as shown in the accompanying table, into administrative units of the Russian Socialist Federated Soviet Republic, the largest of the seven republics forming the Union of Soviet Socialist Republics (q.v.):

Division	Square miles	Pop. (1931)
Ural Area *	660,000	7,688,400
Western Siberian Area . . .	503,653	8,767,200
Eastern Siberian Area . . .	1,227,248	2,568,400
Yakutsk Republic	1,552,994	308,400
Buriat-Mongol Republic . . .	150,192	575,000
Far Eastern Area	900,731	1,593,400
Total	4,994,818	21,500,800

* Includes a small section of European U. S. S. R.

SIERRA LEONE, si-ēr'-ā lē-ō-né. A British West African colony and protectorate between French Guinea and Liberia. Total area, 27,925; total population (1931 census), 1,768,479 of whom 96,422 were in the colony. Some parts of the colony are for administrative purposes governed like the protectorate. The part of the colony consisting of the peninsula of Sierra Leone, the town of Bonthe, and the Tasso, Banana, Turtle, and York islands, with a total area of 260 square miles, is administered as colony. Births in the colony during 1932 totaled 2430; deaths, 2404; marriages 204. Freetown, the capital (55,359 inhabitants in 1931), is the chief seaport in West Africa and an Imperial coaling station.

The chief exports were palm kernels, gold, kola nuts, palm oil, pissava, and ginger. In 1932, total imports amounted to £1,248,346 of which cotton piece-goods represented £262,959; total exports, £932,773. The United Kingdom supplied 66 per cent of the imports and took 40 per cent of the exports. Shipping entered and cleared at the ports in 1932 totaled 3,286,299 tons. For 1932, revenue amounted to £872,469; expenditure, £831,921. The public debt on Jan. 1, 1933 was £2,141,273 against which the sinking fund amounted to £676,148. The government of the colony and protectorate is administered by a governor and commander-in-chief, who is also a vice-admiral, assisted by an executive council of five members, and a legislative council of 22 members including the governor. Governor in 1933, Sir A. W. Hodson.

SIGNALING CONSTRUCTION. See RAILWAYS.

SILESIA, si-lē'shi-ā or -shā. (1) A part of the Province of Moravia and Silesia in Czechoslovakia. (2) A county of Poland. (3) The two Prussian provinces—Lower Silesia and Upper Silesia.

SILK. No estimate can be made of the actual production of raw silk in Asia, and for world calculations it is therefore necessary to use the export figures from those countries, with full realization that there is no measure of the amount consumed internally. Using such export figures and the known production of Europe and the Levant, the estimated production in 1933 rose about 4 per cent above the 1932 production, according to the compilations of the Planning and Research Bureau of The National Federation of Textiles, Inc., successor to The Silk Association of America, whose estimate compared with that of 1932 is reproduced here. Production was about 12,000,000 lbs. below that of 1931. The slight increase in demand showed a corresponding slight improvement in prices after the first quarter of the year in Japanese raw silk, which rose from the unprecedentedly low figure of \$1.24 at New York in March to the year's high of \$2.31 in July, steadily diminishing thereafter and closing the year at \$1.46, the average for the year being exactly three dollars less than the price of \$4.66 per pound in January, 1930.

Total imports into the United States dropped from 547,195 bales in 1932 to 503,376 bales in 1933. Japanese deliveries to United States mills, constituting 90 per cent of the total deliveries, dropped from 518,794 bales in 1932 to 426,358 bales in 1933.

WORLD RAW SILK PRODUCTION, SEASONS
1931-32 AND 1932-33
[Tussah silk included]

	Pounds 1931-32 *	Pounds 1932-33 *
Europe	7,518,000	6,642,000
Italy	7,245,000	6,393,000
France	176,000	172,000
Spain	97,000	77,000
Levant	1,786,000	1,995,000
Asia, total exported ^b	80,646,000	85,428,000
China, Shanghai ^c	4,762,000	6,614,000
China, Canton	3,417,000	3,858,000
Japan	72,795,000	74,956,000
India	22,000	.....
Grand total	90,300,000	94,065,000

* Estimated. ^b The total production of raw silk in Asia is an unknown quantity, therefore, export figures have been used. ^c Includes tussah silk.

SILVER. At the opening of the year the demand for silver was at the record low as established on Dec. 29, 1932, 24½ cents in New York and 16½d. in London. The demand showed a slight increase in the succeeding two months when it reached a price of 27¼ cents on March 3. Upon the announcement of the President's embargo on gold on April 19, the price of silver advanced sharply from 28¾ cents to an early height of 37¼ cents on April 24, slowly receding to 32½ cents at the middle of May and advancing again to 36 cents by early June. Upon the fluctuating decline of the dollar following the President's refusal to accept the proposal for stabilized currency at the London Economic Conference, the price of silver reflected similar fluctuations. This is illustrated in the Annual Review of Handy and Harmon of New York City by the following figures showing sterling exchange and New York quotations on silver on various dates: June 19, \$4.14½, .36; July 18, \$4.84, .40½; July 22, \$4.62, .35½; Sept. 23, \$4.78½, .40½; Oct. 16, \$4.50½, .36½; Nov. 16, \$5.49½, .45; Nov. 27, \$5.11, .42.

On December 21, President Roosevelt issued his silver proclamation, which meant essentially that

newly mined silver shall be bought by the U. S. Treasury at a price of 64½ cents an ounce to the producer, and this proclamation is to "remain in force until the 31st day of December, 1937, unless repealed or modified by Act of Congress or by subsequent proclamation."

The actual production of silver in the continental United States, in terms of recovered metal, was slightly above that of 1932, according to preliminary figures issued by the Bureau of Mines; but with an average price during the year of 34.5 cents against an average of 28.2 cents in 1932, the value was much higher. The comparison is shown in the accompanying table. Aside from production in the United States, the silver output of the world in 1933, as estimated by Handy and Harmon, was: Mexico, 69,100,000 ounces; Canada, 15,400,000; South America, 13,500,000 ounces; and all other countries, 43,600,000 ounces.

SILVER PRODUCTION IN THE WESTERN STATES AND ALASKA, IN TERMS OF RECOVERED METALS

	1933	
	<i>Fine ounces</i>	<i>Value</i>
Arizona	2,409,800	\$ 831,209
California	352,700	121,682
Colorado	2,242,646	773,713
Idaho	7,202,000	2,484,690
Montana	2,572,000	887,340
Nevada	1,115,000	384,875
New Mexico	1,186,182	409,216
Oregon	13,000	4,485
South Dakota	127,529	43,997
Texas		
Utah	5,658,000	1,952,010
Washington	16,500	5,692
Wyoming	259	89
Total	22,895,066	\$7,898,798
Alaska	228,723	64,500
Total	23,123,789	\$7,963,298

	1932	
	<i>Fine ounces</i>	<i>Value</i>
Arizona	2,082,823	\$ 587,356
California	493,533	139,176
Colorado	1,860,408	524,635
Idaho	6,716,968	1,894,185
Montana	1,686,213	475,512
Nevada	1,304,365	367,831
New Mexico	1,142,351	322,143
Oregon	8,616	2,430
South Dakota	126,195	35,587
Texas	1,422	401
Utah	6,962,097	1,963,311
Washington	17,412	4,910
Wyoming	195	55
Total	22,402,598	\$6,317,532
Alaska	234,050	66,002
Total	22,636,648	\$6,383,534

SIMMONS COLLEGE. A nonsectarian college for women in Boston, Mass., founded in 1899. The enrollment on Nov. 1, 1933, was 1474. The faculty numbered 145. The productive funds of the institution amounted to \$3,385,530. and the income for the year was \$549,974. President, Bancroft Beatley, A.M., Ed.D.

SINGAPORE. See STRAITS SETTLEMENTS.

SKATING, FIGURE. For another year Miss Sonia Henie of Norway and Karl Shafer of Austria won the world's figure skating titles, winning the 1933 meet in Paris with ease. The 1932 world's and Olympic champions were in perfect form and also took the European titles. They did not invade the United States. Roger F. Turner of Boston and Miss Maribel Y. Vinson of Boston retained their national crowns for the sixth consecutive year. The pairs title went to Miss Vinson and George E. B. Hill. Miss Vinson had won the three previous years with Sherwin C. Badger

as partner. The national junior title went to William Smollender of Minneapolis and the junior women's to talented Miss Estelle Weigel of Buffalo. The championships were held at New Haven.

The Canadians ran off with the major North American titles, Mrs. Constance Samuel winning the women's laurels and her brother, Montgomery Wilson, the men's. They paired to capture the pairs championship. For the first time a championship for fours was held and this popular event was taken by the team of Miss Elmore Davis, Miss Prudence Holbrook, Guy Owens, and Melville Rogers.

Miss Emilia Rotter and Laszlo Szollas of Hungary succeeded the Olympic champions, M. and Mme. Pierre Brunet, as world's pairs champions.

SPEED SKATING. Melvin Johnson of Detroit won the national speed championship at Lake Oconomowoc, Wis., with 110 points, the result of two firsts, two seconds, and a third. Charles Delpier of Detroit was second, twenty points behind. Miss Kit Klein of Buffalo captured the women's crown with 70 points. Leo Frucsinger of Chicago won the intermediate class and Ken Kesselberg of the same city, the boys'. Miss Klein had a perfect day, winning three races, to take the Middle Atlantic crown at Newburgh, N. Y. in January, and Alex Hurd of Canada won the men's title. Joseph Bill of New York City took the intermediate crown and Bobby Anstett, also of New York, the boys'.

SKIING. Roy Mikkelsen, of the Auburn Ski Club of California, won the national ski jumping championship of 1933, winning handily in the meet at Salisbury, Conn., in late February, and succeeding Anton Lekang. Magnus Satre, of Salisbury, won the national 16-kilometer race; the national class B jumping went to Olav Aasen of the Norway Ski Club, class C to young John Oliver of Minneapolis. Harold Sorensen, of the Norsemen's Ski Club won the Eastern title, with class B honors going to Aasen.

SLAVERY. See INTER-PARLIAMENTARY UNION; ETHIOPIA under *History*.

SLAVONIA. See YUGOSLAVIA.

SLEEPING SICKNESS. See MEDICINE AND SURGERY.

SLENCZYNSKI, RUTH. See MUSIC.

SLOVAKIA. A Province of Czechoslovakia. See CZECHOSLOVAKIA under *Area and Population*.

SLUM CLEARANCE. See ARCHITECTURE.

SMITH, J (ONAS) WALDO. An American civil engineer, died in New York City, Oct. 14, 1933. He was born at Lincoln, Mass., Mar. 9, 1861, and attended Phillips Andover Academy and the Massachusetts Institute of Technology, receiving the C.E. degree from the latter in 1887. After serving as assistant engineer with the Holyoke (Mass.) Water Power Co., he was appointed in 1890 resident engineer for the East Jersey Water Co., supervising the construction of four reservoirs and dams on the Pequannock watershed and erecting at Little Falls what was said to be the first modern mechanical filtration plant in the United States. He acted also from 1892 to 1900 as the company's principal assistant engineer in charge of the water companies of Passaic and Paterson and as engineer for the Montclair Water Co. and the Asquackanonk Water Co. of Passaic. Following his promotion to chief engineer for the East Jersey Water Co., he directed in 1902 the construction of the Boonton dam and other parts of the Jersey City Water Supply System built at an aggregate cost of \$7,500,000.

In 1903 Mr. Smith was employed by the Aqueduct Commissioners of New York City as chief engineer to complete the Croton Dam, said to be at that time the largest masonry dam in the world. Two years later he was named chief engineer for the newly created Board of Additional Water Supply of New York City—his great task being the construction of the Catskill Water Supply System so as to supply New York City with a maximum of 500,000,000 gallons of water a day. The project on which \$185,000,000 was expended included the construction over a 12-year period of the Ashokan Dam with a capacity of upwards of 150,000,000,000 gallons, enlargement of the Kensico Storage Reservoir, and building of the 92-mile Catskill Aqueduct with a pressure syphon under the Hudson between Storm King and Breakneck Mountains. After 1917 there was constructed the Schoharie watershed of 314 square miles in which the aqueduct had its origin, the Gilboa Dam with a capacity of 20,000,000,000 gallons, and the 18-mile Shandaken Tunnel which carried the water to the Ashokan Reservoir. Within the city limits an average of 250,000,000 gallons were distributed daily by 56 miles of tunnel and pipe lines. For this achievement he was awarded in 1918 by the four national engineering societies the John Fritz Medal. On his retirement in 1922 Mr. Smith established a consulting engineering practice and in that capacity advised the Moffat Tunnel Commission of Colorado, the Metropolitan District Commission of Boston, and the Water Supply Boards of Providence, Philadelphia, St. Louis, Hartford, San Francisco, and Vancouver.

SMITH COLLEGE. A nonsectarian college for women in Northampton, Mass., founded in 1871. The enrollment for the autumn of 1933 was 2001, while that for the summer was 202. There were 242 faculty members. The productive funds amounted to \$6,171,705, and the income from funds was \$273,415. The volumes in the library numbered 208,624. President, William Allan Neilson, Ph.D., LL.D., L.H.D., Litt.D.

SMITHSONIAN INSTITUTION. An organization founded in 1846 according to the terms of the will of James Smithson of England, who in 1826 bequeathed his property to the United States of America "to found in Washington, under the name of the Smithsonian Institution, an establishment for the increase and diffusion of knowledge among men." The enterprises, supported wholly by Congressional appropriations but administered by the institution, include the United States National Museum, National Gallery of Art, Bureau of American Ethnology, International Exchange Service, National Zoological Park, and Astrophysical Observatory. It administers also the Freer Gallery of Art.

During 1933 an extensive programme of oceanographic investigations was initiated, under the name of the Johnson-Smithsonian Deep-Sea Expedition, by Eldridge R. Johnson of Philadelphia, who placed at the disposal of the institution his yacht and a considerable sum of money. The expedition's first cruise of two months, under the direction of Dr. Paul Bartsch, curator of the division of mollusks of the United States National Museum, was devoted to exploring the Puerto Rican deep, with important scientific results. There was transferred to Washington and placed on exhibition in the National Gallery of Art the Gellatly collection of paintings and art objects, comprising more than 1600 pieces and valued at more than \$4,000,000, which was presented to the

institution in 1930 by the collector, the late John Gellatly of New York City. A new astrophysical observing station was installed on Jebel Katherin in the Sinaitic Peninsula, while a radiation-measuring device, called the "kampometer," devised by Dr. C. G. Abbot, was successfully used in measuring the infra-red solar spectrum.

The expendable income of the institution for 1933 was \$250,852; its endowment funds totaled \$1,828,773. There were published by the institution and the government bureaus under its direction 100 volumes and pamphlets, of which 177,572 copies were distributed to libraries, educational institutions, and individuals. The most important of these were the eighth revised edition of the *Smithsonian Physical Tables*, in which some 270 tables of new data were included and the scientific scope of the others greatly broadened, and *The Story of Kalaka*, the first volume in the new series of Oriental studies issued by the Freer Gallery of Art. The secretary of the institution is Charles G. Abbot, D.Sc.; the assistant secretary, Alexander Wetmore, Ph.D.

SOAPLESS DETERGENTS. See CHEMISTRY, INDUSTRIAL OR APPLIED.

SOCCER. The national open soccer honors in 1933 went west, shattering an almost iron bound eastern monopoly on the title. The western champion eleven, the Stix, Baer, and Fuller team of St. Louis, scored a double triumph over the eastern representatives, downing the New York Americans, eastern champions, 1-0, at St. Louis and winning, 2-1, in New York.

The national amateur championship, also under the auspices of the United States Football Association, was taken by the German American Football Club of Philadelphia, which defeated the McKnights of Pittsburgh in the final, 5-1. The University of Pennsylvania captured college honors.

The lone bit of international soccer in the United States was when a South American eleven, the Club Andux de Italiane of Santiago, Chilean champion, downed the Brooklyn Celtics in an exhibition, 4-2, in Brooklyn.

The cup of the New York State Football Association was taken by the German Hungarians of Brooklyn with the Metropolitan League team of the Norwegian Turn Society of Bay Ridge as runner-up. The Staten Island Thistles won the New York State qualifying cup by defeating the Dublin Freebooters of the Bronx. The Melita Union Soccer won the championship of the Brooklyn Soccer League, outranking the Brooklyn Celtics. The latter were also second for the Brooklyn League Cup, captured by the Gerritsen Park team. Greenock West of Scotland, with the Shamrock Rovers second, won the annual cup competition of the New York Metropolitan Soccer League.

SOCIAL ECONOMICS AND INSURANCE. See CHILD LABOR; CHILD WELFARE; COÖPERATION; LABOR LEGISLATION; MINIMUM WAGE; OLD AGE PENSIONS; STRIKES AND LOCKOUTS; UNEMPLOYMENT; WOMEN IN INDUSTRY; WELFARE WORK; WORKMEN'S COMPENSATION; LITERATURE, ENGLISH AND AMERICAN.

SOCIALISM. In August, at Paris, there met some 150 delegates from 30 nations and 36 parties in a special "crisis" conference of the Labor and Socialist International to discuss the two outstanding problems which hung over the Socialist movement. More than 30 of the delegates were political exiles, while on the other hand, many of those attending the gathering were playing power-

ful rôles in the political activities of their nations. The Scandinavian bloc, in conjunction with the British delegates, for the most part ruled the proceedings. The assembled Socialists gave particular attention to the problem of Fascism which in one form and another had raised its head in most European countries. Attention was called to the fact that a Belgian Fascist group had granted the existing Conservative government special powers which even included the elimination of parliament; that Socialist workers had suffered in the bloody Geneva riots in November, 1932; and that the Socialists of Hungary, Danzig, Estonia, and Finland had also become the targets of Fascist attacks. Those Socialists from Austria, Germany, and France, who had suffered as a result of difficulties with both the Right and the Left, advocated an attempt at a united front with the Communists at least for common action against war and Fascism. Also, it was interesting to note that those Socialist groups which had had a sad experience with "bourgeois democracy" wanted to set forth more clearly the need for revolutionary movements to fight Fascism. On the other hand the British-Scandinavian bloc, which up to now had had perfectly satisfactory experiences with democracy, refused to permit the placing of too great an emphasis on employment of un-democratic means for gaining control of the state. Mr. Edward Levinson, writing in the *New York Herald-Tribune* from Paris on August 28, pointed out the difficulties the Socialists were having in reaching a common plane of understanding on the question of utilization of forces. He said: "The British shuddered at the very idea of suggesting the possibility of the dictatorship of the proletariat to the British voter. The Scandinavian and Czechoslovak delegates would not countenance any general order against Socialist participation in coalition governments. The programme for meeting the war danger did cut across national lines, but even did not go as far as Leon Blum and other French delegates wished in drawing up an air-tight prohibition against Socialists joining in support of 'capitalistic war.'" The final declarations of the conference restated Socialist theory on the basis of recent developments and also included a practical programme of procedure against war and Fascism. The question of a united front with the Communists was referred to the Second International executive committee to be taken up again when that body met before the end of 1933. The new statement of principles referred to the extended dominion of business by government as exemplified in the cases of United States, Italy, and Germany. The trend toward monopolized capitalism had shaken democracy severely in the countries where it was not firmly rooted before the war.

The Second International called upon the trade unionists of the world to launch a moral and economic boycott against Hitlerism. In the case of a threat of war the conference called upon trade unionists to participate in the general strike called with the aid of the International Federation of Trade Unions. Any nation rejecting arbitration by the League of Nations was to be declared by the Second International and the International Federation of Trade Unions to be an aggressor nation and the target of a general strike by its own workers and a boycott by workers in other lands.

BRITISH LABOR PARTY. In October, at its annual convention at Hastings, England, the Brit-

ish Labor party voted to adopt a general strike against war, in the first place, and to conduct a boycott against German Fascism, in the second. The resolution against war in general was moved by Sir Charles Trevelyan, a former Liberal and a descendant from a sister of Lord Macaulay. The resolution had the backing of Arthur Henderson, president of the Geneva Disarmament Conference, who assured his Labor conferees that when he and his associates were restored to power the Labor party would devote itself to the enactment of a law outlawing war. The resolution further demanded the total disarmament of all nations and the creation of an international police force. It also called upon the present British government "to abandon its retrograde attitude at Geneva on the question of air bombing and to submit proposals for a large immediate reduction in the armament expenditures of all nations, for general abolition of all weapons denied to Germany, for abolition of military aircraft, for international control of civil aviation and for supervision of the execution of the disarmament treaty."

On the next day the Laborites passed two resolutions against Fascism. The first dealt exclusively with Germany and included a pledge upon the part of the British workers to refuse to buy any articles manufactured in that country as well as the raising of relief funds for German refugees and the offer of hospitality in Great Britain to such refugees. It also called upon the League of Nations to prevent the violation of treaty rights by protecting Jews and other minorities in Germany. The second resolution was directed against Fascism in general and with particular reference to its possible appearance in Great Britain. On the other hand the conference turned down a motion calling for a reprimand of the Labor party's executive committee for refusing to cooperate with the Communists and other radicals in Great Britain in presenting a united front against Hitlerism.

The 1000 delegates attending the conference represented an affiliated trade union membership of 2,000,000 as against the high point of 4,300,000 members in 1920. On the other hand it was roughly estimated that the formal voting strength of the party was in the neighborhood of 8,000,000 persons. There was every indication, as the year progressed, that the British Labor party was increasing in strength and was succeeding in its effort to shake off the leadership of Ramsay MacDonald. In a series of municipal and parliamentary elections the Laborites, under the leadership of George Lansbury, had won a number of victories at the expense of the Tories. According to *Today*, the rising tide of Socialism in Great Britain, as indicated by the renewal of interest in the Labor party, was to be regarded as a protest against chronic poverty and a demand for a new social system. Said *Today*: "For the new pivot of the British Labor party is its recently announced programme calling for the nationalization of the Bank of England and the great joint-stock banks, as well as for the national control of credit." *Today* quotes George Lansbury as describing in the following words the present temper of the British people: "The nation is disillusioned. It has learned by bitter experience that the policy of trying to turn abundance into scarcity is mid-summer madness. It now demands the abandonment of the absurd policy which buries thousands of millions of pounds in the banks and keeps millions of workers unemployed, while all around us work is crying out to be done."

SOCIAL PROGRESS, INTERNATIONAL ASSOCIATION FOR. An international association, of which the Association for Labor Legislation is the American section, created in 1925 by amalgamating three former allied organizations, the International Association for Labor Legislation, the International Social Insurance Committee, and the International Association on Unemployment. The general assembly last met at Paris, Oct. 19-22, 1931. See LABOR LEGISLATION, AMERICAN ASSOCIATION FOR.

SOCIAL PSYCHOLOGY. See PSYCHOLOGY.

SOCIAL SECURITY. See OLD AGE PENSIONS.

SOCIAL TRENDS. See CRIME.

SOCIETY ISLANDS. See OCEANIA, FRENCH ESTABLISHMENTS IN.

SODIUM VAPOR LAMP. See ELECTRICAL ILLUMINATION.

SOIL EROSION. See RECLAMATION.

SOILS. Land use planning, land classification, valuation, and adaptation, soil erosion prevention, moisture conservation, soil chemistry, soil fertility, soil physics, soil microbiology, and the dynamic properties of soils affecting tillage, traction, and erosion were among the more important topics receiving special attention by soil investigators.

Numerous land uses surveys were under way as emergency measures. Notable among these was the survey in South Carolina of the average pH of every five-acre tract in the State as a basis for a liming, fertilizer use and crop adaptation programme. Federal cooperation with the State and local authorities in land use planning became more important than ever before. Thousands of unemployed city people returned to the land. The guidance and direction of this wholesale movement were entrusted to the Department of the Interior and Section 208 of the National Recovery Act provided \$25,000,000 to redistribute the population through loans or other aids to the purchase of subsistence homesteads. Emphasis was to be placed on experiments in aiding working men to establish garden homes within commuting distance of factories and offices.

The Agricultural Adjustment Act provided for readjusting productive acreage to market requirements for farm products.

The total value of farm real estate in the United States fell from \$37,027,000,000 as of March, 1932, to \$30,515,000,000 as of March, 1933, according to the *Report of the Secretary of Agriculture for 1933*.

The acre value of farm real estate declined in nearly every region. The index of land values declined to 73 during the year. In only seven States, four of them in New England, was the index of land values higher in March, 1933, than in 1912-14. In some States it was less than 60 per cent of the prewar index. In the Middle Atlantic States land values averaged 82 per cent of prewar, in the East North-Central States 62 per cent, in the West North-Central States 64 per cent, in the South Atlantic States 80 per cent, in the East South-Central States 79 per cent, in the West South-Central States 82 per cent, in the Mountain States 69 per cent, and in the Pacific Coast States 96 per cent. Forced sales of farms increased as a result of delinquency on taxes and on debt service. For the year ended Mar. 15, 1933, approximately 15.3 farms per 1000 were sold for taxes and approximately 38.8 per 1000 were involved in transfers in settlement of debt. The Agricultural Adjustment Act provided for refinancing

farm indebtedness whereby excessive debts may be cut down, interest rates reduced, and payment on principal postponed. It provided means also for redeeming land which had been taken from farmers by foreclosure. Farmers whose mortgages were already held by any of the 12 Federal land banks also benefited by a reduction of their interest charges to 4½ per cent for a period of five years. A loan fund of \$25,000,000 was also made available to the Federal land banks to enable them to postpone foreclosures on delinquent loans. The act authorized and directed the Reconstruction Finance Corporation to make \$200,000,000 available to the Farm Loan Commission for direct loans on farm real estate. The Bureau of Agricultural Economics was engaged in a national study of farm land tax delinquency in cooperation with the State agricultural experiment stations. A programme for gradually removing poor farming areas from cultivation was under way. An agreement was reached between the Department of Agriculture and the Public Works Administration providing that, for every acre of new land brought into cultivation through reclamation by public works funds, money would be made available to take out of cultivation an area of poor farm lands of corresponding productivity. In general the acreage of poor farm land thus removable would amount to several times that of newly reclaimed land. Funds were to be made available for studies to determine the area that should be removed from cultivation.

The Bureau of Chemistry and Soils continued the nation-wide inventory of the soil fertility resources of the United States. The soil survey was world-wide and the United States retained the lead in such work. During the year the Department of Agriculture in cooperation with appropriate State agencies conducted detailed soil surveys in 78 separate areas distributed over 28 States and one insular territorial possession. Detailed surveys aggregating 27,771 sq. miles and reconnaissance surveys to the extent of 4065 sq. miles were covered during the year, bringing the total acreage for the detailed survey to nearly 568,000,000 and of the reconnaissance survey to nearly 405,000,000 according to the Bureau of Chemistry and Soils. Continued progress was made in the inventory of the character and quality of the peat and muck resources of the United States and efforts were continued to locate and develop the vast domestic deposits for use in agriculture and industry. Studies were made of profile characteristics of peat deposits in Ohio, Virginia, and North Carolina, and in sections of Oregon. The results of tests conducted by the Bureau of Chemistry and Soils, designed to determine the extent to which mineral soils may be improved by the addition of certain grades of peat and muck, were published in a form intended to serve the needs of peat producers in 17 States and to point out to consumers the uses and relative value of different kinds of domestic peat products. The results of a systematic study of the major groups of peat land, their subdivision, the distribution of each and their important relationships were prepared for publication in book form. Studies were completed and published by the Boyce Thompson Institute on the effect of various factors on the hydrogen-ion concentration of peat soils with particular reference to the influence of moisture content, drying and leaching. The *Michigan Agricultural Experiment Station* completed studies on the biological decom-

position of peat with particular reference to its use in composting processes. The buffer capacity of peat soils was found to be closely related to initial soil reaction and base content and to ash and calcium content, according to the *New York Cornell Experiment Station*. Apparently reaction is a reliable index of the buffer capacity of peat soils. The Indian Institute of Science completed and published the results of a survey of the origin and nature of the peaty soils of Travancore. Studies of the control of ground water in peat and muck soils were continued by the Bureau of Agricultural Engineering.

Soil impairment by erosion and run-off continued to be recognized as one of the most important problems confronting American agriculture. The Department of Agriculture continued its investigations and demonstrations in coöperation with the State agricultural experiment stations at 10 regional erosion experiment stations and developed methods of erosion control which were of practical importance to a majority of farmers in the United States and of immediate value to the present programme of farm relief. Information continued to accumulate on soil and water losses under various conditions of soil type, slope, crop cover, and character of precipitation. Erosion surveys by the Bureau of Chemistry and Soils indicated that land formerly in cultivation to the amount of 35,000,000 acres has been essentially destroyed for crop production and that 225,000,000 acres of land now in crops has lost all or most of its topsoil. The annual cost of impoverishment of farm lands and damages to roads, reservoirs, irrigation ditches, and valley lands from erosion was estimated at not less than \$400,000,000. Vegetation proved to be the most effective agency of erosion control and the adoption by farmers of the strip cropping method of reducing soil losses became widespread in eroded areas. However, it was demonstrated by the Bureau of Agricultural Engineering that terraces, properly laid out and constructed, are an effective and practical method of controlling soil erosion on cultivated land. The bureau demonstrated especially the utility of broad-base terraces, level on permeable soils in regions of light rainfall but more generally with a longitudinal grade not exceeding 4 in. per 100 ft. Such terraces proved to be the most permanent and effective means of soil-erosion control for cultivated lands. The rate of terracing of farm lands in the United States continued to be about 3,000,000 acres per year. A soil erosion service was established in the Department of Interior with an initial appropriation of \$5,000,000 secured by allotment from the Public Works Administration.

The demand for more accurate and specific information regarding the fertilizer requirements of crops on soils of known character persisted in spite of the national movement toward general curtailment of production. Soil fertility studies by both the Department of Agriculture and the State agricultural experiment stations continued to concentrate in that direction with particular reference to the needs of cotton, corn, wheat, potatoes, sugar beets, sugarcane, sweet potatoes, strawberries, general truck crops, citrus fruits and nut crops. According to the Bureau of Chemistry and Soils work on fertilizer usage in relation to soil fertility was becoming increasingly important owing to the complex problems presented by a number of prominent soil types and the use of new fertilizers of synthetic origin,

especially those resulting from the fixation of atmospheric nitrogen. Evidence continued to accumulate that some of the less common elements such as manganese, magnesium, copper, and zinc may be deficient in the soil or in the fertilizer applied. Only by the use of manganese compounds was commercial growing of tomatoes made profitable on certain Florida soils. The use of magnesium materials in potato fertilizers was found to overcome a typical chlorosis of potato vines due to a deficiency in certain soils, and the use of zinc compounds was developed as a means of overcoming pecan rosette.

Work on humus compounds in soils continued, that of the Bureau of Chemistry and Soils being confined largely to investigations of uronic acid complexes and sterols in soils. Sterol compounds, closely related to vitamin D, were found in all horizons of selected soils.

Information continued to accumulate at the State agricultural experiment stations and the Bureau of Chemistry and Soils relating to the functions and behavior of soil colloids with particular reference to base exchange phenomena, availability of soil nutrients to plants and soil preparation. Much additional information was gained on the dominating influence exerted by colloids upon the capacity of the soil for retention and distribution of moisture. Evidence accumulated that the organic colloid of soil may function at the same time as an acid and a base. Two new soil-water relationships developed are that the maximum volume of soil in equilibrium with water is variable in soils of divergent types, and distribution of water within the soil is varied by the character as well as by the quantity of colloid. The evidence pointing to the fact that the dynamic reactions of soils are controlled largely by the colloidal material continued to grow. The theory of basic relationships between the colloidal properties of arable soils and the principles of design of tillage machinery was strengthened and developed into a practical reality by the *Alabama Agricultural Experiment Station*. That station in cooperation with the Bureau of Agricultural Engineering started the installation of a new farm tillage laboratory in which to make studies to establish the types of machines best suited economically to the soils of the southeastern United States. This laboratory costing \$110,000 and financed with funds obtained from the Public Works Administration is the only one of its kind and size in the world. Additional light was thrown by the *New Jersey Agricultural Experiment Station* on the laws of colloidal behavior with particular reference to amphoteric reactions and isoelectric weathering. The Department of Agriculture completed and published the results of a study on the fractionation, composition, and hypothetical constitution of certain colloids derived from the great soil groups. The movement of gases through soil under certain conditions was developed for use as a criterion of soil structure according to a critical study at the *Arizona Agricultural Experiment Station*.

Soil microbiology was again an important subject for research with particular reference to its more practical aspects relating to soil fertility. The inspection of legume and soil inoculants was being broadened to include equipment, methods, and personnel of production in order to detect and eliminate faulty procedures before the product reaches the market. Evidence accumulated that nodule production alone is not a guaranty of the

most beneficial activity of an inoculant for legumes. Studies and observations of forest soil microbiological population were continued showing a predominance of fungous flora on the forest floor where the soil is very acid and of bacteria and earthworms where less acid conditions prevail. Arsenic injury to crops was definitely proved in some areas where large amounts of arsenic are used for insecticidal and fungicidal purposes. It was found that soils contain abundant molds which are capable of setting arsenic free from the various combinations used so that it appears in soluble and volatile forms. Evidence accumulated that the Winogradsky Azotobacter plaque method for determining phosphorous deficiencies of soils has no general or practical value when used on eastern soils. The feasibility was established of a method of determining soil deficiencies consisting of testing soil by inoculating samples, treated in routine manner, with *Aspergillus niger*. A type of organism was found in the genus *Chatomium* which proved to be an active destroyer of cellulose and related substances, is tolerant of varied temperatures, and is active within a wide range of moisture conditions. Evidence continued to accumulate that an active microbiological population exists in peat soils. An abundant population consisting of bacteria, and, in the case of certain lowland peats, of actinomycetes was found at all depths of peat profiles by the *New Jersey Agricultural Experiment Station*. Peat supported the growth of *Azotobacter* only when at a pH of about 5.9 or above according to the *Minnesota Agricultural Experiment Station*. The presence of native sulfofying flora, which prevented the accumulation of elemental sulphur, was established in both mineral and peat soils by the *New York Cornell Agricultural Experiment Station*.

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Agricultural Experiment Station Research Bulletin No. 157, Ames, Iowa, 1933.

SOLOMON ISLANDS. A group of islands in the South Pacific, lying east of the island of New Guinea. The southern islands (Guadalcanar, Malaita, Yaabel, New Georgia, San Cristoval, Chioseul, Shortland, and many smaller ones) are known as the British Solomon Islands Protectorate of which the land area is approximately 11,000 miles, with a total population (1931) of 94,060. The northern islands (Bougainville, Buka, and adjacent small islands) form part of the Territory of New Guinea, mandated to Australia. See NEW GUINEA under *Territory of New Guinea*.

SOMALILAND, ITALIAN. See ITALIAN SOMALILAND.

SOMALILAND, sô-mä'le-länd', PROTECTORATE. A British African protectorate extending along the south shore of the Gulf of Aden. Area, 68,000 square miles; population (estimated), 344,700. The capital and chief port is Berbera. In 1932, imports (by sea) were valued at 4,077,827 rupees (excluding specie, 10,645 rupees); exports (by sea), 2,142,030 rupees (excluding specie, £57,175); revenue, £102,894; expenditure, £156,240; public debt (Jan. 1, 1933), £217,250.

SORGHUM. See AGRICULTURE; FLAX.

SOTHERN, E(DWARD) H(UGH). An American actor, died in New York City, Oct. 28, 1933. Born in New Orleans, La., Dec. 6, 1859, the second son of E. A. Sothorn, he received his education at various English preparatory schools and in accordance with his father's wishes attempted to become a painter. His forte, however, was the drama, and his successful début in New York City in 1879 as the cabman in *Brother Sam*, in which his father was then appearing, caused the elder Sothorn to relent. In 1881 he joined John E. McCullough's company, which played in London in *False Colors* and *Out of the Hunt*, and on his return to the United States two years later toured in several farces such as *Three Wives to One Husband* and *The Fatal Letter*. In 1885 he joined, as leading man, the Lyceum Theatre's Stock Company, of which Daniel Frohman was manager, achieving his first real success in *One of Our Girls*. During the 13 years that he was associated with this company he perfected his art as a romanticist, progressing from such comedies as *A Scrap of Paper* (1886), *Met by Chance* (1887), *The Highest Bidder* (1887), and *Editha's Burglar* (1887) to the romantic plays *Sheridan, or the Maid of Bath* (1893), *The Prisoner of Zenda* (1895), *The Lady of Lyons* (1897), and *A Colonial Girl* (1898). His successful portrayals of the rôles of D'Artagnan in *The King's Musketeers* (1899), Heinrich in *The Sunken Bell* (1900), Francois Villon in *If I Were King* (1901), and Robert, King of Sicily, in *The Proud Prince* caused him to be acclaimed the leading "romantic actor" of the United States.

Mr. Sothorn's appearance in *Hamlet* in 1900 was followed by his engagement by Charles Frohman in 1904 to co-star with Julia Marlowe in Shakespearean plays. He quickly took first rank among contemporary Shakespearean actors, appearing with great success as Hamlet, Macbeth, Jacques, Petruchio, Malvolio, Shylock, and Romeo. The Marlowe-Sothorn partnership was temporarily dissolved in 1907, and Mr. Sothorn appeared during the next two seasons in *When Knighthood Was in Flower*, *The Fool Hath Said in His Heart*, *Our American Cousin*, and *Richelieu*. Reunited in

Antony and Cleopatra in 1909, Mr. Sothorn and Miss Marlowe were married in 1911 and continued presenting their Shakespearean repertoire until Mrs. Sothorn's retirement in 1915. They presented revivals, however, in 1919, 1921, 1923, and during the World War were active in providing entertainment at the canteens of the American Expeditionary Forces in France. In 1924 they presented the entire scenery, costumes, and properties of 10 Shakespearean plays to the Shakespeare Memorial Theatre at Stratford-on-Avon. Mr. Sothorn devoted his later years to lecture tours on which he deplored the realistic trend of the theatre. He wrote *My Remembrances* (1917).

SOUND. See **PHYSICS**.

SOUND PICTURES. See **MOTION PICTURES**; **PHOTOGRAPHY**.

SOUTH. UNIVERSITY OF THE. A Protestant Episcopal institution for the higher education of men in Sewanee, Tenn., founded in 1857. The enrollment for the autumn term of 1933 was 237, of whom 216 were registered in the college and 29 in the theological school. The faculty had 26 members, exclusive of student assistants. The income from productive funds was \$61,705, while the receipts from all sources totaled \$281,238. The library contained 45,755 volumes. President, Benjamin Ficklin Finney, LL.D.

SOUTH AFRICA, UNION OF. A self-governing dominion of the British Commonwealth. Capital, Pretoria; seat of the legislature, Capetown.

AREA AND POPULATION. With an area of 471,917 square miles, South Africa had an estimated population on June 30, 1933, of 8,369,200, divided as follows: Europeans, 1,889,500; Bantus (Negroes), 5,681,100; Asiatics, 196,400; mixed and other races, 602,200; total non-European, 6,479,700. The area and estimated mean populations of the four Provinces, by racial divisions, on June 30, 1933, are shown in the accompanying table.

AREA AND POPULATION BY PROVINCES
[Estimated, June 30, 1933]

Province	Area, sq. miles	Europeans	Bantus	Asiatics and mixed races
Cape of Good Hope	276,536*	766,500	1,881,300	548,900
Natal	35,284	185,000	1,383,300	178,500
Transvaal	110,450	731,500	1,867,100	54,500
Orange Free State	49,647	206,500	549,400	16,700
Total	471,917*	1,889,500	5,681,100	798,600

* Excluding Walvis Bay (area, 430 square miles), attached to Cape of Good Hope Province.

The 1931 census of Europeans showed a total of 1,828,175. Estimated populations of the chief cities in 1932 were: Johannesburg, 355,600; Capetown, 274,000; Durban, 121,000; Pretoria, 90,700; Port Elizabeth, 78,900; Bloemfontein, 52,800; Benoni, 51,300; Germiston, 46,900; East London, 44,800; Pietermaritzburg, 41,200; Boksburg, 41,900; Kimberley, 30,200; Bruckersdorp, 25,100. In 1932, European births numbered 45,175 (24.30 per 1000); deaths, 18,465 (9.93 per 1000); marriages, 15,688 (8.58 per 1000). Of the 1931 European population about 55 per cent were of Dutch origin and about 36 per cent British.

EDUCATION. At the beginning of 1932, there were 756,434 pupils in state and state-aided schools, exclusive of 7068 students in the universities. They were divided as follows: Europeans, 358,021; non-Europeans, 398,413. There were ten universities and colleges.

PRODUCTION. South Africa has some 10,000,000 acres of arable land, of which 6,000,000 were devoted to cereals (chiefly corn). Forests covered 2,600,000 acres. Production of the chief crops was: Wheat, 10,627,000 bushels in 1932-33 season (13,713,000 in 1931-32); oats, 5,920,000 bushels (European cultivation) in 1930-31; corn, 37,267,000 bushels in 1932-33 (61,625,000 in 1931-32); potatoes (European cultivation), 5,758,000 bushels in 1931-32; sugar cane, 3,500,000 short tons in 1931-32; tobacco (European cultivation), 10,000,000 pounds in 1932-33 (21,100,000 pounds in 1931-32); Kafir corn (European), 34,000 short tons in 1932-33 (42,000 in 1931-32); cotton, 960,000 pounds in 1932-33 (1,431,000 in 1931-32); wine, 27,715,000 gallons in 1931-32; peanuts (European cultivation), 12,880,000 pounds in 1932-33 (5,250,000 in 1931-32). Animals products for 1931-32 were: Butter, 21,339,000 pounds; cheese, 8,258,000 pounds; wool, 305,000,000 pounds; mohair, 9,500,000 pounds.

Mineral production in the calendar year 1932 was valued at 54,235,000 South African pounds (\$258,462,000), compared with £54,895,000 (\$267,146,000) in 1931. Conversions to dollars made at par for 1931 and at the average exchange rate in 1932. The value of output of the chief minerals in 1932, in South African pounds, was: Gold, £49,098,000; platinum, £42,000; diamonds, £1,680,000; coal, £2,727,000; copper, £277,000; asbestos, £116,000. Gold production in 1933 was 11,017,495 ounces, compared with 11,553,564 ounces in 1932, a decline of 536,069 ounces. The quantity of other minerals produced in 1932 was: Asbestos, 12,071 short tons; coal, 10,650,000 short tons; copper, 11,027 short tons; tin, 975 short tons; diamonds, 798 carats; osmium, 4998 troy ounces; platinum, 7086 troy ounces. The declared value of gold production in 1933 was £67,604,000. Part of the increase over 1932 was due to currency depreciation.

In the year ended June 30, 1930, factories employed 218,585 persons and 991,779 motive horse power, the value of production being £112,441,000 (\$547,194,000), of which £55,787,000 (\$271,487,000) was added in process of production.

COMMERCE. The trend of South African foreign trade during the period 1929-33 is shown in the accompanying table from the 1933 *Commerce Yearbook*.

SOUTH AFRICAN TRADE. 1929-33

Year	Thousands of pounds sterling		Thousands of dollars *	
	Imports	Exports	Imports	Exports
1929	83,467	80,943	406,193	393,910
1930	64,559	67,931	314,174	330,584
1931	52,945	60,330	257,658	293,596
1932	32,673	65,903	159,001	320,719
1933 *	46,281	73,149	225,388	356,236

* Converted at par. * Preliminary.

The leading exports in 1932 (1931 figures in parentheses) were (in 1000 U. S. dollars): Gold (bar), \$231,610 (\$189,609); wool, greasy, \$31,010 (\$26,648); fresh fruits, \$7769 (\$6594); sugar, \$6376 (\$7014); uncut diamonds, \$5724 (\$13,354); cut and polished diamonds, \$3793 (\$4036); corn, \$3361 (\$2543); bunker coal, \$3238 (\$5150). Leading imports were machinery and apparatus, chemicals and drugs, automobiles and parts, heavy iron and steel manufactures, gasoline, wearing apparel, etc. The United Kingdom took 42.1 per cent of the total 1932 exports (43.4 per cent in 1931); France, 12.6 (10.7); Germany,

8.0 (7.0); Belgium, 8.0 (6.9); Canada, 5.9 (3.9). Of the total 1932 imports, the United Kingdom supplied 45.4 per cent (44.1 per cent in 1931); United States, 13.4 (14.2); Germany, 7.6 (6.8); Japan, 3.8 (5.0).

FINANCE. Budget operations of the South African government were as follows (in thousands of South African pounds):

<i>Fiscal years, ended Mar. 31</i>	<i>Ordinary receipts</i>	<i>Ordinary expenditures</i>	<i>Surplus (+) or deficit (-)</i>
1929-30	30,486	29,998	+ 488
1930-31	28,563	29,949	-1,386
1931-32	27,041	28,188	-1,145
1932-33	25,845	20,456	+5,387
1933-34 *	28,292	34,016	-5,724

* Estimates.

The ordinary budgets do not include expenditures from loans, which amounted to £10,454,000 in 1929-30, £10,810,000 in 1930-31, and £10,092,716 in 1931-32. The public debt of the Union on Mar. 31, 1932, totaled £263,945,830 (external, £159,086,122; internal, £104,260,708), compared with £256,845,100 on Mar. 31, 1931 (external, £161,190,746; internal, £95,654,354). The par value of the South African pound was the same as that of the pound sterling. Gold payments were suspended by the Union government on Dec. 29, 1932.

COMMUNICATIONS. The Union in 1932 had 13,512 miles of railway line, all state owned except 411 miles. In 1932 the railways carried 72,962,000 passengers and 19,113,000 short tons of freight, the gross receipts totaled £22,040,000 (\$107,256,000). There were more than 85,600 miles of highways. A mail and passenger airline between Cape-town and Croyden, England, was opened in 1932. During 1932, 1285 vessels of 4,772,000 net registered tons entered the ports of the Union and 1263 vessels of 4,775,000 tons cleared.

GOVERNMENT. The executive power is vested in a governor-general, appointed by the Crown, who acts through an executive council of ministers responsible to Parliament. Legislative power rests in a Parliament consisting of the King, a Senate of 40 members (32 elected—8 from each province), and a House of Assembly of 148 members elected by universal white suffrage. The suffrage is exercised also by a limited number of colored citizens under property and wage qualifications. Governor-General and Commander-in-Chief in 1933, the Earl of Clarendon (appointed January, 1931). For the executive council formed in 1933, see under *History* below.

HISTORY

COALITION AND FUSION. Political developments of far-reaching significance marked the year 1933 in South Africa. The growing schism between the Afrikaners and the English-speaking element in the population was bridged in part by the formation of a coalition government. Moreover, great progress was made toward a permanent fusion of the Nationalist party, representing mainly the Afrikaners, and the South African party, representing mainly the English-speaking population but with an influential group of moderate Afrikaners including the leader of the party, Gen. Jan Christiaan Smuts.

The Nationalist party, led by Prime Minister J. B. M. Hertzog, had controlled the government since 1924. Its position was threatened toward the end of 1932 by widespread opposition to its policy of retaining the gold standard, despite the

abandonment of the gold standard by Great Britain in 1931. Its gold policy was in line with other measures tending to weaken the link with the British Commonwealth. As such it was bitterly opposed by the English-speaking South Africans; the predominantly English province of Natal threatened to secede from the Union. At the same time the government's gold policy was opposed by many Afrikaners, whose economic interests were adversely affected. On Dec. 20, 1932, Tielman J. de V. Roos, an influential Afrikaner, resigned his seat on the Supreme Court and entered politics in opposition to the National government. He demanded immediate devaluation of the currency and the termination of antagonistic racial policies through the formation of a coalition government.

This move forced the Nationalist government to abandon the gold standard on Dec. 29, 1932. During the first weeks of 1933, Judge Roos made a triumphal tour of South African provinces, being everywhere enthusiastically received except in the strongly Nationalist Orange Free State. He opened negotiations with General Smuts for an alliance with the South African party which would permit the overthrow of the Hertzog government and new elections. Meanwhile strong pressure was exerted upon Prime Minister Hertzog and General Smuts to sink their political differences and form a national government on the British model to deal with the economic crisis. These latter negotiations met with success late in February, when an agreement for a coalition government was concluded by Generals Hertzog and Smuts.

The coalition ministry, formed Mar. 30, 1933, was composed of six Nationalists and six members of the South African party, as follows: Prime Minister and External Affairs, General Hertzog; Deputy Prime Minister and Justice, General Smuts; Finance, N. C. Havenga (Nationalist); Mines, Patrick Duncan (South African); Native Affairs, Pieter G. W. Grobler (Nationalist); Railways and Defense, Oswald Pirow (Nationalist); Agriculture, Gen. Jan. C. G. Kemp (Nationalist); Labor, A. P. J. Fourie (Nationalist); Lands, Col. D. Reitz (South African); Interior and Education, Jan. H. Hofmeyr (South African); Posts and Telegraphs, Senator Clarkson (South African); Minister without Portfolio, Mr. Suttard (South African).

Elections to the House of Assembly held May 17, 1933, gave the coalition 138 out of the 150 seats. The new coalition group consisted of 75 Nationalists, 61 South African party members, and 2 Laborites (Creswell faction). The 12 Opposition members comprised 6 Independents, 2 followers of Judge Roos, 2 Laborites, and 2 Home Rule advocates. The remainder of the year witnessed a vigorous effort to transform the coalition into a permanent single political party. The fusion movement was approved by the South African party congresses in all four provinces and by the Nationalist congresses in Natal, Transvaal, and the Orange Free State. The movement met a distinct setback in Cape of Good Hope Province, in October, when the Nationalist party Congress at Port Elizabeth voted the fusion proposal down, 140 to 30, despite an earnest plea for fusion by Prime Minister Hertzog.

The leader of the Cape Nationalists in opposing coalition and fusion was Dr. D. F. Malan, formerly Minister of Interior. A new party was in process of formation under his leadership toward

the end of 1933, uniting all members of the National party opposed to General Hertzog's policy of coalition and fusion. This group was strongly Afrikaner in sentiment, favoring the ultimate establishment of a republic.

LEGISLATION. Freed from the restrictions previously imposed by their party obligations, the coalition majority in Parliament proceeded to a general reorganization of federal and provincial finances. More important was the imposition of a heavy tax on gold mining, the proceeds of which were used to strengthen the position of agriculture. This was envisaged as a permanent policy with the aim of placing agriculture in an impregnable position before the mineral resources of South Africa were exhausted. The future of agriculture was causing some concern as a result of the drying up of the country through deforestation, veld burning, and overstocking. The seriousness of the problem was emphasized by the most severe drought experienced in the memory of South Africans, which caused heavy losses of livestock and crops.

In October, the government announced plans for the reorganization of its national defense policy. The small navy built by the Nationalist government as a gesture of independence was for the most part scrapped and it was decided to restore the former contribution toward Imperial defense in return for the protection afforded by the British Navy. At the same time provision was made for the increase and improvement of land forces, especially in aviation units and coast defenses, and for the intensification of obligatory military training.

This development reflected in part the apprehension created among all the British dominions by Japan's naval expansion, as well as South African concern over Germany's renewed interest in South-West Africa. Effective Dec. 15, 1933, South Africa imposed "exchange dumping duties" on an additional list of goods imported from Japan. This was in line with efforts made throughout the British Commonwealth to check the invasion of their markets by cheap Japanese textiles and other goods. On Jan. 21, 1933, the Union had abolished the primage duty of 5 per cent ad valorem and the surtax of $7\frac{1}{2}$ per cent ad valorem chargeable, with certain exceptions, against imported goods. The trade treaty signed between South Africa and Canada at the Ottawa Conference Aug. 20, 1932, went into force June 30, 1933.

ECONOMIC DEVELOPMENTS. The abandonment of the gold standard was followed during 1933 by a strong boom in the shares of gold mines, a rise in domestic commodity prices, and a general and pronounced improvement in business conditions. As producer of about half of the world's gold, South Africa reaped full advantage of the increase in the value of gold with relation to other commodities. Agricultural prospects, hard hit by the drought, were revived toward the end of the year, when heavy rains replenished the water supplies. The gold boom was held under control by the heavy taxes levied upon both production and profits of the industry.

NAZIS IN SOUTH-WEST AFRICA. The future of South-West Africa (q.v.), administered by the Union of South Africa under mandate of the League of Nations, aroused some concern in the Union in 1933. The espousal of the Nazi cause and principles by the German delegates to the South-West House of Assembly caused the British and Dutch members to sink their differences and unite

in opposition to the Germans. The union gave them nine votes against the seven German votes. The 1933 session of the Assembly, over the protests of the Germans, passed motions suppressing Nazi organizations in South-West Africa and prohibiting Nazi propaganda. The British and Dutch representatives furthermore announced that in view of the principles adopted by the German delegates they were no longer prepared to carry out the Cape Town agreement of Apr. 9, 1932 (for terms of the agreement, see 1932 YEAR BOOK). The Union government withheld its approval to the South-West Africa Assembly bills making Naziism illegal. Meanwhile the large Jewish population in the Union itself had launched a boycott of German goods and was in turn the object of an anonymous anti-Jewish propaganda.

OTHER EVENTS. In Bechuanaland Protectorate, a native chief, Tshekedi, in violation of South African law ordered the flogging of a white man for immorality among native women. After a hearing before Vice Admiral E. R. G. Evans of the British Navy, as Acting High Commissioner of Bechuanaland, the white man was banished from the territory and Tshekedi was removed as chief and exiled on September 14. The case, the handling of which evoked much criticism, was reviewed by the British Colonial Office and the chief was reinstated.

SOUTH AMERICA. See under the various South American countries; **EXPLORATION**; **ARCHAEOLOGY**; **PAN AMERICAN CONFERENCE**.

SOUTHAMPTON DOCKS. See **PORTS AND HARBORS**.

SOUTH AUSTRALIA. A state of the Australian Commonwealth occupying the south central part of the continent. Area, 380,070 square miles; population (1933 census), 580,987. Adelaide, the capital and largest city, had 312,629 inhabitants at the same census. In 1932, births numbered 8521; marriages, 3036; deaths, 4957.

The value of production for 1931-32 totaled £20,973,307 of which crops represented, £13,907,488; manufactures, £6,570,939; pastoral, £2,725,702; minerals, £559,069; dairying, £1,570,144; poultry, fisheries and game, forestry, etc., £1,039,905. The estimated production of wheat for 1932-33 was 43,420,614 bushels from a total of 42,429,614 acres. Livestock (Jan. 1, 1933): 7,713,230 sheep; 312,932 cattle; 190,222 horses; 113,831 pigs. Wool production for 1931-32 amounted to 67,021,312 lb.

State revenue for 1932-33 totaled £10,160,712; expenditure, £11,169,610; public debt, £103,707,332. There were 3756 miles of railway and 46,000 miles of highway in the State. Executive authority is vested in a governor who is aided by a council of ministers and the lieutenant-governor. Parliament consists of a legislative council of 20 members and a house of assembly of 46 members. Governor in 1933, Sir A. Hore-Ruthven; Premier, R. S. Richards.

SOUTH CAROLINA. POPULATION. The population of the State on Apr. 1, 1930, according to the Fifteenth Census, was 1,738,765, as against 1,083,724 in 1920. Columbia, the capital, had (1930) 51,581 inhabitants; Charleston, 62,265.

AGRICULTURE. The table on page 757 shows the acreage, production, and value of the principal crops for 1933 and 1932.

EDUCATION. The number of persons of school-going age in the State was estimated, for the academic year 1932-33, as 677,587. Whites formed 344,697 of this total; Negroes, 332,890. There

Crop	Year	Acreage	Prod. Bu.	Value
Cotton	1933	1,379,000	742,000*	\$35,987,000
	1932	1,661,000	716,000*	21,838,000
Corn	1933	1,578,000	22,808,000	15,058,000
	1932	1,656,000	17,885,000	7,691,000
Tobacco	1933	101,000	85,850,000*	10,817,000
	1932	68,000	39,236,000*	4,904,000
Oats	1933	870,000	7,215,000	5,050,000
	1932	389,000	7,974,000	2,871,000
Hay (tame)	1933	268,000	195,000*	2,438,000
	1932	287,000	210,000*	2,100,000
Sweet potatoes	1933	56,000	4,648,000	2,789,000
	1932	66,000	6,072,000	2,429,000
Potatoes	1933	16,000	1,744,000	1,360,000
	1932	17,000	1,445,000	1,084,000

* Bales. * Pounds. * Tons.

were enrolled in the public schools 473,130 pupils. Of these, 253,460 were whites and 219,670 were colored. The number enrolled in common schools or elementary grades in the school year 1931-32 (the latest year for which this information was furnished) was 202,894 whites and 214,299 Negroes; that in the high schools, 48,470 whites and 9411 Negroes. For the academic year 1932-33 expenditures for public-school education totaled \$11,513,935. Salaries of teachers averaged, for the year, \$648; those of white teachers alone averaged \$848; those of Negro teachers, \$269.

LEGISLATION. A regular session of the Legislature convened on January 10. It created a State convention to pronounce the will of the State as to the proposed repeal of the Eighteenth Amendment to the Federal Constitution; this convention was to be composed of 46 delegates; candidates for delegate were to be nominated by counties, but were to be elected by the State at large, on November 7. Beer and wine of alcoholic strength up to 3.2 per cent were rendered lawful and sellable generally without restriction, but were to be taxed at the rate of 2 cents on each 12-ounce bottle. An appropriation bill of but \$8,925,000 was passed, to cover a period of 18 months which was rendered necessary by a change in the State's fiscal year. The total was \$500,000 less than the previous appropriation for 12 months. The savings were made largely by means of statutory reductions of State pay. The State's four-mill direct tax on property was abolished. To make up the expected loss of \$1,600,000 yearly of revenue for school aid, the special property tax on public utilities was increased; likewise the tax on the stock of domestic corporations and one on the property of foreign corporations. Efforts to enact a tax on sales failed. Dealing with the March banking panic, the Legislature passed an act, later declared valid by the Federal Supreme Court, suspending the liquidation of insolvent banks for 18 months.

POLITICAL AND OTHER EVENTS. On November 7 the voters chose delegates to form a State convention on the repeal of the Eighteenth Amendment. The popular vote gave a slight majority in favor of retaining the amendment, and the elected delegates were opposed to repeal. Governor Blackwood followed the lead of North Carolina on September 1 by taking steps, with the support of the tobacco growers in great number, to prevent the sale of tobacco at the existing low prices.

OFFICERS. The chief officers of the State, serving in 1933, were: Governor, Ibra C. Blackwood; Lieutenant-Governor, James O. Sheppard; Secretary of State, W. P. Blackwell; Treasurer, J. H.

Scarborough (resigned) and (later) E. P. Miller; Budget Secretary, J. M. Smith; Attorney General, John M. Daniel; Comptroller, A. J. Beattie.

Judiciary. Supreme Court: Chief Justice, Eugene S. Blease; Associate Justices, Thomas P. Cothern, John G. Stabler, Jesse F. Carter, and Milledge L. Bonham.

SOUTH CAROLINA, UNIVERSITY OF. A non-sectarian State institution of higher education located in Columbia. The enrollment for the autumn session of 1933 totaled 1342. The faculty numbered 76. The State appropriation was \$249,000 from Jan. 1, 1933 to July 1, 1934. The library contained 125,000 volumes. President, Leonard T. Baker, A.M., LL.D.

SOUTH DAKOTA. POPULATION. The population of the State on Apr. 1, 1930, according to the Fifteenth Census, was 692,849, as against 636,547 in 1920. Sioux Falls, the chief city, had (1930) 33,362 inhabitants; Pierre, the capital, 3659.

AGRICULTURE. The following table shows the acreage, production, and value of the principal crops for 1933 and 1932:

Crop	Year	Acreage	Prod. Bu.	Value
Wheat	1933	1,248,000	5,120,000	\$ 3,076,000
	1932	3,958,000	58,468,000	14,162,000
Hay (tame)	1933	1,277,000	778,000*	4,668,000
	1932	1,015,000	1,045,000*	4,441,000
Corn	1933	3,370,000	40,440,000	14,154,000
	1932	5,030,000	73,941,000	9,612,000
Oats	1933	696,000	5,220,000	1,357,000
	1932	2,321,000	75,432,000	6,261,000
Barley	1933	403,000	3,451,000	1,208,000
	1932	2,053,000	47,680,000	6,668,000
Potatoes	1933	62,000	2,480,000	1,364,000
	1932	73,000	5,110,000	1,175,000
Rye	1933	190,000	760,000	827,000
	1932	475,000	7,125,000	1,069,000
Flaxseed	1933	46,000	115,000	167,000
	1932	165,000	776,000	629,000

* Tons.

MINERAL PRODUCTION. The outstanding mineral industry of the State was, as in previous years, the mining of gold, of which all but a very small part was done by the Homestake Mine, the largest active gold enterprise in the Union. The State's yearly output of gold increased to 480,330 fine ounces (1932), from 432,075 (1931); in value, to \$9,929,297 (1932) from \$8,931,791 (1931). Minor amounts of silver and of lead were recovered from the gold ore.

The production of gold for 1933, partly estimated, was 510,058 ounces; in value \$10,543,835 on the old basis of \$20.67 an ounce, which had been abandoned in the course of the year. The gold presumably fetched some \$2,097,000 more than the above total.

FINANCE. State expenditures in the year ended June 30, 1932, as reported by the U. S. Department of Commerce, were: for maintaining and operating governmental departments \$8,563,858 (of which \$1,586,232 was for local education); for conducting public-service enterprises, \$594,967; for interest on debt, \$2,671,746; for permanent improvements, \$6,581,803; total, \$18,412,374 (of which \$7,341,457 was for highways, \$1,088,050 being for maintenance and \$5,653,407 for construction). Revenues were \$17,329,915. Of these, property and special taxes furnished 26.3 per cent; departmental earnings and compensation to the State for officers' services, 8.4; sale of licenses, 28.5 (in which was included a gasoline sale tax that produced \$3,410,350). Funded debt outstanding on June 30, 1932, totaled \$50,421.

886, of which \$146,886 was for highways. Net of sinking-fund assets, the debt was \$14,499,938. On an assessed valuation of \$1,608,675,986 the State levied in the year ad-valorem taxes of \$4,914,890.

EDUCATION. A definite source of revenue providing partial State support for the public schools was provided by the operation of a State tax on gross incomes. Proposals for the future organization of State aid were agitated.

The number of persons of school age in the State was reckoned for 1932 as 216,658. There were enrolled in the public schools in that year 164,684 pupils. Of these, 130,697 were in common schools or elementary grades; in high schools, 33,987.

CHARITIES AND CORRECTIONS. The Board of Charities and Corrections, exerting in 1933 the central administrative authority over State institutions for the care and custody of persons, consisted of three members. The board had under its control the State Penitentiary at Sioux Falls, the State Hospital for Insane at Yankton (about 1550 inmates), the State Training School at Plankinton (about 140), the School for the Deaf at Sioux Falls (about 150), the School and Home for the Feeble-Minded at Redfield (about 500), the School for the Blind at Gary (about 50), and the State Tubercular Sanatorium at Sanator (about 175). There were in the Penitentiary, in December, 595 inmates, of whom 15 were women.

LEGISLATION. The Legislature met in regular session on January 3. To meet the financial needs of the State and reduce the burden on property, it enacted an income tax, not on net, but on gross income; the rates imposed were $\frac{1}{4}$ per cent on wholesalers and manufacturers, $\frac{1}{2}$ per cent on livestock producers, 1 per cent on other incomes generally, $1\frac{1}{2}$ per cent on salaries and wages of \$2000 and over, and 2 per cent on those of \$5000 and over. The organization of the State government was simplified by doing away with the hail-insurance department, the securities commission, the State sheriff's office, the industrial commission, and the bonding office and reducing the railroad commission to one man. Grace was extended to property owners on their payments of State taxes by permitting them to pay off delinquencies under a 10-year contract.

Provision was made for expressing the State's will as to the proposed repeal of the Eighteenth Amendment to the Federal Constitution; a State convention for this purpose was created, to be composed of 103 members, who were to be elected by legislative districts; but the election was to be at a relatively distant date—that of the general election in November, 1934. At that time also, it was provided that a popular vote might be taken on whether to repeal the State's own prohibition law. No action was taken to legalize beer as permitted by the Federal modification of the Volstead Act. Therefore a special session was called, which met on July 31 and made provision for the sale of beer of the alcoholic content of 3.2 per cent.

POLITICAL AND OTHER EVENTS. The State's general tax levy for 1934 was eliminated in September. At the same time the board of equalization reduced the assessed valuation of property in the State by \$144,227,732. These steps were taken in the anticipation that the State's tax on gross income, which went into effect on July 1, would yield about \$3,500,000 a year needed to meet State expenditure.

OFFICERS. The chief officers of the State, serv-

ing in 1933, were: Governor, Tom Berry; Lieutenant-Governor, H. A. Ustrud; Secretary of State, Myrtle Morrison; Auditor, George O'Neil; Treasurer, Frank G. Siewert; Attorney General, Walter Conway; Commissioner of Schools and Public Lands, Ben Strool; Superintendent of Public Instruction, I. D. Weeks.

Judiciary. Supreme Court: Judges, S. C. Polley, Frederick A. Warren, Everett D. Roberts, Herbert B. Rudolph, Dwight Campbell.

SOUTH DAKOTA, UNIVERSITY OF. A State institution of higher education at Vermillion, founded in 1882. The enrollment for the autumn term of 1933 was 815 and for the summer session 338. The faculty and staff numbered 140. The operating income for the year was \$433,380. President, Herman G. James, J.D., Ph.D.

SOUTH DAKOTA STATE COLLEGE. A State college of agriculture and mechanic arts at Brookings, founded in 1882. The enrollment for the autumn of 1933 was 675 collegiate and 95 secondary vocational students. The 1933 summer school had an attendance of 109. On the teaching staff were the equivalent of 62 full-time teachers in the collegiate department and six in the secondary vocational. The income for 1932-33 was \$879,404. The library contained approximately 45,000 bound volumes and 15,000 pamphlets. President, Charles W. Pugsley, D.Agr.

SOUTHERN CALIFORNIA, UNIVERSITY OF. An institution of higher education for men and women in Los Angeles, Calif., founded in 1879. The enrollment for 1932-33, including summer session and extension classes, was 13,845. In the autumn of 1933 there were 550 members on the faculty. The endowment was \$1,315,000, the income from tuition and fees, \$1,683,195, and other income \$169,205. President, Rufus B. von KleinSmid, Sc.D., J.D.

SOUTHERN RHODESIA. See under RHODESIA.

SOUTH GEORGIA; SOUTH ORKNEYS. See FALKLAND ISLANDS.

SOUTH-WEST AFRICA. A former German protectorate, administered since Dec. 17, 1920, by the Union of South Africa under a mandate from the League of Nations. Area, 322,394 square miles; population (1932), 275,000 of whom some 32,000 were Europeans. Capital, Windhoek. In 1931, imports were valued at £1,631,766; exports, £1,448,740. The budget for 1932-33 estimated revenue at £500,000 and expenditure (including £82,000 loan expenditure) at £700,372. Administrator in 1933, D. G. Conradie. See SOUTH AFRICA, UNION OF, under *History*.

SOVIET CENTRAL ASIA. A region in central Asia, including the territory formerly known as Russian Turkestan. Administratively it is divided into the soviet socialist republics and autonomous areas, affiliated with the U.S.S.R., shown in the accompanying table.

States	Sq. miles	Population
Turcoman S. S. R.	189,658	1,030,500
Uzbek S. S. R.	75,598	4,525,000
Tadzhik S. S. R.	54,826	745,200
Kara-Kalpak Aut. Area	46,820	570,000
Kirghiz A. S. S. R.	60,000	1,000,000

SOVIET UNION. See UNION OF SOVIET SOCIALIST REPUBLICS.

SPAIN. A state of southwestern Europe, proclaimed a republic Apr. 14, 1931. Capital, Madrid. AREA AND POPULATION. Including the Balearic and Canary Islands, Spain had an area of 196,807

square miles and a population estimated on Jan. 1, 1932, at 23,656,300 (23,500,975 at the census of 1930). Living births in 1932 numbered 870,525 (28.1 per 1000 inhabitants); deaths, 338,895 (16.3 per 1000); marriages, 158,693 (13.2 per 1000). Estimated populations of the chief cities on Jan. 1, 1932, were: Barcelona, 991,262; Madrid, 890,511; Valencia, 327,088; Sevilla, 231,049; Málaga, 191,611; Zaragoza, 177,250; Bilbao, 166,758; Murcia, 160,478; Granada, 118,905; Córdoba, 106,045. Emigration in 1931 totaled 66,989.

EDUCATION. At the 1930 census, 45.46 per cent of the population could neither read nor write (46.45 per cent in 1920). The Republican Constitution made secular primary education free and compulsory, but authorized the churches to conduct schools for religious training under state supervision. The number of school buildings was increased from 35,989 in 1930 to about 45,600 in 1933. Primary schools in 1930 numbered 41,589 (35,989 public and about 5600 private), with about 3,600,000 pupils; secondary schools (1930-31), 94, with 76,074 pupils; universities (1930), 11, with 47,108 students.

PRODUCTION. Agriculture is the main occupation. In 1931 Spain had 39,404,000 acres (32 per cent of the total area) of arable land, 46,040,000 acres of pastures, and 11,244,000 acres of trees and shrubs, etc. The value of field crops (1931) was 9,615,903,000 pesetas (\$773,123,000 at average exchange rates), compared with 9,096,313,000 pesetas (\$1,061,540,000) in 1930. The chief crops in 1932 (thousands of units, bushels except as indicated), with 1931 figures in parentheses, were: Wheat, 184,206 (134,426); rye, 25,905 (21,903); barley, 132,569 (90,727); oats, 57,215 (41,670); corn, 27,286 (26,389); rice, 15,591 (13,042); potatoes, 188,526 (171,846); sugar beets (metric tons), 1793 (2856); beet sugar (metric tons, 1932-33 and 1931-32 seasons), 218 (361); olive oil (gallons, 1932-33 and 1931-32 seasons), 99,886 (101,725); grape must (gallons), 528,153 (503,881). The 1933 wheat crop was 3,762,000 metric tons.

In 1931 the value of crude mineral products was 489,934,000 pesetas (\$39,391,000) and of refined mineral products 942,302,000 pesetas (\$75,761,000); comparative 1930 figures were 477,741,000 pesetas (\$55,752,000) and 1,095,572,000 pesetas (\$127,853,000). On Jan. 31, 1933, Spain had 2,070,000 raw cotton-spinning spindles. The mineral and metallurgical output in 1931 (in metric tons), with 1932 figures in parentheses where available, was: Coal and lignite, 7,538,000 (7,179,000); coke, 751,000; iron and copper pyrites, 2,572,000; pig iron, 473,000 (293,000); copper (blister), 25,812 (14,369); lead, 109,630 (114,291); zinc, 10,094 (9907); mercury, 682; superphosphates, 887,850 (1,200,000); cement, 1,630,000.

COMMERCE. Spanish imports in 1932 were valued at 975,442,000 pesetas (\$188,260,000 at par), compared with 1,175,474,000 pesetas (\$226,866,000) in 1931. Exports totaled 738,381,000 pesetas (\$142,508,000), as against 961,043,000 pesetas (\$185,480,000) in 1931. Leading import items in 1932 were: Chemicals and fertilizers, \$22,177,000; raw and waste cotton, \$20,688,000; oilseeds, \$19,279,000; machinery, \$15,775,000; and mineral oils, \$10,687,000. The chief exports were: Fresh fruits, \$39,400,000 (oranges, \$33,299,000); olive oil, \$12,373,000; fresh vegetables, \$10,493,000; wines, \$8,952,000; chemicals, \$7,363,000; and almonds, \$6,522,000. The United Kingdom purchased

25.8 per cent of all Spanish exports in 1932; France, 18.4; Germany, 8.9; and the United States, 7.0 per cent. The United States supplied 16.4 per cent of the total imports; United Kingdom, 10.6; Germany, 10.3; and France, 7.6 per cent.

In 1933 imports were valued at 837,000,000 gold pesetas and exports at 673,000,000 pesetas. By volume there was a 21 per cent decline in imports and a 6 per cent increase in exports. Imports from the United States (1933) were \$30,756,698 (\$26,688,366 in 1932) and exports to the United States were \$13,698,591 (\$11,400,375 in 1932).

FINANCE. For the fiscal calendar year 1931 actual revenue was 3,656,000,000 pesetas (\$349,000,000) and expenditure was 3,855,000,000 pesetas (\$368,000,000), the deficit being 199,000,000 (\$19,000,000). For 1932 actual revenue was 4,409,000,000 pesetas (\$354,000,000); expenditure, 4,297,000,000 pesetas (\$345,000,000); surplus, 112,000,000 pesetas (\$9,000,000). For 1933 the budget estimates called for revenues of 4,722,000,000 and expenditures of 4,727,000,000 pesetas. The public debt on Jan. 1, 1933, amounted to 19,972,674,000 paper pesetas (\$1,627,773,000) and 305,142,000 gold pesetas (\$58,892,000). The peseta (par value, \$0.1930) exchanged for United States gold dollars at an average of \$0.0954 in 1931, \$0.1804 in 1932, and \$0.0832 in 1933.

Actual receipts in 1933 totaled 4,561,490,000 pesetas, including loans of 619,280,000 pesetas, and expenditures were 4,426,440,000 pesetas. The actual deficit was thus 484,230,000 pesetas (preliminary).

COMMUNICATIONS. The Spanish railways, which are privately owned, had 9877 miles of line in 1930. In that year they carried 117,100,000 passengers and 48,136,000 metric tons of freight, the gross receipts being equivalent to \$110,503,000 at the average exchange rate. Highways had a total length of 52,224 miles in 1930. Regular air services were operated between Madrid and Barcelona (322 miles) and Madrid and Sevilla (248 miles) during 1932, 6374 passengers being carried on a total of 1321 scheduled flights. Telephone communication between Madrid and Manila, P. I., was inaugurated early in 1933.

The merchant marine on June 30, 1932, consisted of 861 vessels of 1,265,321 gross tons. Idle shipping Oct. 1, 1933, totaled 339,000 gross tons. During 1932, 18,068 vessels of 30,495,624 net registered tons entered Spanish ports, against 19,402 vessels of 31,431,473 tons in 1931.

GOVERNMENT. The Constitution of Dec. 9, 1931, declared Spain to be a democratic republic of workers of all classes, organized as an integral state but with autonomy for municipalities and certain regions. Freedom of conscience was guaranteed; all citizens were made equal before the law; Castilian (Spanish) was made the official language; and war was formally renounced as an instrument of national policy. Legislative power was vested in the people, who exercise it through the unicameral Cortes, or Congress of Deputies, elected for four years by universal male and female suffrage.

The President is elected for six years conjointly by the Cortes and by an equal number of electors chosen by universal, secret suffrage. He is ineligible for reelection for six years after the end of his term. The Premier is appointed and dismissed by the President, who also appoints the Ministers upon the Premier's nomination. President in 1933, Niceto Alcalá Zamora y Torres,

elected Dec. 10, 1931. Premier and Minister of War at the beginning of 1933, Manuel Azaña y Díaz, appointed Dec. 16, 1931. For changes in 1933, see *History*.

HISTORY

THE CONSERVATIVE REACTION. The year 1933 marked the end of the first phase of the Spanish Republic, established upon the ruins of the monarchy on Apr. 14, 1931. Premier Azaña's coalition ministry of Socialists and Republicans was forced to resign by internal dissensions and a rising tide of conservative opposition. The radical and semi-socialistic measures by which the Azaña government had sought to rebuild Spain were repudiated in three successive elections. The ministry gave way in the end to a coalition of conservative and moderate parties which threatened to undo much of the work accomplished by the Constituent Cortes and the government during the previous two years.

These accomplishments included the framing of a progressive constitution; reorganization of the army and its removal from politics; the separation of Church and State; dissolution of the Jesuits and expropriation of their property; nationalization of the property of the Church and exclusion of the religious orders from commerce, industry, and from all except religious education; and legalization of civil marriage and divorce. In the field of social legislation a code of laws had been passed giving the worker full protection, social insurance benefits, and the guaranteed right of collective bargaining. Redistribution of the large landed estates was provided in the Agrarian Reform Law. The educational system was secularized and extended by the establishment of more than 9000 new schools. The age-old Catalan question was peaceably settled by a division of administrative powers between the central government and Catalonia (q.v.). In addition, the Republic had inaugurated a large-scale programme of public works designed to modernize Spain's transportation, irrigation, and power facilities.

ANTI-CLERICAL MEASURES. Of these measures, two important ones were enacted by the Cortes during 1933. The bill for the seizure of all church property was finally approved March 24. It provided that "churches of all classes, episcopal palaces, rectories, seminaries and other buildings of the Catholic cult are declared to be national property; also all ornaments, pictures, and other such objects in them." The law restricting the religious orders was presented to the Cortes in December, 1932. Because of the bitter opposition it was not finally approved until June, 1933, when it resulted in a cabinet crisis. It provided that the orders were to cease all primary teaching by Dec. 31, 1933, and all other non-religious instruction by October, 1933. The bishops of Spain responded with a pastoral letter strictly forbidding attendance at state schools. Pope Pius addressed an encyclical to the bishops, clergy, and people of Spain condemning this legislation and urging them to defend the faith. The full strength of the Church was placed behind those political parties demanding repeal of the anti-clerical laws.

OTHER OPPOSITION GROUPS. Besides the opposition of the Church, the monarchists, and a newly formed Fascist movement headed by José Primo de Rivera (son of the former dictator), the Azaña ministry faced the hostility of the merchants, manufacturers, and landlords. The latter groups, antagonized by the government's pro-

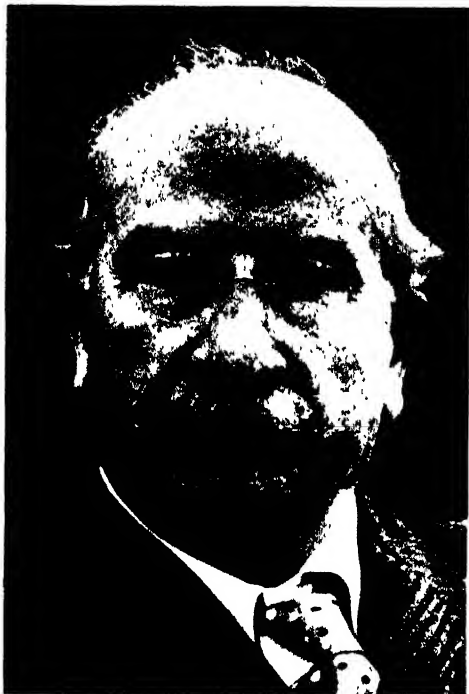
labor policy, formed in July, 1933, a central committee which played an effective part in Azaña's overthrow. Their central committee, the Catholic Action, and various other conservative organizations united their anti-government efforts through the medium of the *Confederación Española de Derechas Autónomas*, formed in February, 1933.

Attacked by these groups for its radicalism, the Azaña government was assailed also from the Left because it was not radical enough. Both the Anarcho-Syndicalists and the Communists waged an unceasing war upon it. Their third serious effort to overthrow the republic and establish a strictly proletarian régime came in January, 1933. It was crushed with the loss of some 50 lives. Sporadic strikes, riots, and disorders continued, however, and the government was forced to resort to arbitrary arrests and imprisonments. The jails held about 9000 political prisoners in the summer of 1933. Moreover the government inaugurated a policy of strike-breaking which further alienated labor. The cabinet's ability to withstand these aggressively hostile elements was weakened by growing dissensions within its ranks. The government coalition during 1933 gradually split asunder on the issue of whether the republic was to be bourgeois or socialist in character.

THE ELECTIONS. The first definite indication of the government's waning prestige was the victory of the opposition forces in the elections held in about one-third of the Spanish municipalities on Apr. 23, 1933. Incomplete returns indicated that the government parties won 5048 seats in the municipal councils, as against 4206 seats won by the anti-government republicans under Alejandro Lerroux and 4954 won by the Right parties. Lerroux and other opposition leaders demanded that Premier Azaña resign in response to popular demand as expressed in the municipal elections. The Premier held on until the dispute over the Church laws widened the breach in the cabinet ranks. He finally offered his resignation on June 8, when President Alcalá Zamora refused to allow him to reorganize the Ministry of Agriculture without consulting other party leaders. Advised against calling a new election at that time, the President attempted without success to find a leader capable of forming a new ministry without the support of Azaña or the Socialists. On June 11 he was forced to turn again to Azaña. The latter's reorganized ministry proved no stronger than before and by the middle of August the break-up of the Republican-Socialist coalition made further progress in legislation virtually impossible.

The fall of the Azaña régime was hastened by the election on Sept. 3, 1933, of 15 judges of the Tribunal of Constitutional Guarantees. One judge was elected for each of the 15 regions by the municipal councilors. The government elected only five of the 15; the Radical party under Lerroux elected four and the extreme Right six. This second rebuff caused the resignation of Azaña, September 7, and the formation of a ministry under Lerroux on September 13. The Radical leader failed to survive his first vote of confidence in the Cortes, however, and gave way on October 3 to a coalition of Republicans (formed October 7) under his lieutenant, Diego Martínez Barrios. The Socialists were excluded in the new ministry, which contained seven members of the Lerroux cabinet.

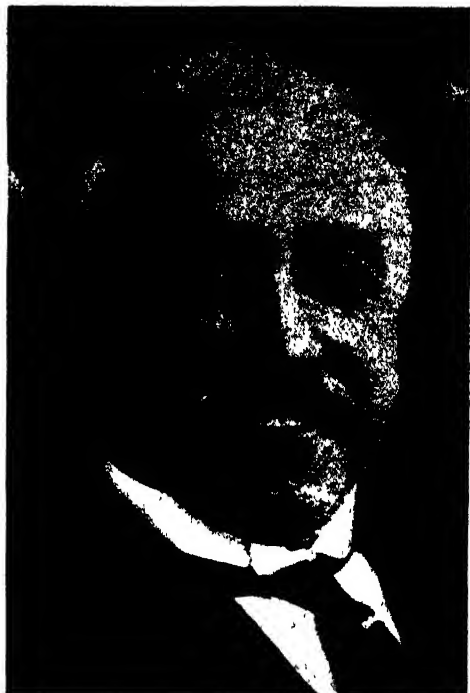
With the authorization of President Alcalá Zamora, Premier Martínez Barrios immediately dissolved the Constituent Cortes and called new elections for November 19, with a supplementary



Acme

ALEJANDRO LERROUX

Premier, Sept 12-Oct 3, 1933, Reappointed
Dec 16, 1933



Underwood

NICETO ALCALÁ ZAMORA

President of Spain, Elected Apr 14, 1931



Acme

DIEGO MARTINEZ BARRIOS

Premier, Oct. 8-Dec. 16, 1933



Acme

JUAN BOTELLA ASENSI

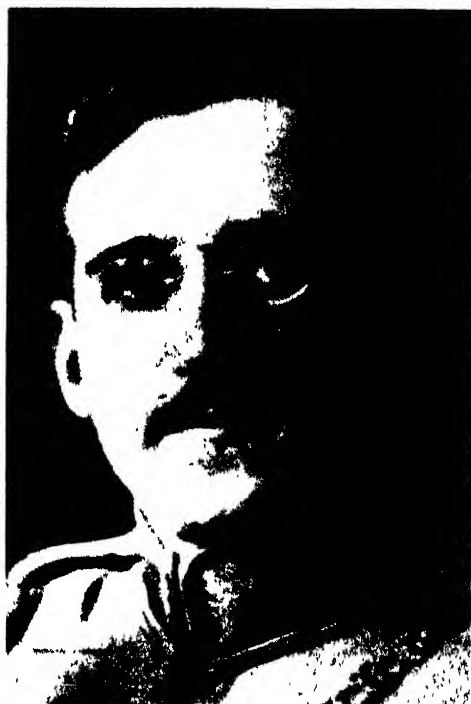
Minister of Justice, Appointed Sept. 12, 1933

SPAIN



Keystone

DR ENGELBERT DOLLFUSS
Chancellor of Austria



Keystone

ALEXANDER I
King of Yugoslavia



International

CAROL II
King of Rumania



Wule World

BORIS III
King of Bulgaria

RULERS OF CENTRAL EUROPE

election to be held December 3 in districts where no candidate received the 40 per cent of the total vote required by law.

The general elections were of great significance for several reasons. The 12,500,000 votes cast included those of some 6,000,000 women, who exercised for the first time in a general election the suffrage extended to them by the republican régime. It was also the first opportunity which the nation had had to register its approval or disapproval of the Constitution and legislation enacted by the Constituent Cortes. In general the four chief alternatives facing the voters were: (1) the parties of the extreme Right, united in the C. E. D. A. by the Catholic leader José María Gil Robles; (2) the parties of the Right Centre (moderately conservative) under Lerroux and Miguel Maura; (3) the moderately radical republican groups headed by Azaña; and (4) the Socialist party, headed by Largo Caballero, Fernando de los Ríos, Indalecio Prieto, and others.

The result was a sweeping victory for the parties of the Right and the Right Centre. Of the 472 seats in the Cortes, the Right captured 212, the Centre 162, and the Left (radical) parties 98. Of the 20 parties represented in the new Cortes, the Agrarian Populists (conservative, Catholic, pro-monarchist) under Gil Robles, with 104 seats, and Lerroux's Radicals, with 101 seats, emerged as the most powerful. The Socialist representation was cut to 58 from 114 in the previous Cortes, while Azaña's Republican Movement returned only five deputies in place of 30. The lineup of the Right parties was: Agrarian Populists, 104; Agrarians, 39; Independents, 24; Traditionalists, 17; Renovación Española, 15; Basque Nationalists, 12; Nationalists, 1. The Centre parties comprised: Radicals (Lerroux), 101; Catalan League, 25; Conservative Republicans, 18; Liberal Democrats, 9; Independents, 6; Progressive Republicans, 3. The Left parties included: Socialists, 58; Catalan Left, 22; Galician Federation, 6; Republican Movement, 5; Independent Radical Socialists, 4; Radical Socialists, 1; Federals, 1; Communists, 1.

The elections were marked by considerable disorder and charges of unfair tactics and irregularities. Botella Asensi, Minister of Justice in the Martínez Barrios cabinet, resigned in protest against the conduct of the elections. He charged that Lerroux had reached an understanding with the extreme Right. The Socialists, alarmed at the prospect of a Monarchist reaction, gave warning that any attempt by the Right to wreck the Republic and its work would be met with armed revolution and a dictatorship along Communist lines. The Socialists, however, refused to join in a fourth Anarchist-Syndicalist insurrection which coincided with the meeting of the new Cortes on December 8. A reign of terror continued for five days, especially in Catalonia, Andalusia, and Estremadura, and more than 100 persons were killed before government forces restored order.

LERRoux FORMS CABINET. Shortly after the Cortes convened the Martínez Barrios ministry resigned and Alejandro Lerroux formed a new minority government (Dec. 16, 1933), dependent upon the support of the Right. The Lerroux cabinet contained eight members of the Premier's Radical party and five representatives of other Centre parties. The line-up was: Premier, Alejandro Lerroux; Foreign Affairs, Leandro Pita Romero; Justice, Ramon Alvarez Valdes; War, Diego Martínez Barrios; Marine, José Rocha; Finance, Antonio Lara; Interior, Manuel Rico

Avello; Education, Don Antanagildo Pareia y Ebenes; Labor, José Estadella; Communications, José María cid Ruiz Zorrilla; Agriculture, Cirilo del Rio Rodriguez; Public Works, Rafael Guerra del Rio; Industry, Ricardo Samper. While the new ministry was committed to revision of the anti-clerical laws, the land reforms, and the secularization of education, it accepted the republic. So also did nearly all of the Right parties, including Gil Robles's powerful Agrarian Populists.

CATALONIAN DEVELOPMENTS. Meanwhile the semi-autonomous government of Col. Francisco Macia, President of the Catalan Generalidad (state), was encountering great difficulty in its effort to launch the new state upon a successful course. By the Statute passed by the Cortes at Madrid, Sept. 9, 1932, and subsequently accepted by the Macia government, the administration of Catalonia was divided between the federal and the local government (see 1932 YEAR BOOK for provisions of the Statute). There remained the task of interpreting the Statute with regard to its actual application, and of establishing a constitutional government in accord with its provisions. The interpretation of the Statute was entrusted to a mixed commission representing both the Madrid and Barcelona governments.

The work of drafting a Catalonian Constitution was begun early in January, 1933, and a state government in accordance with the Statute was set up early in June. The transfer of various administrative powers from the central to the Barcelona government was scheduled for later in the year. The transfer of the administration of justice took place on November 1, but the transfer of control over the police and finances was for some reason deferred. A move on the part of the Lerroux ministry to destroy Catalonian regional autonomy was feared.

Although many Catalans were not satisfied with the autonomy granted under the Statute and demanded complete independence from Spain, the Nationalist movement suffered a severe setback during 1933 as a result of dissensions within Colonel Macia's Esquerra party, which had been instrumental in securing the Statute. Quite unexpectedly Colonel Macia's party was defeated by the Catalan League in the national elections of November 19 and December 3. It won only 22 seats in the national Cortes, as against 25 captured by the more conservative Catalonian League. The death of Colonel Macia on December 25 removed a powerful champion of Catalan autonomy (see MACIA Y LLUSA, FRANCISCO). Luis Companys, former Civil Governor of Catalonia, was elected President of the Catalan Generalidad, succeeding Colonel Macia, by the Catalan Parliament on December 31.

BASQUE STATUTE APPROVED. A statute providing for the establishment of an autonomous Basque state comprising the three provinces of Guipúzcoa, Alava, and Vizcaya was approved by more than 85 per cent of the voters at a plebiscite held in the three provinces Nov. 5, 1933. The provisions were reported to be similar in many respects to those of the Catalan Statute. To become effective it required the approval of the Spanish Cortes. See BASQUE PROVINCES.

FOREIGN RELATIONS. The arrest and imprisonment of five American citizens residing on the island of Majorca, following an altercation in June with the local Civil Guard, led to considerable diplomatic negotiation by the American ambassador in Madrid during 1933. All were charged

with attacking a Civil Guard, an offense covered by military law in Spain and carrying a penalty of up to six years' imprisonment. The defendants—Rutherford Fullerton, Mr. and Mrs. Clinton Lockwood, Roderick F. Mead, and Edmund W. Blodgett—were released on bail after seven weeks' imprisonment. A military court at Palma, Majorca, acquitted them on October 26, but the approval of the military auditor, required by Spanish military law, was not forthcoming. At the end of 1933 the defendants were awaiting a review of their case by the Spanish courts. By decrees issued Dec. 15, 1933, the Spanish government established stringent regulations covering the admission of foreigners to any of the Balearic islands. The decrees were attributed partly to a desire to eliminate undesirables from the islands and partly to prevent foreign spies from securing information on the new fortifications under construction there.

A supplementary commercial agreement between France and Spain, providing tariff and quota concessions, became effective June 23, 1933. See ANDORRA under History.

Consult Anita Brenner, "Spain's Venture in Democracy," *Current History*, December, 1933; Lawrence A. Fernsworth, "Whither Spain?" *Foreign Affairs*, October, 1933; Bailey W. Diffie, "Spain Under the Republic," *Foreign Policy Reports*, Dec. 20, 1933.

SPANISH-AMERICAN LITERATURES.

The facts here given are not to be considered exhaustive, nor must the omission of some countries be held as evidence that they produced nothing in 1933.

ARGENTINA. Again Argentina offers materials of interest in several fields.

Fiction. Hugo Wast published a splendid work in two volumes: *Don Bosco y su tiempo*, dealing with the period of the unification of Italy (somewhat as does Marion Crawford's Saracinesca series), vol. i bearing the sub-title *Los años de Carlos Alberto*, and vol. ii that of *Los años de Pio IX.* Carlos María Ocantos produced *En el más allá* . . .; Oscar Charpentier, *La mujer que soñó* (with a very unusual theme); J. Alvaro Sol, *La jaula sangrienta*; Alberto María Rossi, *La camisa de once varas*; Manuel Gálvez, *Nacha Regules*; Augusto Scarpitti, *Hombres sin valor*; and Isabel Figueras de Walls, *El ramo de orquídeas*.

Drama. José Borrás wrote *La codicia rompe el saco*: Juguete cómico en dos actos y en verso (Instituto de Literatura Argentina) Sección de documentos, Tomo 5, núm. 1; Francisco Javier de Acha, *Una víctima de Rosas*, Drama en tres actos, en verso y prosa; (Instituto de Literatura Argentina) Sección de documentos, Tomo III, núm. 8; and Horacio H. Dobranich, *Monólogos y cabos sueltos*.

Poetry. Fernández Moreno (whose *Décimas* won for him the Second National Prize for Literature in 1929) published a volume called *Cuadernillos de Verano* (sort of poetic triptych of a summer's vacationing): *Córdoba y sus sierras* (Córdoba in Argentina), *Mar del Plata*, and *Montevideo*. Eduardo Escobar wrote *Pais Azul*; Bartolomé R. Aprile, *El hijo de Martín Fierro*; (daring but successful, attempt to make a continuation, or sequel, to a well-known literary work); Blanca del Prado (poetess of deep and delicate sensibility) expresses easily her memories and impressions of a sojourn in Perú; González Carbalho has some exquisitely harmonious verse

in *Día de canciones*; and Enrique Banch's *La urna* is another beautiful work.

Erudition. Among scholarly works may be mentioned: Gabriel Paláu, *Diario íntimo de un cura español (1919-1930)*; Ernesto Nelson (the great educator), *La delincuencia juvenil*; Arturo Capdevila (whether as poet, novelist, or dramatist, the great artist of Argentina's Episodios Nacionales), *La santa furia del padre Castañeda*, *Vidas españolas e hispanoamericanas del siglo XIX*; Alfredo Colmo (author of the excellent *América Latina and Política Cultural en los Países Latino-americanos*), *La Revolución en la América Latina* (second ed. of fine study of revolutionary movements in the Americas, with sharp criticism of militarism); Ricardo Riaño Jauma, *José Ingenieros y su obra literaria* (devoted to the great littérateur who was Argentina's greatest philosopher and psychologist); Almafuerte (Pedro Bonifacio Palacios, who died in 1917), *Discursos completos* (recopilación, estudios y notas de Sergio J. Bagú); Enrique Larreta, *Las dos fundaciones de Buenos Aires* (excellent study); Juan Alfonso Carrizo, *Cancionero Popular de Salta*; Antonio Aita, *Expresiones*; Arturo Mejía Nieto, *El perfil americano*; Ricardo Rojas (Rector of the National University of Buenos Aires), *El santo de la espada: Vida de San Martín* (excellent); and G. Martínez Zuviria (National Librarian), *La Biblioteca Nacional en 1932*.

Prizes. The three National Prizes for literature (for 1930) were awarded, as follows: First Prize (\$30,000), to Carlos Ibarguren for his *Juan Manuel de Rosas* (a masterly study); Second Prize (\$20,000), to Eleuterio Tiscornia for his *Gramática del Martín Fierro* (an exhaustive and scholarly work); and the Third Prize (\$10,000) to Carlos B. Quiroga for his *Los Animalitos de Dios* (excellent collection of tales and apologues).

Necrology. Argentine letters suffered three notable losses through death: José de San Martín (author of *Mis profetas locos* and *Alberto (Ghiraldito)*); Ricardo Jaimes Freyre (master of symbolism, diplomat, and author of *Castalia Bárbara*, *Los sueños son vida*, and *Los Conquistadores*); and Luis Mario Jordán (poet, novelist, essayist).

CHILE. Several interesting works in various genres have come to hand. Miguel Luis Amunátegui Reyes, the learned Director of the Academia Chilena (Correspondiente de la Academia Española), continued his monumental work (see NEW INTERNATIONAL YEAR BOOK for 1932) *Don Antonio García Reyes* with vol. iv, and a fifth volume is announced. Joaquín Edwards Bello, *Oriollos en París* (third ed. corrected). Eugenio Orrego Vicuña published *Carrera* (prose drama); Roberto Meza Fuentes, *Palabras de amor* (cuadernos de poesía); R. Rodríguez San Martín, *Mapa de un corazón* (highly praised verses by a young writer); R. M. Velasco, *La Mujer superior al hombre*; Dr. Yolando Pino Saavedra, *La Poesía de Julio Herrera y Reissig: Sus temas, y su estilo*; (published by the Universidad de Chile); Raúl Silva Castro, *Estado actual de los métodos de la historia literaria and Fuentes bibliográficas para el estudio de la Literatura Chilena*; and Alonso Ercilla y Zúñiga, *La Araucana* (ed. hecha por la Universidad de Chile, con motivo de la celebración del cuarto Centenario de Alonso de Ercilla, 2 vols.). Aurelio Díaz Meza (writer of Chilean Tradiciones) offers a picture of colonial Chile in *La Quintrala y su época*.

In the Academia Chilena (Correspondiente de la Academia Española) three members-elect took

their chairs, reading the obligatory entrance discourses: Francisco J. Cavada (distinguished philologist); Ricardo Montaner Bello (writer, jurist, consultant, professor of International Law in the University of Santiago, Chile) who wrote *Don Antonio José Iriarri, filólogo*; and Agustín Edwards (littérateur and politician), who wrote *Elogio de Don Eliodoro Yáñez y bosquejo panorámico de la prensa chilena*.

Necrology. Chilean letters suffered a grievous loss through the death of Francisco Contreras (b. 1877), poet, critic, and novelist. As a poet he wrote *Esamaltines* (1897), *Raúl, Toison* (1906), *Romances de hoy* (1907), *Luna de Patria* (1913), and *La varillita de virtud* (1920). As critic he served (as the successor, since 1910, of Eugenio Díaz Romero) as editor of the section of Letras Hispano-Americanas of the *Mercure de France*, and as author of *Los Modernos* (1909), *Rubén Darío-su vida y su obra* (1930), etc. As a novelist he wrote, in French, *La ville merveilleuse* (in 1924; in Spanish in 1927), *La montagne ensorcelée* (1928), and *La vallée qui rêve* (appeared posthumously in the *Mercure de France*). These three novels are considered unmittable documents concerning the Chile of the recent past.

COLOMBIA. Miguel Abadía Méndez (illustrious humanist, Ex-Minister of Public Instruction, and Ex-President of Colombia) was elected Director of the Academia Colombiana. (Correspondiente of the Academia Española).—Luis Carlos López published *Por el Atajo* . . . with prologue by Emilio Bohadillo and epilogue by Eduardo Castillo—J. M. Yepes (distinguished Senator and historian) expounds the boundary dispute between Colombia and Perú: *Le conflit entre la Colombia et le Péru—Affaire de Leticia devant le droit international*. The Colombian government continues its practice of honoring its great citizens by officially publishing their complete works: *Miguel Antonio Caro, Obras completas, Tomo VI: Discursos y documentos públicos*. (Ed. oficial dirigida por don Víctor E. Caro.)

COSTA RICA. Alejandro Alvarado Quirós, Secretary of the Academia Costarricense, published *Prosa Romántica*.

CUBA. The crisis, through which our Cuban friends are passing, is hardly a propitious moment for the production of creative or scholarly books. The following items have come to our attention: J. D. M. Ford and Maxwell I. Raphael, *A Bibliography of Cuban Belles-Lettres*; René Lufriu y Alonso, *La Vida de la Academia de la Historia, de Cuba* (1931-1932); Juan M. Dihigo y Mestre, *Un orientalista cubano: Francisco Mateo de Acosta y Zenea*; Manuel Navarro Luna, *Pulso y onda* (fine verse); Nestor Carbonell, *José Martí: Apóstol, héroe, y mártir*; José Manuel Carbonell, *El dolor de los ciegos y la piedad cubana*; and José María Chacón y Calvo, Cuba's Secretary of Embassy at Madrid, and Member of the Academia Cubana (Correspondiente de la Academia española), gave us *El Consejo de Indias y la Historia de América*.—The Academia Cubana lost one of its most noted members, Rafael Montoro y Valdés, its Censor, who died July 13, 1933.

DOMINICAN REPUBLIC. Federico Henríquez Carvajal, Rector of the University of the Dominican Republic, President of the Academy of History of the Dominican Republic, President of the Dominican Supreme Court, Minister of the Interior, Doctor of Jurisprudence, poet, and journalist,

took possession of his chair in the Academia Dominicana.

ECUADOR. Attention should be called to two works of fiction: Jorge Icaza, *Barro de la sierra* (collection of tales); and Eduardo Samaniego y Alvarez, *La voz interior*. There are also two works of erudition, each of which has gone to a second improved edition: Remigio Crespo Toral, *El divorcio de Colombia: Segunda edición—Aspectos de última hora*; and Alejandro Mateus, *Riqueza de la lengua castellana y provincialismos ecuatorianos*. Other erudite works of interest are: Manuel María Pólit Laso, *Composiciones poéticas del Sr. D. Belisario Peña para completar la colección*, and *Los Hermanos de Santa Teresa en América* (Nuevo estudio histórico, 2a. ed.); and Aurelio Espinosa Pólit, *Virgilio, el poeta y su misión providencial* (Prólogo del Dr. Remigio Crespo Toral).—Ecuador has suffered two grievous losses through death within the past year. Although it occurred Oct. 29, 1932, we received too late for inclusion in last year's article the news of the death of Manuel María Pólit Laso, Archbishop of Quito, and Director of the Academia Ecuatoriana. (Correspondiente de la Academia Española). Born in Quito (1862), he made his general studies in Europe, and his law studies in Ecuador, receiving his degree in 1881. During his youth, he was a lawyer and politician, serving as Deputy to the Cortes and Secretary of the Congress for several years. Suddenly, in 1891, he took orders and shortly thereafter became Vicar-General of the Archdiocese of Quito, later Bishop of Cuenca (in Ecuador), and in 1918, Archbishop of Quito. In 1921 he was elected Correspondiente in Ecuador of the Real Academia Española. He thereupon successfully reorganized the Academia Ecuatoriana as a Correspondiente of the Royal Spanish Academy, becoming its Director, which post he held until his death.—On Jan. 26, 1933, Honorato Vázquez died. He was the Academy's senior member (see INTERNATIONAL YEAR BOOK for 1932). He was a Doctor of Jurisprudence, Professor of Literature in the Colegio Nacional de Cuenca (his native city, where he was born in 1855), and Minister of Ecuador to Spain for many years.

GUATEMALA. Rafael Arévalo Martínez produced a novel *La signatura de la Esfinge*. Dorothy H. Popenoe spent years of expert and intelligent investigation, *in situ*, in the preparation of her very attractive *Santiago de los Caballeros de Guatemala*, which is an unusually fine piece of archaeological reconstruction and historical writing. The illustrations were also drawn by the author, who died before the work was published.

HONDURAS. Rómulo E. Durón, former Minister of Public Instruction and Sub-Minister of Foreign Affairs, has continued his literary labors by producing *Biografía de don Juan Nepomuceno Fernández Lindo*.

MEXICO. Creative writers and scholars have both been active.

Versé. B. Ortiz de Montellano, *Sueños* (exquisite); Alfonso Reyes, *Romancero del Río de Enero*; Aristeo Martínez de Aguilar, *Haz*; Vicente Echeverría del Prado, *Vida Suspensa*; and Alvaro Gamboa Ricalde, *En la tierra del mayab*.

Fiction. José Mancisidor, *La asonada* (highly praised); Roque Estrada, *Liberación* (contemporary historical novel); Salvador Quevedo y Zubieta, *México marimacho* (revolutionary historical novel, 2d ed.).

Drama. Mauricio Magdaleno, *Teatro revolucion-*

ario Mexicano; Juan Bustillo Oro, *Tres dramas mexicanos* (three plays belonging to the new theatrical movement "Teatro de Ahora," and showing three separate problems of to-day).

Erudition. Luis Castillo Ledón, *La Conquista y Colonización Española en Méjico: Su verdadero carácter*; Luis Chávez Orozco, *Bibliografía de Zaoatecas*; José Castillo y Pifia, *Conferencias y Discursos*; J. M. Puig Casauranc, *Mirando la vida, Una Política social-económica de "preparación socialista,"* and *Los Juan López Sánchez López y López Sánchez de López*; Arturo Torres-Rioseco, *Bibliografía de la novela mejicana*; Plutarco Elías Calles, *El General Calles señalando rumbos*; Enrique A. Cervantes, *Herreros y forjadores poblanos: Dibujos y fotografías del autor*; Domingo Díez, *Bibliografía del Estado de Morelos*; Moisés Sáenz, *Sobre el indio ecuatoriano y su incorporación al medio nacional*; Rodolfo Usigli, *Méjico en el teatro*; Alfonso Taracena, *La Tragedia Zapatista and Autobiografía—Cuentos* (both highly praised); and Manuel Romero de Terreros (Marqués de San Francisco), *Encuadraciones artísticas mejicanas—Siglos XVI al XIX* (study of four centuries of book-binding in Mexico). The Academia Mejicana (Correspondiente de la Academia Española) received two of its members-elect: Artemio de Valle-Arizpe, who has since published *Virreyes y Virreinas de la Nueva España—Leyendas, tradiciones y sucesos del México virreinal*, in two large volumes; and Mariano Cuevas (worthy descendant of a family that for more than three hundred years has devoted itself to belles-lettres), whose entrance discourse dealt with the *Orígenes del humanismo en Méjico*.

NICARAGUA. The Academia Nicaraguense lost through death the Perpetual Secretary, Francisco Paniagua Prado, and elected to that post in his stead Antonio Lezcano y Orrega, who was treasurer.

PANAMÁ. Two works have come to our attention: Ernesto J. Castellero R., *El Doctor Manuel Amador Guerrero, Prócer de la Independencia, y primer Presidente de la República de Panamá: Primer Centenario 1933*; and Ismael Ortega B., *Manuel Amador Guerrero, 1833-1933*.

PERÚ. Perú has shown literary activity in various fields but chiefly in erudition. Works that have come to our attention are: Rosa María Rojas, *La alcancia de cristal*; Enrique López Albuja, *Mataraché* (novela retaguardista) and *Cuentos Andinos*; Sturgis E. Leavitt, *A Tentative Bibliography of Peruvian Literature*; Luis Humberto Delgado, *Vida de Rodó*; David Rubio, *La Universidad de San Marcos de Lima durante la colonización española (Datos para su historia)*; Ventura García Calderón, *Virages*; Víctor Andrés Belaúnde, *El debate constitucional and Meditaciones Peruanas*; Alberto Ureta, *Las Tiendas del desierto* (a volume of verse by a poet with real inspiration); Pedro M. Benvenuto Murrieta, *Quince plazuelas, una alameda y un callejón* (a reconstruction of the Lima of 1884-1887, with two valuable glossaries of Peruanismos); Ismael Portal, *Del pasado limeño* (chronicles by this veteran writer); María Wiese, *Nuevos Relatos*; Catalina Recavarren Ulloa, *Poesías*; Luis E. Galván, *La escritura del alfabeto de las lenguas aborígenes del Perú*; J. de la Riva-Agüero, *Añoranzas* (commentary on the book of Benvenuto Murrieta previously mentioned); *Goethe—Homenaje de Lima en el primer centenario de su muerte*; and *Crónica Intelectual: La semana de Palma*; Hector

Velarde (some of whose previous works are *Kikif* and *Tumbos de Lógica*), *Yo quiero ser filósofo* and *Fragmentos de espacio* (a group of essays on architecture); Angélica Palma (her book on *Fernán Caballero* appeared in 1931), *Ricardo Palma* (a beautiful, restrained account of a great man, written by his daughter).

The outstanding event of the literary year in Perú was the celebration of the centenary of Ricardo Palma. The centenary took the form of a programme called *La Semana de Palma*, organized by the "Sociedad Amigos de Palma." The programme lasted from 10 P.M. February 6 until the evening of February 14. On February 6 there was a radio address by Carlos Pareja y Paz Soldán. On February 7 there were various ceremonies including the inauguration of the bust of Palma by the sculptor Manuel Piqueras Cotolí and an address by José de la Riva-Agüero y Osma. February 8 the placing of the bust of Palma in the Alameda de Miraflores, which is renamed Ricardo Palma. February 9 Inauguration of the Exposition of Personal Mementos of Palma and reciting of verses by José Gálvez. February 10 lecture concerning Palma by Jorge Guillermo Leguía. February 11 address: "Palma político," by Víctor Andrés Belaúnde; and verses by Eduardo Martín Pastor. February 13 address: "Palma romántico," by Raúl Porras Barrenechea; and remarks by Angélica Palma. February 14 radio address by Pedro M. Benvenuto Murrieta.

URUGUAY. From Uruguay we have received literary pieces of several types. Guillermo Furlong, S.J., *Los Jesuitas y la cultura rio-platense*; Alberto Nin Frías, *Alexis o el temperamento homo-sensual* (con breves Prólogos de Havclock Ellis, Benavente, y Marañón); and L. F. Azarola Gil, *Los orígenes de Montevideo 1607-1749*.—Carlos Reyles, the great novelist and critic, published *El Gaucho Florido* (novela de la estancia cimarrona y del gaucho crudo), by long odds his best work.—Ester de Cáceres, Doctor of Medicine, author of two other volumes of verse (*Las Islas Extrañas and Canción*), published a new volume of verse, *Libro de la soledad*. Although the name of God scarcely appears in any of the books, the motive of the singing in all her verse is the author's desire for and need of God.

VENEZUELA. Dr. J. M. Núñez Ponte published the second edition of his discourse read on taking possession of his chair in the Venezuelan Academy, the title being *Importancia cultural del Castellano*. Dillwyn F. Ratcliff, published through the Instituto de las Españas en los Estados Unidos, *Venezuelan Prose Fiction*, a very valuable addition to our resources. The Academia Venezolana added those members who read their official discourses and took possession of their chairs: Jacinto Fombona, Doctor of Jurisprudence of Caracas and a poet of note; and Eloy G. González, and Crispín Avala Duarte.

SPANISH LITERATURE. For the first time in many years erudition seems to have outstripped any of the creative forms of literature, leaving the drama and fiction about on a par for second place.

DRAMA. A remarkable thing about this year's production is that there were three religious plays of no mean worth: Gonzalo Delgrás, *INRI*; J. M. Pemán, *El divino impaciente* (verse drama, life of San Francisco Javier); and Eduardo Marquina, *Teresa de Jesús and Salvadora*. Honorio Maura produced *El príncipe que lo aprendió todo en la vida, Hay que ser modernos*, and *El balcón de la*

felicidad. Among the older generation we find: Manuel Linares Rivas, *Eva Quintana—Romance de fieras*; Carlos Arniches, *Las pícaras faldas* and *Cuidado con el amor*; Pilar Millán Astray, *Ruth*; G. Martínez Sierra, *El amor y la muerte*; Jacinto Benavente, *El rival de su mujer*; Enrique Suárez de Deza, *Escuela de millonarios* and *La duquesa se divierte*; Serafín y Joaquín Álvarez Quintero, *El rincón de la pícara vida*, *El susto*, and *Un pregón sevillano*; Joaquín Dicenta, *Leonor de Aquitania* (verse play, prize of the Ayuntamiento de Madrid) performed by company of Enrique Borrás and Margarita Xirgu; Pedro Muñoz Seca, *El refugio*, and with Pedro Pérez Fernández, *Trastos viejos* and *La voz de su amo*; Francisco Serrano Anguita, *Siete puñales*, and with Manuel de Góngora, *La novia de Reverte*. Others that should be mentioned are: Marcelino Domingo, *Doña María de Castilla*; Frederico García Lorca, *Bodas de Sangre*; Antonio Estremera, *Los ateos*; Pedro L. Pico and Tomás Borrás, *Napoleoncito*; Pedro Sánchez de Neyra, *La viuda*; Enrique López Alarcón, *La maravilla de Ejesa*; Manuel de Góngora, *La razón del silencio*; Rodolfo Viñas, *Oro*; Pérez Domenech, *Un grito en la noche* (dramatization of Pedro Mata's novel of the same title); Seneca, *Medea* (Spanish translation by Miguel de Unamuno, and performed in the Roman Theatre at Mérida); Enrique Jardiel Poncela, "*Usted tiene ojos de mujer fatal*"; and Luis Manzano, *La mujer, mujer*.

FICION. There are two new books in Pío Baroja's series *La selva oscura*: *El Cabo de las Tormentas*, and *Los visionarios*. Several others of the older generation are still producing books that charm. Concha Espina, *Candelabra* and *Llama de cera*; W. Fernández Flórez, *Aventuras del Caballero Rogelio de Anaral*; José Más, *En la selva de Bithynia* (a scathing satire of modern life); Pedro Mata, *Subverguenzas*; M. R. Blanco-Belmonte, *El Capitán de las Esmeraldas* (Córdoba under Carlos V); and Rosa Arciniega, *Mosko-Strom* (a literary triumph). Others that should be mentioned are: Rafael Sánchez-Guerra, *De hombre a hombre*; María Costa Durán, *Alas rotas* (great success); Samuel Ros, *El hombre de los medios abrazos*; Francisco Aparicio Miranda, *La mujer de tu prójimo*; A. de Ascanio, *El invencible*; Doctots Oliver Cobeña and Torres Oliveiros, *La tierra número 2* (great success); Rafael Villaseca, *Las brujas de Montecarlo* (highly interesting); Mariano Tomás, *Vega Vd. a casa en primavera* (excellent).

POETRY. The quality of the verse produced seems to be excellent: Julio Bernácer, *Mediterráneo*; Agustín de Foxá, *La niña del caracol* (highly praised ballads); María Luisa de Iriarte, *Romances de amor antiguo y otras composiciones* (an original rhythm, new lyric forms, and modern adjectivation); José Gallo de Renovales, *Horas del Escorial*; Antero de Quental, *Sonetos cacogidos*; and José Moreno Villa, *Puentes que no acaban* (a beautiful poem). Concha Espina produced a solid volume of notable verse: *Entre la noche y el mar*.

ERUDITION. Despite the strenuous problems that face all loyal Spaniards of whatever persuasion during these months of adjustment, scholarship has flourished, as witness the following: Fernando Castán Palomar, *Escenario zaragozano: Horas y Figuras*; Pedro Rodríguez de Ardila, *Baco y sus bodas en España* (annotated by Francisco Rodríguez Marín; Emilio Gutiérrez-Gamero, *Galdós y su obra: los episodios nacionales*; Wenceslao Fer-

nández Flórez, *La conquista del horizonte*; Mariano Tomás, *Vida y desventuras de Miguel de Cervantes*; José R. Lomba y Pedraja, *Costumbristas españoles de la primera mitad del siglo XIX*; Joaquín de Entrambasaguas y Peña, *Una guerra literaria del siglo de oro: Lope de Vega y los preceptistas aristotélicos*; Eusebio Vasco, *Treinta mil cantares populares*, Tomo 3; Federico Carlos Sáinz de Robles, *Castillos en España: Su historia, su arte, sus leyendas*; Julio Puyol y Alonso, *La conspiración de Espoz y Mina (1824-1830), con noticias y documentos hasta ahora inéditos*; Charles E. Kany, *Life and Manners in Madrid 1750-1800*; José Bergamín, *Mangas y Capirotes*; Manuel Ciges Aparicio, *España bajo la dinastía de los Borbones (1701-1830)*; Juan Orta González, *El destino de los pueblos ibéricos* (analysis of historic faults and qualities of the Iberian race); José de la Torre y del Cerro (greatest authority on Mosque at Córdoba), *Beatriz Enríquez de Harana y Cristóbal Colón* (minute study, with documents newly discovered in the Archives of Córdoba); C. E. Chapman, *Colonial Hispanio America: A History*; Conde de Romanones, *Doña María Cristina de Habsburgo y Lorena la discreta regenta de España* (by one who served throughout the Regency and afterward); Mariano de Pano y Ruata (Director of the Academia de Bellas Artes de San Luis, de Zaragoza, whose fine study of *La Condesa de Bureta . . . y el Regente . . .*, appeared some years ago), *El Monasterio de Sijena, La Serie Prioral*; Eugenio d'Ors, *Estudios de Arte: Arte portugués*; Augusto Malaret, *Por mi Patria y por mi Idioma*; Vicente Castañeda and Amalio Huarte, *Nueva colección de pliegos sueltos*; Julián Paz, *Catálogo de manuscritos de América existentes en la Biblioteca Nacional*; *Revue Hispanique*, Tome 81 and last (articles by scholars from many lands: tribute to R. Foulché-Delbosc, founder and sole editor throughout the 80 volumes that precede this dedicatory volume; Narciso Alonso Cortés, *Montalvo, el del Amadís*; Antonio Rubió y Lluch, *Mitteilungen zur Geschichte der Griechischen Sklaven in Katalonien im IV. Jahrhundert, und Chanceliers et notaires dans la Grèce catalane*; R. Menéndez Pidal, *Un inédito de Pereda, Realismo de la epopeya española, La Historia Troyana polimétrica*, and *El lenguaje del siglo XVI*; *Diccionari Català-Valencià-Baleari*, Tomo II, fascicles 22-26; José Balari y Jovany and Manuel de Montoliu, *Diccionario Balari-Inventario lexicográfico de la lengua catalana*, Tomo II, fascicles 5-8; Ignacio Casanova, *La cultura catalana del segle XVIII*; Armando Cotarelo Valledor, *Historia crítica y documentada de la vida y acciones de Alfonso III, el Magno, último rey de Asturias*; José Couselo Bouzas, *Galicia artística en el siglo XVIII y primer tercio del XIX*; Luis and Agustín Millares Cubas, *Cómo hablan los canarios*; Gregorio Marañón, *Amel* (study of the Swiss philosopher Amiel) and *Raíz y decoro de España* (brilliant essays dedicated to the youth of the Hispanic countries); Pedro de Irizar y Avilés, *Sinónimos: Reportorio de palabras usuales castellanas de sentido análogo* (5a. ed. augmented by Homero Seris); José A. Balseiro, *Novelistas Españoles Modernos*.

ACADEMIES. THE SPANISH ACADEMY elected (vice the Marqués de Villa-Urrutia) Miguel Artigas, Director of the Biblioteca Nacional; (vice Carlos María Cortezo) Tomás Navarro Tomás, authority in experimental practical phonetics; and (vice the Marqués de Figueroa) Gregorio Marañón, internationally famous physician and sur-

geon.—The SPANISH ACADEMY awarded the following prizes: Luca de Tena Prize, for 1932, for journalism to Fermín Mugueta; Mariano de Cavia Prize, for 1932, to Pedro Massa, for *Sardana en la montaña y Sardana en la ciudad*; Juan Valera Prize, to Luis González López, for *Las Mujeres de Juan Valera*; Fastenrath Prize to Agustín Millares Carlo, for *Tratado de paleografía española*; the two Prizes of the Conde de Cartagena Foundation, to Angel González Palencia, for his *Estudio sobre la censura gubernativa en España desde 1800 hasta 1833*, and to Antonio Alcalá Venceslada, for his *Vocabulario Andaluz*.

The ACADEMY OF HISTORY elected (vice the Marqués de Villa-Urrutia) Francisco Álvarez Osorio, Director of the Museo Arqueológico.—The ACADEMY OF HISTORY discerned the Premio al Talento, for 1930, to Domínguez Bordona (in charge of the priceless library in the former Royal Palace), for his book *Códices miniados españoles*.

HONORS. The Spanish Republic signally honored two of Spain's outstanding scholars, by conferring upon them the Banda de la Orden de la República—the highest rank in this newly established Order. The scholars are: Santiago Ramón y Cajal, internationally known histologist, and Ramón Menéndez Pidal, the greatest Romance Philologist in Spain.

NECROLOGY. Spain suffered a number of serious losses in the fields that concern us. In journalism there were: the brilliant Felix Lorenzo; the illustrious Eugenio Rodríguez de la Escalera who signed "Monte-Cristo"; Francisco López Acebal, novelist and dramatist; and Luis López Ballesteros, novelist, Deputy at Cortes, Vice-President of Congress, Civil Governor of Madrid, Sevilla, etc.—The stage also suffered severely in the deaths of: Pedro Sepúlveda, a notable actor; Felipe Carsi, dean of Spanish actors; and that brilliant actress, Rosario Pino.—In Belles-Lettres, there were the finished novelist and critic Guillermo Díaz Caneja; the mellow octogenarian poet Salvador Rueda.—The several Academies were likewise not spared: Eugenio Carré y Aldao, Member of the Academia Gallega, historian of Modern Gallegan Literature; Manuel Serrano y Sanz, professor of history in the University of Zaragoza, Member of the Academia de Bellas Artes de San Luis de Zaragoza, and Member-elect of the Academy of History of Madrid; Tomás Montejo y Rica, Professor and Honorary Rector of the University of Madrid, Minister of Public Instruction, and Member of the Academy of Moral and Political Sciences; and Carlos M. Cortezo, celebrated physician, Minister of Public Instruction, Senator, President of the Academy of Medicine, Director of the "Siglo Médico," professor in University of Madrid, Member of the Spanish Academy, and Knight of the Illustrious Order of the Golden Fleece.—Juan Armada y Losada, Marqués de Figueroa (d. Dec. 22, 1932), Deputy, Member of the Academia de Ciencias Morales y Políticas, and of the Academia Española, lawyer, Minister of Public Works, Minister of Grace and Justice, Vice-President of the Congress (several times), Counselor of State, and President of the Congress.—Wenceslao Ramírez de Villa-Urrutia, Marqués de Villa-Urrutia (d. Apr. 1, 1933), Member of the Academia Española, and the Academia de la Historia; Life Senator, Minister of State, Ambassador in Austria-Hungary, England, France, and Italy; Knight of the Collar of the Royal and Distinguished Order of Carlos III, and

Knight Grand Cross of the Légion d'Honneur, of the Victorian Order, of Saint Stephen of Hungary, of Saint Maurice and St. Lazarus of Italy, and of the Netherlands Lion of Holland; and an outstanding historian.

SPECTROSCOPE. See ELECTRICAL ILLUMINATION.

SPEED-BOAT RACING. See MOTORBOATING.

SPEED SKATING. See SKATING.

SPITSBERGEN. See SVALBARD.

SPORTS. Articles covering the activities in the various sports during 1933 will be found under such titles as ATHLETICS, BASEBALL, FOOTBALL, GOLF, OLYMPICS, RACING, TENNIS, YACHTING; also UNIVERSITIES AND COLLEGES.

SQUASH RACQUETS, SQUASH TENNIS. See COURT GAMES.

STANFORD UNIVERSITY. A privately endowed institution of higher education, nonsectarian, and coeducational, founded in Palo Alto, Calif., in 1891 in memory of Leland Stanford, Jr. On the campus are the schools of business, education, engineering, and law. The school of medicine is in San Francisco, and the Hopkins marine station at Pacific Grove. The total enrollment in 1932-33 was 3856. The 1933 summer session had an attendance of 598, while the enrollment for the autumn session was 3310. The faculty numbered 666, including 152 teaching and research assistants. The endowment funds amounted to \$31,544,583; the income for the year was \$2,677,573. The principal gift received during 1933 was approximately \$400,000 from Ellwood P. Cubberley and his wife, establishing the Ellwood P. and Helen Cubberley Trust Fund. There were 586,098 volumes in the libraries. President, Ray Lyman Wilbur, M.D., LL.D., Sc.D.

STARR, FREDERICK. An American anthropologist, died in Tokyo, Japan, Aug. 14, 1933. He was born at Auburn, N. Y., Sept. 2, 1858. On his graduation from Lafayette College in 1882 he was variously engaged as professor of sciences at the State Normal School, Lock Haven, Pa. (1883-84) and Coe College (1884-85), registrar of Chautauqua Institution (1888-89), and curator of ethnology at the American Museum of Natural History, New York City (1899-91). He was then called to the University of Chicago as assistant professor of anthropology and in 1895 became associate professor and curator of the anthropological section of the Walker Museum. He retired as professor-emeritus in 1923.

Professor Starr carried on his research in many lands. During 1905-06 he made a careful study of the pygmy races of Central Africa, visiting 28 different tribes and traveling 22,000 miles with only a guide. He next visited the Philippine Islands in 1908 and during 1909-10 and again in 1917 was in Japan where he was particularly interested in the aboriginal Aino. He conducted investigations also in Liberia in 1912 and in Korea during 1911-13 and again during 1915-16. In recognition of these researches the Belgian government made him an Officer of the Order of Leopold II (1907); the Liberian, a Knight Commander of the Order of African Redemption (1915); and the Japanese, a member of the Order of the Sacred Treasure, third grade (1921). He was highly respected by the Japanese, among whom he was living at the time of his death, for his interest in their national customs and for his attempting to understand their viewpoint in the Sino-Japanese conflict.

Among Professor Starr's publications were:

Some First Steps in Human Progress (1895); *American Indians* (1899); *Indians of Southern Mexico* (1900); *The Aino Group at the St. Louis Exposition* (1904); *The Truth about the Congo* (1907); *In Indian Mexico* (1908); *Filipino Riddles* (1909); *Japanese Proverbs and Pictures* (1910); *Congo Natives* (1912); *Liberia* (1913); *Mexico and the United States* (1914); *An Early Account of the Choctaw Indian* (1918); *Korean Buddhism* (1918); *The First Man* (1919); *The Origin of Religion* (1919); and *Fujiyama, the Sacred Mountain of Japan* (1924).

STARS. See ASTRONOMY.

STATE BANKS. See BANKS AND BANKING.

STATISTICAL ASSOCIATION, AMERICAN. An organization founded in Boston in 1839 to foster an interest in statistics and to promote scientific methods of collecting and interpreting statistical data. The official publication is the *Journal of the American Statistical Association*.

The association's ninety-fifth annual meeting was held in Philadelphia, Pa., Dec. 27-29, 1933. Several joint meetings were held with the American Association for Labor Legislation, American Economic Association, American Farm Economic Association, American Political Science Association, American Sociological Society, and the Econometric Society, which was meeting in Philadelphia on these dates. Among the topics discussed were: "Construction and Urban Real Property Statistics"; "The Business Cycle"; "Employment and Unemployment Statistics"; "A Social Programme as Protection against Unemployment"; "State and Federal Cooperation in the Collection of Social Welfare and Criminal Statistics"; "Statistical Problems of Industries under the Codes"; and "The Rehabilitation of Agriculture."

The officers elected for 1934 were: President, Frederick C. Mills; vice-presidents, Isador Lubin, William L. Crum, Royal Meeker, Karl J. Holzinger, James Harvey Rogers, Bradford B. Smith, Emanuel A. Goldenweiser, Paul H. Nystrom; secretary-treasurer, Willford I. King. Headquarters are in the Commerce Building of New York University, 236 Wooster Street, New York City.

STATISTICS. WAGES PER HOUR. The Bureau of Labor Statistics presented in the table below (Table I) a general index of wages or earnings per hour for each year, 1840 to 1932, for the wage earners of the country as a whole, exclusive of agricultural wage earners, with the 1913 earnings per hour at the base or 100. The index is a composite of all satisfactory data available. Agriculture was excluded because of the seasonal character of that industry and the wide variety of the perquisites so often forming part of the compensation of farm hands. The figures of the table are for average wage rates or earnings per hour for wage earners actually at work. They cannot be taken as reflecting earnings per day or per week. The table shows that the general trend of wages per hour has been upward. There was a sevenfold increase in the 80 years from 1840 to 1920, the peak year, the index rising from 33 to 234 in that time. Unusual increases were made during each of the two great wars. From 1840 to 1861 the increase was but 21 per cent. Between 1861 and 1865 the increase was 45 per cent. After the Civil War there was an increase each year to 1872, when rates or earnings per hour were 72 per cent higher than in 1861. From 1914 to 1919, or during the World War, the increase was from an index of 102 to 184, or 80 per cent. In 1920 the

wage level was 129 per cent higher than in 1914 and 134 per cent higher than in 1913, the base year of the index. The year 1921 was one of depression, unemployment, and wage-rate decreases. The general level of wage rates or earnings per hour in that year was 7 per cent and in 1922 was 11 per cent less than in 1920. From 1922 there was an increase each year to 1929. The depression began late in that year and has continued through 1930, 1931, 1932, and into 1933. The level for 1929 was but a fraction of 1 per cent lower than in 1920. The level for 1930 was 1.7 per cent lower than in 1929; for 1931 it was 6.9 per cent lower; and for 1932 it was 20.2 per cent lower.

TABLE I—INDEX NUMBERS OF WAGES PER HOUR, 1840 TO 1932 (EXCLUSIVE OF AGRICULTURE)

[On currency basis during Civil War period.
1913 = 100]

Year	Index number	Year	Index number	Year	Index number
1840 ..	33	1871 ..	68	1902 ..	77
1841 ..	34	1872 ..	69	1903 ..	80
1842 ..	33	1873 ..	69	1904 ..	80
1843 ..	33	1874 ..	67	1905 ..	82
1844 ..	32	1875 ..	67	1906 ..	85
1845 ..	33	1876 ..	64	1907 ..	89
1846 ..	34	1877 ..	61	1908 ..	89
1847 ..	34	1878 ..	60	1909 ..	90
1848 ..	35	1879 ..	59	1910 ..	93
1849 ..	36	1880 ..	60	1911 ..	95
1850 ..	35	1881 ..	62	1912 ..	97
1851 ..	34	1882 ..	63	1913 ..	100
1852 ..	35	1883 ..	64	1914 ..	102
1853 ..	35	1884 ..	64	1915 ..	103
1854 ..	37	1885 ..	64	1916 ..	111
1855 ..	38	1886 ..	64	1917 ..	128
1856 ..	39	1887 ..	67	1918 ..	162
1857 ..	40	1888 ..	67	1919 ..	184
1858 ..	39	1889 ..	68	1920 ..	234
1859 ..	39	1890 ..	69	1921 ..	218
1860 ..	39	1891 ..	69	1922 ..	208
1861 ..	40	1892 ..	69	1923 ..	217
1862 ..	41	1893 ..	69	1924 ..	228
1863 ..	44	1894 ..	67	1925 ..	226
1864 ..	50	1895 ..	68	1926 ..	229
1865 ..	58	1896 ..	69	1927 ..	231
1866 ..	61	1897 ..	69	1928 ..	232
1867 ..	63	1898 ..	69	1929 ..	233
1868 ..	65	1899 ..	70	1930 ..	229
1869 ..	66	1900 ..	78	1931 ..	217
1870 ..	67	1901 ..	74	1932 ..	186*

* Subject to revision.

WHOLESALE PRICES. The following table (Table II) presents the index numbers of wholesale prices by groups of commodities, by years, from 1920 to 1933, inclusive, and by months from January to December, 1933.

AGE DISTRIBUTION OF GAINFUL WORKERS. The accompanying table (Table III) compiled from a report of the United States Census Bureau, gives for 1920 and 1930 the proportion of gainfully occupied persons in the total population of the United States, 10 years of age and over, by age groups, and also the percentage distribution of the gainfully employed by age groups. The term "gainful worker" according to the Census definition includes all persons 10 years of age and over who usually follow a gainful occupation although they may not have been actually employed at the date the census was taken.

INTERNATIONAL COMPARISON OF COST OF LIVING. The *International Labor Review* of the International Labor Office presented a comparison of the cost of certain important foodstuffs and articles of fuel and light in various countries. The tables on page 769 present the information. Table IV shows in terms of United States currency the rela-

TABLE II—INDEX NUMBERS OF WHOLESALE PRICES
[1926 = 100]

Year and month	Farm products	Foods	Hides and leather products	Textile products	Fuel and lighting	Metals and metal products	Building materials	Chemicals and drugs	House-furnishing goods	Miscellaneous	All commodities
1920	150.7	137.4	171.3	164.8	163.7	149.4	150.1	164.7	141.8	167.5	154.4
1921	88.4	90.6	109.2	94.5	96.8	117.5	97.4	115.0	113.0	109.2	97.6
1922	93.8	87.6	104.6	100.2	107.3	102.9	97.3	100.3	103.5	92.8	96.7
1923	98.6	92.7	104.2	111.3	97.3	109.3	108.7	101.1	108.9	99.9	100.6
1924	100.0	91.0	101.5	106.7	92.0	106.3	102.3	98.9	104.9	93.6	98.1
1925	108.8	100.2	105.3	108.3	96.5	103.2	101.7	101.8	103.1	109.0	103.5
1926	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1927	99.4	96.7	107.7	95.6	88.3	96.3	94.7	96.8	97.5	91.0	95.4
1928	105.9	101.0	121.4	95.5	84.3	97.0	94.1	95.6	95.1	85.4	98.7
1929	104.9	99.9	109.1	90.4	83.0	100.5	95.4	94.2	94.3	82.6	95.3
1930	88.3	90.5	100.0	80.3	78.5	92.1	89.9	89.1	92.7	77.7	86.4
1931	64.8	74.6	86.1	66.3	67.5	84.5	79.2	79.3	84.9	69.8	73.0
1932	48.2	61.0	72.9	54.9	70.3	80.2	71.4	73.5	75.1	64.4	64.8
1933	51.4	60.5	80.9	64.8	66.3	79.8	77.0	72.6	75.8	62.5	65.9
1933:											
January	42.6	55.8	68.9	51.9	66.0	78.2	70.1	71.6	72.9	61.2	61.0
February	40.9	58.7	68.0	51.2	63.6	77.4	69.8	71.3	72.3	59.2	59.8
March	42.8	54.6	68.1	51.3	62.9	77.2	70.3	71.2	72.2	58.9	60.2
April	44.5	56.1	69.4	51.8	61.5	76.9	70.2	71.4	71.5	57.8	60.4
May	50.2	59.4	76.9	55.9	60.4	77.7	71.4	73.2	71.7	58.9	62.7
June	53.2	61.2	82.4	61.5	61.5	79.3	74.7	73.7	73.4	60.8	65.0
July	60.1	65.5	86.3	68.0	65.3	80.6	79.5	73.2	74.8	64.0	68.9
August	57.6	64.8	91.7	74.6	65.5	81.2	81.3	73.1	77.6	65.4	69.5
September	57.0	64.9	92.3	76.9	70.4	82.1	82.7	72.7	79.3	65.1	70.8
October	55.7	64.2	89.0	77.1	73.6	83.0	83.9	72.7	81.2	65.3	71.2
November	56.6	64.3	88.2	76.8	73.5	82.7	84.9	73.4	81.0	65.5	71.1
December	55.5	62.5	89.2	76.4	73.4	83.5	85.6	73.7	81.0	65.7	70.8

tive cost in October, 1932, in each of 21 countries, of an "international basket of provisions" consisting of 14 commodities for which the International Labor Office had information as to actual prices in all of the countries listed. Money cost and the index numbers contained in the table have been computed by the International Labor Office at the par value of the national currencies and also at the exchange rate. However, attention is called to the fact that the fluctuating rates of exchange in 1932 render approximate all figures expressed in a common currency. The 14 items comprising

the basket, and the weight of each (representing approximately the average amount consumed by an adult man per week) are as follows: Bread, 3.75 kilograms (kilogram 2.2 pounds); flour (wheaten), 0.80 kilogram; butter, 0.17 kilogram; beef, 0.45 kilogram; mutton, 0.10 kilogram; pork, 0.20 kilogram; bacon, 0.15 kilogram; potatoes, 2.02 kilograms; sugar, 0.45 kilogram; coffee (or tea), 0.07 kilogram; cheese, 0.09 kilogram; rice, 0.20 kilogram; milk, 2.40 liters (liter 1.06 quarts); and eggs, $3\frac{1}{2}$ (number). In figuring the cost of the various articles, the price of the

TABLE III—PROPORTION OF PERSONS GAINFULLY OCCUPIED, BY AGE AND SEX, 1920 AND 1930

Census year	Males		Females		Both sexes		Percentage distribution of gainfully occupied		
	Total number	Per cent gainfully occupied	Total number	Per cent gainfully occupied	Total number	Per cent gainfully occupied	Males	Females	Total
1920									
10 to 13 years	4,336,009	6.0	4,258,863	2.8	8,594,872	4.4	0.8	1.4	0.9
14 years	1,033,297	16.9	1,012,968	8.2	2,046,265	12.6	.5	1.0	.6
15 years	925,679	30.4	935,766	15.4	1,861,445	22.8	.9	1.7	1.0
16 years	976,834	51.3	996,124	27.9	1,972,958	39.5	1.5	3.2	1.9
17 years	926,033	65.0	929,140	35.7	1,855,173	50.3	1.8	3.9	2.2
18 and 19 years	1,845,246	78.3	1,895,734	42.3	3,740,980	60.0	4.4	9.4	5.4
20 to 24 years	4,527,045	91.0	4,749,976	88.1	9,277,021	63.9	12.5	21.2	14.3
25 to 44 years	16,028,920	97.2	15,249,602	22.4	31,278,522	60.7	47.1	40.0	45.7
45 to 64 years	9,114,960	93.8	7,915,205	17.1	17,030,165	58.2	25.9	15.8	23.8
65 years and over	2,483,071	60.1	2,450,144	8.0	4,933,215	34.3	4.5	2.3	4.1
Unknown	92,875	61.5	55,824	28.0	148,699	48.9	.2	.2	.2
10 years and over	42,289,969	78.2	40,449,346	21.1	82,739,315	50.8	100.0	100.0	100.0
1930									
10 to 13 years	4,862,291	3.3	4,760,201	1.5	9,622,492	2.4	.4	.7	.5
14 years	1,206,486	9.2	1,175,899	4.0	2,382,385	6.6	.3	.4	.3
15 years	1,154,648	16.3	1,141,051	7.6	2,295,699	11.9	.5	.8	.6
16 years	1,181,920	82.7	1,185,895	17.0	2,367,815	24.8	1.0	1.9	1.2
17 years	1,157,150	49.9	1,138,672	27.5	2,295,822	38.8	1.5	2.9	1.8
18 and 19 years	2,264,107	70.7	2,320,172	40.5	4,584,279	55.3	4.2	8.8	5.2
20 to 24 years	5,336,815	89.9	5,533,563	42.4	10,870,378	65.7	12.6	21.8	14.6
25 to 29 years	4,860,180	97.0	4,973,428	81.0	9,833,608	63.6	12.4	14.3	12.8
30 to 34 years	4,561,786	97.6	4,558,635	24.4	9,120,421	61.0	11.7	10.4	11.4
35 to 39 years	4,679,860	97.7	4,528,785	23.1	9,208,645	61.0	12.0	9.7	11.5
40 to 44 years	4,136,459	97.6	3,853,736	21.9	7,990,195	61.1	10.6	7.9	10.0
45 to 49 years	3,671,924	97.2	3,870,355	21.0	7,042,279	60.7	9.4	6.6	8.8
50 to 54 years	3,131,645	95.7	2,844,159	19.7	5,975,804	59.5	7.9	5.2	7.3
55 to 59 years	2,425,992	93.0	2,219,685	17.3	4,645,677	56.8	5.9	3.6	5.4
60 to 64 years	1,941,508	86.8	1,809,713	14.7	3,751,221	52.0	4.4	2.5	4.0
65 to 69 years	1,417,812	75.7	1,352,793	11.4	2,770,605	44.3	2.8	1.4	2.5
70 to 74 years	991,647	57.5	958,357	7.6	1,950,004	33.0	1.5	.7	1.3
75 years and over	915,752	32.3	997,444	4.0	1,913,196	17.5	.8	.4	.7
Unknown	51,816	59.9	42,206	31.8	94,022	47.8	.1	.1	.1
10 years and over	49,949,798	76.2	48,773,249	22.0	98,723,047	49.5	100.0	100.0	100.0

TABLE IV—COST OF A "FOOD BASKET" IN VARIOUS COUNTRIES, IN TERMS OF UNITED STATES CURRENCY, OCTOBER, 1932

Country	Localities covered	Cost of the "food basket" in United States currency		Index numbers (United States = 100)	
		At par	At exchange rate ^a	At par	At exchange rate
United States	51 towns	\$1.74	\$1.74	100	100
Austria	3 towns	1.52	1.28 ^b	87	74
Belgium	Brussels	1.06	1.05 ^c	61	60
Canada	6 towns	1.52	1.40	88	80
Czechoslovakia	3 towns	1.23	1.23	71	71
Denmark	Copenhagen	1.84	.88	77	51
Estonia	2 towns	.71	.71 ^d	41	41
France	6 towns	1.56	1.56 ^e	90	90
Germany	6 towns	1.23	1.33	76	76
Great Britain	7 towns	1.54	1.07	89	61
Hungary	Budapest	1.16	1.16	67	67
Irish Free State	3 towns	1.57	1.09 ^f	90	63
Italy	6 towns	1.60	1.55 ^g	92	89
Latvia	Riga	.92	.92	53	53
Netherlands	4 towns	1.23	1.23	71	71
Norway	Oslo	1.44	.92	83	53
Poland	4 towns	.75	.75	43	43
Portugal	Lisbon	...	1.20	..	69
Sweden	3 towns	1.72	1.13	99	65
Switzerland	4 towns	1.50	1.50	86	86
Yugoslavia	4 towns	1.02	.79 ^h	59	45

^a In October 1932 except where otherwise noted.^b Based on Zurich exchange rate in November, 1932.^c Based on exchange rate in November, 1932.^d Based on exchange rate in July, 1932.^e Based on exchange rate in December, 1932.

...

cheaper kind of bread was used; coffee only was taken into account for those countries in which little tea is used by the working classes, but for Great Britain and the Irish Free State, where coffee is not used by workers' families, only tea was considered. It was stated that the quantities used in the basket are "to some extent arbitrary, and do not correspond to the actual quantities consumed in any of the countries considered. Also, the differences between these weights and the quantities actually consumed vary for different countries, and the system of uniform fixed weights applied throughout may make certain countries

appear relatively too cheap and others too expensive, according to the varying degrees to which the above weights reflect actual conditions." However, the "basket" is believed by the International Labor Office to represent the approximate average proportions in which the various articles are consumed by the working classes in different countries.

In order to show the extent to which the cost of food had decreased since 1929, the International Labor Office recomputed the basket index numbers on a July, 1929 base. The number of towns and the towns themselves are the same for each coun-

TABLE V—COMPARISON OF "FOOD BASKET" COST INDEXES FOR DIFFERENT COUNTRIES WITH THE OFFICIAL COST-OF-FOOD INDEXES, JULY, 1929 TO OCTOBER, 1932
[July, 1929 = 100]

Country	Index ^a	Localities covered	July 1929	Jan. 1930	July 1930	Jan. 1931	Oct. 1931	Oct. 1932
United States	A	10 towns	100 ^b	102 ^c	96 ^b	93 ^c	79	66
	B	51 towns	100	102	96	86	77	66
Austria	A	3 towns	100	96	89	86	91	93
	B	Vienna	100	100	97	89	90	88
Belgium	A	Brussels	100	..	..	92	79	72 ^d
	B	59 towns	100	106	97	92	80	75
Canada	A	6 towns	100	107	100	89	77	69
	B	60 towns	100	108	100	90	72	65
Czechoslovakia	A	3 towns	100	96	90	86	84	82
	B	Prague	100	95	95	85	84	81
Denmark	A	Copenhagen	100	99	87	85	84	81
	B	100 towns	100	97	82	85	81	80
Estonia	A	2 towns	100	98	84	82	71 ^e	64 ^f
	B	Tallinn	100	83	77	71	70	62
France	A	6 towns	100 ^g	104 ^h	105 ⁱ	104 ^j	96 ^k	93 ^l
	B	Paris	100	99	98	101	88	82
Germany	A	6 towns	100	102	95	91	84	75
	B	72 towns	100	97	94	86	79	70
Great Britain	A	7 towns	100	108	94	94	84	85
	B	680 towns	100	101	94	89	85	82
Irish Free State	A	3 towns	100	105	95	93	94 ^m	84 ⁿ
	B	105 towns	100	104	94	91	93	81
Italy	A	6 towns	100 ^o	103	94	96 ^p	84 ^q	83 ^r
	B	Milan	100	104	98	88	82	81
Latvia	A	Riga	100 ^s	..	..	80	74	67
	B	...Do...	100	93	82	77	62	50
Netherlands	A	4 towns	100	108	97	91	84	75
	B	10 towns	100	100	92	88	82	72
Poland	A	4 towns	100	97 ^t	81	71	68	59
	B	Warsaw	100	97	91	77	72	63
Spain	A	3 towns	100	101	101	101	99 ^u	..
	B	Madrid	100	103	102	112	113	..
Sweden	A	3 towns	100	104	97	91	90	88
	B	49 towns	100	96	92	89	85	83

^a A = "food-basket" index numbers. B = food index numbers compiled by national statistical authorities.
^b June. ^c December, 1929, 1930, or 1931. ^d November. ^e July. ^f May. ^g August. ^h February. ⁱ 29 articles.
^j March. ^k January, 1932.

try for the whole period covered. Unweighted averages were used throughout except for Great Britain, for which prices were available only in the form of weighted averages for seven towns. The recomputed indexes are given in Table V, together with food index numbers compiled by national statistical authorities in the different countries concerned, also recomputed on a July, 1929 base.

STEAM BOILERS. See **BOILERS**.

STEAM TURBINES. Progress in steam turbines during the past year centred around improvements in design making for greater dependability and economy. New governing and control systems were evolved to provide freedom from oscillations and at the same time have the necessary sensitivity. New blade sections and improved arrangement of axial clearances increased efficiencies, and the use of materials better suited to present steam conditions reduced maintenance.

Because of the American practice of designing turbines to meet high peak loads while carrying high vacuum, a very large volume of steam must be passed through the low-pressure casing at such times. This means crowding of the steam and consequent loss in efficiency in the low-pressure section. To obviate this condition it would be necessary to increase the already large dimensions of large turbines which, in turn, would add considerably to the initial cost of the unit. The compromise, in many cases, has resulted in excessive leaving losses in the low-pressure steam. This problem is now being given extensive study with a view to effecting modifications in design that will minimize such losses.

As a result of several disastrous fires due to breakage of oil lines supplying the governing mechanism and the consequent impingement of oil on hot steam pipes, the arrangement of turbine oiling and governing systems has undergone radical changes. A new non-inflammable governing fluid has been brought out by one manufacturer, and in the case of the new Buzzard Point Station at Washington, D. C. the oil reservoir, pumps, purifiers, and coolers are isolated in a fire-proof room under the turbine. This room is protected by an automatic CO₂ fire-extinguishing system. Furthermore, all oil piping to the governor and bearings is run inside of and spot-welded to drain lines that return to the oil reservoir in the fire-proof room. This practice is likely to be followed by other new stations.

While a few large turbines were installed during the year, notably a 165,000-kilowatt unit, of the single-shaft type, at the Richmond Station in Philadelphia, the majority of the installations were replacements or supplements to existing equipment. In a number of cases higher pressure units, operating with steam at 400 to 600 pounds, were installed so as to exhaust into the existing lower pressure mains and thus increase the economy of the plant.

In the rayon industry several turbine-generators were put in to operate at frequencies above 100 cycles.

One turbine manufacturer announced the design for a 200,000-kilowatt unit to operate at 1200 pound steam pressure and 1000° F., although no installation has yet been made.

In the high-temperature range, a paper by W. A. Carter and F. O. Ellenwood at the Annual Meeting of the American Society of Mechanical Engineers in December, reported on "The Thermal Performance of the Detroit Turbine Using Steam

at 1000° Fahrenheit." This unit has actually operated successfully for long periods at 1100° with a thermal efficiency of 31.8 per cent and a heat rate of 10,730 B.t.u. per kilowatt-hour. The trend as shown by recent installations is toward higher initial steam temperatures in the neighborhood of 825 to 850°.

Last year also saw the completion and initial operation of two 20,000-kilowatt mercury turbines, one at the Schenectady Works of the General Electric Company and the other at the Kearny Station of the Public Service Electric & Gas Company at Newark, N. J.

STEEL. See **IRON AND STEEL**.

STEEPLECHASING. See **HORSE RACING**.

STEVENS INSTITUTE OF TECHNOLOGY. A college of engineering at Hoboken, N. J., founded in 1870. The enrollment for the autumn of 1933 was 459 undergraduate and 33 graduate students. There were 60 members on the teaching staff. The income for 1932-33 was \$340,000. President, Harvey Nathaniel Davis, Ph.D.

STRAITS SETTLEMENTS. A British crown colony in the Malay Archipelago. The various Settlements with their areas and populations (1931 census) are shown in the accompanying table.

Settlement	Sq. miles	Pop. (1931)	Chief town
Singapore ^a	288	560,023	Singapore
Penang ^b	575	859,757	Georgetown
Malacca	637	186,694	Malacca
Labuan	35	7,538	Victoria
Total for S. S.	1,535	1,114,012	Singapore

^a Includes Christmas and Cocos or Keeling Islands

^b Includes Province Wellesley and the Dindings.

Singapore, the capital, had 433,432 inhabitants in 1932; it is one of the greatest ports in the world. A total of 20,011 merchant vessels (exclusive of native craft) aggregating 43,353,043 tons entered and cleared the ports in 1932. The budget for 1933 estimated revenue at £4,087,172; expenditure, £3,203,773. On Jan. 1, 1933 the public debt amounted to £6,913,352 and 15,074,300 Straits dollars. Governor in 1933, Sir C. Clementi.

STRATOSPHERE. See **METEOROLOGY, AERONAUTICS**.

STREETS. See **ROADS AND STREETS**.

STRIKES AND LOCKOUTS. From 1917 and almost consistently (up to 1932), there had been a steady downward drop in the number of industrial disputes taking place in the United States. In 1933, however, with the recognition of trade union organization by the NRA, industrial disputes once again raised their heads; and while they did not approach the record year 1919, certainly as far as the number of disputes, persons involved and violence and turbulence occurring were concerned, they were as serious as anything that had taken place in this aspect of industrial relations in the whole post-war period. Table I

TABLE I—RELATIVE NUMBER OF DISPUTES AND OF EMPLOYEES INVOLVED, 1916 TO 1932

Year	Dis- putes	Employ- ees	Year	Dis- putes	Employ- ees
1916	100	100	1925	84	27
1917	117	77	1926	27	21
1918	88	78	1927	19	22
1919	96	260	1928	17	22
1920	90	91	1929	24	15
1921	63	69	1930	17	10
1922	29	101	1931	24	17
1923	41	47	1932	21	15
1924	38	41			

gives the relative number of disputes and of employees involved from 1916 to 1932, with 1916 as the base year.

Table II shows the number of employees involved in disputes and the average per dispute for the same period.

TABLE II—TOTAL AND AVERAGE NUMBER OF WORKERS IN DISPUTES BEGINNING IN EACH YEAR FOR WHICH NUMBER OF EMPLOYEES IS REPORTED, 1916 TO 1932

Year	Disputes in which number of employees is reported	Number of employees		Year	Disputes in which number of employees is reported	Number of employees	
		Total	Average per dispute			Total	Average per dispute
1916	2,667	1,599,917	600	1925	1,012	428,416	428
1917	2,325	1,227,264	528	1926	783	329,592	421
1918	2,151	1,239,989	576	1927	734	349,434	476
1919	2,665	4,160,348	1,561	1928	629	357,145	568
1920	2,226	1,463,054	657	1929	903	230,463	255
1921	1,785	1,099,247	616	1930	653	158,114	242
1922	899	1,612,562	1,794	1931	894	279,299	312
1923	1,199	756,584	631	1932	808	242,826	301
1924	898	654,641	729				

Table III shows the number of disputes ending in each year and their total and average duration.

TABLE III—TOTAL AND AVERAGE DURATION OF DISPUTES ENDING IN EACH YEAR FOR WHICH DURATION IS KNOWN, 1916 TO 1932

Year	Disputes for which duration is reported	Duration		Year	Disputes for which duration is reported	Duration	
		Total	Average per dispute			Total	Average per dispute
		Days	Days			Days	Days
1916	2,116	49,680	23	1925	879	23,809	27
1917	1,435	26,981	19	1926	738	18,805	25
1918	1,709	29,895	17	1927	669	15,865	24
1919	1,855	62,930	34	1928	656	17,997	27
1920	1,321	51,893	39	1929	913	18,507	20
1921	1,258	64,231	51	1930	667	12,292	18
1922	580	21,436	37	1931	880	14,154	16
1923	968	23,177	24	1932	817	13,246	16
1924	957	28,588	30				

In 1933, however, with the inauguration of the New Deal, labor once again became restive and industrial disputes swept the country leaving no section and no industry untouched. The chief cause for labor disputes was undoubtedly the demand upon the part of labor to organize in and conduct collective bargaining through trade unions of its own choosing; however, disputes over wages and hours continued of course to take place. It was estimated by Mr. Mauritz A. Hallgren, writing in the *Nation* of November 8, that since the New Deal began nearly 1,000,000 workers had gone out on strike. The number of disputes brought to the attention of the Bureau of Labor Statistics had increased more than four-fold from January to August, 1933; and more than five-fold as compared with the average for 1932. In many communities industrial disputes had definitely taken a violent turn and were resulting in wholesale arrests of strikers and strike pickets and in the destruction of property. According to Mr. Hallgren, this unrest "also led to numerous riots, from which both workers and police have come away with bruised heads and broken limbs, when no more serious injuries have been inflicted. Indeed, press dispatches show that some hundreds of strikers have been wounded and perhaps a dozen killed in clashes with factory guards, deputy sheriffs, and city police." There was no question that increasing independence of labor was due to the fact that workers were feeling their strength, particularly with the formal recognition of their right to organize by the Federal government under the New Deal. It is significant to note, too, that

strikes were taking place not so much in the organized industries, that is to say, in the printing, railroading, and building trades, but in the heavy industries where heretofore an open shop policy had prevailed. Labor was organizing and engaging in strike activities in steel, automobiles, oil, and

rubber, and it was doing similarly in loosely integrated industries like bituminous coal and the clothing and needle trades.

One significant result of this renewal of activity has been the expression from many quarters that strikes were not only antiquated and barbaric but that they were frustrating the orderly development of the New Deal programme. The Paul Block newspapers published a signed editorial from their owner which declared that "hundreds of strikes throughout the country are largely responsible for the retardment of business progress. . . . Business is ready to start upward, and no one, either employer or employee, should be allowed to stand in the way."

The article on LABOR ARBITRATION AND CONCILIATION will point out how under the New Deal there has been set up elaborate machinery for the purpose of intervening in labor disputes, that is, the National Labor Board. Here it suffices to mention that labor unrest apparently may be accepted as a sign of recovery, for in periods of real stagnation the psychological attitude of labor has not been very much unlike that of industry.

In Table IV there are presented figures for industrial disputes in the United States as reported to the Bureau of Labor Statistics for the twenty-four months period January, 1932 to December, 1933. It will be observed how under the New Deal the number of disputes, the number of workers involved, and the number of man-days lost in disputes have increased by leaps and bounds.

Table V is presented to show how industrial disputes were leaving no industry untouched. It gives, by industrial groups, the number of strikes beginning in August, September, and October, 1933, and the number of workers directly involved.

TABLE IV—INDUSTRIAL DISPUTES BEGINNING IN AND IN EFFECT AT END OF EACH MONTH JANUARY, 1932 TO OCTOBER, 1933

Month and year	No. of disputes beginning in month	No. of disputes in effect at end of month	No. of workers beginning in month	No. of workers in effect at end of month	Number of man-days lost in disputes
1932					
January ..	87	87	12,091	4,993	132,873
February ..	56	34	33,713	31,103	460,701
March	64	30	33,087	13,937	736,782
April	89	44	19,187	21,513	620,866
May	87	52	44,357	49,777	1,251,455
June	69	46	15,858	24,138	943,388
July	66	40	20,890	33,216	740,785
August	85	38	28,492	27,717	754,423
September ..	85	33	17,824	7,456	566,045
October	47	23	10,442	2,324	147,059
November ..	38	21	3,460	1,896	68,154
December ..	85	12	3,425	997	40,492
1933					
January ..	67	29	19,616	8,790	240,912
February ..	63	32	10,909	6,706	109,860
March	91	41	39,913	12,794	445,771
April	72	46	23,077	19,867	535,039
May	133	49	41,652	16,584	603,723
June	131	45	40,903	24,593	504,362
July	219	68	108,350	49,058	1,404,850
August	198	73	145,635	101,041	1,401,532
September ..	180	92	235,071	150,210	3,642,431
October	107	67	51,668	94,368	3,067,967
November *	56	45	38,875	23,277	1,193,188
December *	41	40	26,924	14,706	441,807

* Preliminary figures subject to change.

STRIKES AND LOCKOUTS IN CANADA, 1913 TO 1932

Year	Number of disputes in existence in the year	Number of disputes beginning in the year	Employers involved	Workers involved	Time lost in working-days
1913 ..	152	143	1,077	40,519	1,036,354
1914 ..	63	58	261	9,717	490,850
1915 ..	63	62	120	11,395	95,042
1916 ..	120	118	332	26,538	236,814
1917 ..	160	158	758	50,255	1,123,515
1918 ..	230	228	782	79,743	647,942
1919 ..	336	332	1,967	148,915	3,400,942
1920 ..	322	310	1,374	60,327	799,524
1921 ..	168	159	1,208	28,257	1,048,914
1922 ..	104	89	732	43,775	1,528,661
1923 ..	86	77	450	34,261	671,750
1924 ..	70	64	435	34,310	1,295,054
1925 ..	87	86	497	28,949	1,193,281
1926 ..	77	75	512	23,834	266,601
1927 ..	74	72	480	22,299	152,570
1928 ..	98	96	548	17,581	224,212
1929 ..	90	88	263	12,946	152,080
1930 ..	67	67	338	13,768	91,797
1931 ..	88	86	266	10,738	204,238
1932 ..	116	111	497	23,390	255,000

disputes, which in some cases were continued for relatively long periods. Most of the time loss in such disputes in 1932 was due to two controversies in Nova Scotia and four in Alberta. In other industries the 1932 time loss was considerably less

TABLE V—INDUSTRIAL DISPUTES BEGINNING IN AUGUST, SEPTEMBER, AND OCTOBER, 1933

Industrial group	Number of disputes beginning in— August	September	October	Number of workers involved in disputes beginning in— August	September	October
Auto, carriage, and wagon workers	1	4	.	100	5,875	5,256
Bakers	7	5	3	1,477	1,270	45
Brick and tile workers .....	..	1	..	..	46	..
Broom and brush workers .....	..	1	..	..	46	..
Building-trades workers	13	9	6	872	16,767	551
Car builders	1	..	..	50	..	..
Chauffeurs and teamsters .....	..	7	6	..	12,143	4,895
Clothing workers	54	43	13	85,367	80,142	9,145
Coopers	1	2	..	41	120	..
Electric and gas appliance workers ..	4	2	2	1,160	3,342	1,700
Farm laborers	4	8	2	3,130	4,095	4,300
Fishermen .....	..	1	..	..	60	..
Food workers	3	3	2	1,050	2,200	260
Furniture workers	9	8	3	872	2,363	620
Glass workers .....	..	1	1	..	210	200
Hotel and restaurant workers .....	..	1	..	..	200	..
Iron and steel workers .....	..	2	2	..	2,400	950
Jewelry workers .....	..	1	1	..	30	3,050
Laundry workers	1	2	1	60	68	90
Leather workers	4	6	1	1,207	1,663	2,100
Light, heat, power, and water workers	..	..	1	..	..	300
Longshoremen	1	..	2	100	..	300
Lumber, timber, and mill workers ..	2	..	..	500	..	..
Metal-trades workers	13	19	7	2,735	5,666	1,547
Miners	11	7	14	17,306	84,370	5,856
Oil and chemical workers .....	..	1	1	..	50	800
Paper and paper goods workers	1	..	1	4,000	..	550
Pottery workers .....	..	..	1	..	..	150
Printing and publishing workers ..	2	..	..	60	..	..
Rubber workers	2	1	1	516	392	1,536
Shipbuilding workers	1	..	2	158	..	4,700
Steamboatmen	1	..	..	14	..	..
Stoneworkers	1	2	..	150	47	..
Municipal employees	2	..	1	2,019	..	100
Teachers .....	..	1	2	..	117	184
Textile workers	42	20	13	12,455	23,449	6,198
Tobacco workers	7	1	..	8,408	55	..
Other occupations	10	20	6	1,828	6,427	3,065
Total	198	179	95	145,635	253,612	58,203

CANADA. In 1932 there were 116 strikes and lockouts in Canada—28 more than in the preceding year. The number of workers involved in these industrial disputes of 1932 were 23,390, an increase of 12,652 over 1931. The time loss in man working days was 255,000 in 1932 as compared with 204,238 in the previous 12 month period. Such increases are accounted for mainly by the greater number and importance of the coal mine

than that of 1931, although the number of employees involved was almost double in the later year. As in 1931 the majority of the disputes did not continue long and involved relatively few workers. The chief industries affected were logging, sawmilling, salmon fishing, and fur and clothing manufacture. The table at the top of this column is a record of the strikes and lockouts in the Dominion of Canada from 1913 to 1932.

DENMARK. According to the American vice-consul at Copenhagen, Mr. E. Gjessing, as reported in the *Monthly Labor Review*, on Jan. 31, 1933, the Danish Parliament passed a law banning all strikes and lockouts for a period of one year. By this enactment a general labor war, which threatened to break out on February 1 in Denmark, was averted. Strikes have been rare in this country, the only time industrial disputes occurring being as a result of the inability on the part of capital to make quick adjustments in wages when Denmark went off the gold standard. As a result of this inability of the two groups to come to an understanding, from early 1932 on, every month seemed to force the contesting groups farther apart so that there was imminent danger of industrial warfare on a wholesale scale. Thus in January, 1932, the association of employers issued a notice of lockout which would have affected 100,000 workers; the trade unions replied immediately with strike notices. A board of arbitration attempted to formulate a proposal of compromise, but in vain. The prime minister thereupon called a conference of representatives of the employers and workers. The result of his mediation was that a basis for negotiations was reached, and the board of arbitration thereupon submitted the proposal which was the result of the ensuing negotiations. The proposal, which was accepted by both parties, provided for an extension of one year from date of expiration of all trade agreements.

In January, 1933, on the eve of the expiration of the wage agreements the employers renewed an earlier demand for a 20 per cent cut and the representatives of labor refused to negotiate, whereupon lockout warnings to take effect on February 1 followed. The employers claimed that the wage standard was too high and about 20 per cent above that of Sweden, and pointed to the ever increasing unemployment in Denmark as a proof of their contention. At the end of January, 1933, about 42 per cent of all organized workers were out of employment. The increasing unemployment, the fall in the prices of agricultural products, the resultant distress among the farmers and the looming industrial conflict combined to produce a situation which threatened to be serious in the extreme. It was to meet these conditions that the bill, previously mentioned, was passed Jan. 31, 1933. It aimed to remedy the agricultural situation by inflating the currency, reducing its value in kroner from 19 to 22.50 in the pound sterling, and to meet the industrial situation by forbidding strikes and lockouts for one year.

STUDENT SERVICE, INTERNATIONAL. See INTERNATIONALISM.

STURGIS, MAJ.-GEN. SAMUEL DAVIS, U.S.A., RET. An American soldier, died in Washington, D. C., Mar. 6, 1933. He was born in St. Louis, Mo., Aug. 1, 1861, attended Washington University there, and was graduated from the United States Military Academy in 1884. Commissioned a 2d lieutenant in the 1st Field Artillery, he rose through the grades until on the outbreak of the Spanish-American War he was acting as assistant adjutant-general of the Department of the Pacific and the 8th Army Corps. He participated in the campaign against Manila and during the first American occupation of Cuba in 1899 served as adjutant-general of the Department of Pinar del Rio. Later in that year he was transferred to the Philippines as assistant adjutant-general of the Philippine division during the insurrection there.

Assigned to the General Staff Corps from 1907 to 1911, General Sturgis returned to field duty with the 3d Artillery at Fort Sam Houston, Texas, and for three years (1913-16) was connected with the 1st Artillery in the Hawaiian Islands. He organized the 7th Field Artillery at San Antonio, Texas, in 1916 and until the entry of the United States into the World War served as commander of Camp Funston at Leon Springs, Kans.

On his promotion to the rank of major-general, General Sturgis organized and commanded at Camp Pike, Little Rock, Ark., the 87th Division of the National Army, accompanying it overseas. During the Meuse-Argonne operations of October, 1918, he saw detached service with the 1st and 42nd Divisions, both of which were in the line twice. After the Armistice he assumed command of the 80th Division and on his return to the United States in April, 1919, was assigned successively to Camp Gordon, Atlanta, Ga., Camp Pike, Little Rock, Ark., and Camp Sherman in Ohio. Named commander of the Panama Canal Department in 1921, he served during the year previous to his retirement in 1925 as commandant of the Third Corps Area at Baltimore.

SUBWAYS. See RAPID TRANSIT.

SUCCESSION STATES. See LITTLE ENTENTE.

SUDAN. See ANGLO-EGYPTIAN SUDAN; FRENCH WEST AFRICA

SUEZ CANAL. Traffic in the canal showed a slight gain for the year ending June 30, 1933. The total number of transits was 5163 as against 5025 in the previous twelve-month period; the gross tonnage was raised to 40,572,276 from 39,533,187, and the net tonnage to 29,239,770 from 28,377,553. British bottoms continued to carry about 53 per cent of the gross tonnage, with German vessels occupying second place in number and tonnage, about 8½ per cent. The accompanying table shows the total commercial traffic for the year.

SUEZ CANAL COMMERCIAL TRAFFIC STATISTICS, YEAR ENDED JUNE 30, 1933

[This statement is compiled from the Suez Canal Bulletin]

Flag	Number of transits	Suez Canal	
		Gross tons	Gross tons
American	76	657,910	485,513
British	2,829	22,212,301	16,018,235
Chinese	2	7,748	5,967
Czechoslovakian	2	7,392	5,194
Danish	79	573,010	429,823
Danzig	3	32,258	24,034
Dutch	329	3,184,298	2,301,845
Estonian	2	6,925	4,901
Finnish	3	20,223	15,234
French	324	2,928,186	2,044,766
German	437	3,594,185	2,566,361
Greek	46	182,172	136,996
Italian	301	2,339,889	1,624,224
Japanese	300	2,161,725	1,608,752
Norwegian	231	1,542,789	1,141,246
Panamanian	1	4,996	3,980
Persian	2	1,520	975
Portuguese	3	16,279	11,796
Russian	95	506,769	370,424
Swedish	95	583,945	434,162
Venezuelan	1	3,392	2,429
Yugoslav	2	4,369	2,913
Total	5,163	40,572,276	29,239,770

SUGAR. The 1933 cane sugar production of Louisiana was estimated at 202,000 short tons, a decrease of 21,000 tons below the 1932 production. The cane crop for sugar was placed at 2,655,000 short tons. In addition 225,000 tons were reported as grown for sirup and 245,000 tons for seed cane, or a total sugar cane production of 3,125,000 tons.

Eight southern States including Louisiana reported an area of 125,000 acres of sugar cane grown for sirup and a sirup production of 19,106,000 gallons. The leading State, Louisiana, produced 4,847,000 gallons followed by Georgia with 4,125,000 gallons, Alabama with 3,220,000 gallons and Mississippi with 3,173,000 gallons. Louisiana in addition to the cane sirup produced 15,240,000 gallons of molasses. Sixteen States reported an acreage of 240,000 acres of sorgho, or sweet sorghum and a sorgho sirup production of 14,961,000 gallons. The yield of maple products in 1933 as reported by 10 States was 1,322,000 pounds of maple sugar and 2,175,000 gallons of maple sirup.

During the fiscal year ended June 30, 1933, the United States exported 41,000 short tons of refined sugar, 554,000 gallons of sirup and 665,000 gallons of molasses and imported 2,951,000 short tons of cane sugar including 1,230,000 tons from the Philippine and Virgin Islands, 62,000 pounds of dextrose, lactose, and levulose, 2,542,000 pounds of maple sugar and maple sirup, 10,799,000 gallons of edible molasses and 134,651,000 gallons of molasses for other than human consumption.

The world's raw sugar production in 1932-33 according to estimates published in November by Willett and Gray amounted to 24,278,794 long tons of which 16,496,076 tons were cane sugar and 7,782,718 tons beet sugar. The 1932-33 production was smaller by more than 2,000,000 tons than the production of the preceding year. The cane sugar production of the leading countries was reported as follows: British India 4,651,000 tons, Cuba 1,995,079 tons, Java 1,374,254 tons, Philippine Islands 1,145,341 tons, Brazil 950,000 tons, Hawaii 900,000 tons and Puerto Rico 744,918 tons of 2240 pounds each. The yields of raw beet sugar in the leading European countries were estimated as follows: Germany 1,497,137 tons, France 1,000,000 tons, Soviet Republics 1,070,000 tons, Czechoslovakia 563,086 tons, Great Britain 490,000 tons, and Italy 430,000 tons.

In the United States the beet sugar production in 1933 according to estimates by the Department of Agriculture was 1,629,000 short tons, an increase of 272,000 tons over the production in 1932. The beet sugar production (mostly refined) of the leading States was reported as follows: Colorado 390,000 tons, California 262,000 tons, Michigan 177,000 tons, and Utah 147,000 tons. The yields of sugar beets in the leading States were estimated at 2,624,000 tons for Colorado, 1,568,000 tons for California, 1,236,000 tons for Michigan, and 1,068,000 tons for Nebraska. The average sucrose content of the beets, reported as 16.47 per cent, was above the average and ranged from 15.02 per cent in Nebraska to 18.25 per cent in California. The sugar beet dry pulp production was estimated at 271,000 tons.

SUICIDE. See CRIME.

SULPHUR. Production, shipments, and exports of sulphur in 1933 showed large increases in comparison with 1932 according to the annual report of the U. S. Bureau of Mines. Production was 58 per cent, shipments 48 per cent, and exports 48 per cent higher in 1933 than in 1932, but they were 29 per cent, 9 per cent, and 10 per cent, respectively, below the averages for the 5-year period 1928-32. Shipments exceeded production; consequently, stocks at the mines were reduced. Production of sulphur was reported from California, Louisiana, Texas, and Utah.

Sulphur output amounted to 1,406,063 long tons in 1933, a gain of 58 per cent, compared with the output in 1932 of 890,440 tons. Shipments increased from 1,108,852 tons, valued at about \$20,000,000 in 1932, to 1,637,368 tons, valued at about \$29,500,000 in 1933, or 48 per cent in both quantity and value. Stocks at the mines on Dec. 31, 1933, had decreased to 2,799,950 tons, or 231,310 tons below the reserve at the close of the preceding year. The average quoted price for sulphur as reported by the trade journals was unchanged at \$18 a ton f.o.b. mines throughout the year. Spot prices for car lots were \$21 a ton and prices for sulphur exported were given as \$22-\$25 a ton f.a.s. Atlantic ports. See CHEMISTRY, INDUSTRIAL OR APPLIED.

SUMATRA. See NETHERLAND INDIA.

SUMMER THEATRE. See DRAMA.

SUNDAY SCHOOL UNION, AMERICAN. A nonsectarian society organized in 1817 to establish and maintain Sunday schools in the rural and mountain sections of the United States and to publish and circulate moral and religious literature. Its board of managers and missionary force are composed of men representing many of the Protestant denominations. For the year ending Feb. 28, 1933, 634 schools were organized and 513 reorganized, with a total of 3720 teachers and 38,240 scholars. There were 258 young people's societies established; 138 preaching stations opened; 23 churches of various denominations organized; and 8 churches built. The organization, with schools in every State but two, maintained approximately 4000 Sunday schools.

President, E. Clarence Miller, Ph.D.; vice-presidents, Robert L. Latimer and James F. Shrader; secretary of missions, Elliott D. Parkhill, D.D., editor of publications, Arthur M. Baker, Ph.D.; treasurer, John H. Talley. National headquarters are at 1816 Chestnut Street, Philadelphia, Pa.

SUPREME COURT. See UNITED STATES.

SURETY INSURANCE. See INSURANCE.

SURGEONS, AMERICAN COLLEGE OF. A college or guild (not a teaching institution), organized in 1913 by some 500 surgeons of North America to elevate the standard of surgery. Fellowships in the organization are granted on the basis of merit only, with reference to professional ability and moral and ethical fitness. In 1933 these numbered approximately 11,000 and included representatives from practically every country of the world and from every branch of surgery.

The college's twenty-third annual congress was held in Chicago, Ill., Oct 9-13, 1933, with an attendance of more than 3000 surgeons. Among the important conferences were those on graduate and undergraduate teaching of surgery, cancer clinics, industrial medicine and traumatic surgery, community health, and hospital standardization. The organization's official journal is *Surgery, Gynecology, and Obstetrics*.

The officers elected for 1933-34 were: President, Dr. William D. Haggard, Nashville, Tenn.; president-elect, Dr. Robert B. Greenough, Boston, Mass.; vice-presidents, Dr. Evarts A. Graham, St. Louis, Mo., and Dr. Alexander R. Munroe, Edmonton, Alberta, Canada; and treasurer, Dr. Frederic A. Besley, Waukegan, Ill. Dr. Franklin H. Martin is director-general, and Dr. Malcolm T. MacEachern and Dr. Bowman C. Crowell are associate directors. Headquarters are at 40 East Erie Street, Chicago, Ill.

SURGERY. See MEDICINE AND SURGERY.

SURINAM, soo'ri-nām' (DUTCH GUIANA). A possession of The Netherlands on the north coast of South America. Area, 54,291 square miles; population (1931), 155,888. Paramaribo, the capital, had 48,389 inhabitants.

SUZZALLO, su'za-lō, HENRY. An American educator, died in Seattle, Wash., Sept. 25, 1933. He was born at San Jose, Calif., Aug. 22, 1875. On his graduation from Stanford University in 1899 he was an instructor there for several years and in 1902 was made assistant professor of education. In 1907 he was called to Columbia University (from which he had received the Ph.D. degree in 1905) to serve as adjunct professor of elementary education in its Teachers College. Two years later he became professor of the philosophy of education, the first incumbent of such a chair of educational sociology at any American institution.

Dr. Suzzallo accepted the presidency of the University of Washington in 1915 and succeeded during the next decade in making it one of the principal educational institutions of the Northwest, its enrollment alone increasing from 2850 in the autumn of 1915 to 6850 in the autumn of 1926. In the latter year, however, he was relieved of his duties by the Board of Regents on account of a clash with Gov. Ronald H. Hartley regarding the conduct of the university. Dr. Suzzallo charging political interference with the institution's academic programme. He had served during the World War as chairman of the Washington State Council of Defense and as one of 10 umpires appointed by President Wilson in connection with the controversies investigated by the National War Labor Board, later acting as adviser to the War Labor Policy Board.

Named chairman of the board of trustees of the Carnegie Foundation for the Advancement of Teaching in 1927, Dr. Suzzallo acted also in that year as visiting professor on international relations for the Carnegie Endowment for International Peace at the Universities of Vienna, Budapest, Sofia, Belgrade, Zagreb, Bucharest, Padua, and Constantinople. On his return he was appointed director of the President's National Advisory Committee on Education, which sought the formulation of a national policy for better participation of the government in educational activities, recommending in particular the appointment of a Secretary of Education in the President's Cabinet. In 1930 he succeeded Dr. Henry S. Pritchett as president of the Carnegie Foundation for the Advancement of Teaching.

In addition to serving as an elector of the Hall of Fame after 1920 Dr. Suzzallo had acted as chairman of the committee of selection for the Rhodes Scholarship Trust (1915-26) and as president of the National Association of State Universities (1921-22). He edited the Riverside Educational Monographs after 1909, and from 1930 to 1933 the *National Encyclopedia*.

SVALBARD (SPITSBERGEN). An Arctic archipelago belonging to Norway, situated between 10° and 35° E. and 74° and 81° N. Area, 24,294 square miles. The wintering force in 1931-32 was 436. Coal is the principal mineral—the export of which amounted to 215,952 tons in 1932. The budget for 1933-34 was estimated to balance at 90,000 kroner.

SWARTHMORE COLLEGE. A nonsectarian institution for higher education in Swarthmore, Pa. The 1933-34 enrollment was 583. The teach-

ing staff numbered 84. The total endowment was \$7,000,000. President, Frank Aydelotte, LL.D.

SWEDEN. A constitutional monarchy of Scandinavia. Capital, Stockholm; reigning sovereign in 1933, King Gustaf V.

AREA AND POPULATION. Sweden has a gross area of 173,174 square miles (158,510 square miles of land). The estimated population on Dec. 31, 1932, was 6,190,364, compared with 6,141,571 at the census of 1930. At the end of 1932, 33.25 per cent of the population was urban, as against 29.52 per cent in 1920 and 21.49 per cent in 1900. Males numbered 3,053,528 and females 3,136,836. In 1932, there were 89,733 living births, 71,427 deaths, and 41,556 marriages. The birth rate per 1000 inhabitants in 1932 was 14.53 (15.37 in 1930); death rate, 11.57 (11.71 in 1930). Emigrants in 1932 numbered 2121 (2971 in 1931); immigrants, 8991 (8390 in 1931). Populations of the chief cities at the beginning of 1933 were: Stockholm, 519,711; Göteborg, 251,110; Malmö, 131,249; Norrköping, 62,288; and Hälsingborg, 57,360.

EDUCATION. Primary education is free and compulsory for children from 7 to 14 years of age. In 1931, there were 671,606 pupils in elementary schools, 35,316 pupils in 127 public secondary schools, 4620 students in 54 people's high schools, and about 3800 in 2 high schools and 8 elementary technical schools. The two universities, at Uppsala and Lund, had 3239 and 2706 students, respectively, in the autumn of 1932.

PRODUCTION. Agriculture supports approximately half the population, the remainder being dependent upon fishing, lumbering, commerce, and industry. There were 427,152 farms under cultivation in 1927. The value of all crops in 1932 was estimated at 920,000,000 kronor (1 krona equals \$0.2680 at par), compared with 851,000,000 kronor in 1931. Production of the chief crops, in metric tons, in 1932, with 1931 figures in parentheses, was: Wheat, 721,213 (463,573); rye, 434,215 (283,126); barley, 237,402 (222,903); oats, 1,187,982 (987,850); mixed grain, 580,383 (500,073); peas, beans, and vetches, 49,915 (44,027); potatoes, 2,133,649 (1,481,895); sugar beets, 1,554,039 (876,129); fodder roots, 4,062,597 (3,185,551); hay, 5,774,866 (5,769,198). Livestock in 1932 included 3,120,500 cattle, 607,700 sheep and lambs, 1,542,000 swine, and 659,600 horses. The forests, covering 57,257,000 acres, support the important pulpwood, paper, match, and wood-working industries. Revenue from the state forests in 1931 was 34,638,673 kronor.

The mining industry experienced a sharp depression during the years 1931 and 1932. Production of iron ore declined from 11,230,428 metric tons in 1930 to 7,070,808 in 1931 and 3,298,989 in 1932. Pig iron output was 264,775 metric tons in 1932, 389,236 tons in 1931, and 459,780 in 1930. Preliminary figures for other minerals in 1932, with 1931 figures in parentheses, were (in metric tons): Coal, 33,076 (343,197); silver and lead, 11,086 (14,844); copper, 3553 (3609); manganese, 4728 (8364); pyrites, 71,534 (57,609); zinc, 46,034 (58,972). The production of wrought iron and steel was 537,148 metric tons in 1932 (551,243 in 1931). In 1931, 267 mines were in operation, employing 52,679 workers.

Industrial establishments in 1931 numbered 14,772, with 430,050 employees (323,444 men), and a total effective horse power of 4,257,000.

The volume of industrial production in 1932 was estimated to have fallen 15 to 20 per cent below the 1930 level, due to the restriction of foreign markets and curtailment of credits. However, exports of lumber and of newsprint were higher than in 1931, but prices were generally unsatisfactory. The value of industrial products intended for sale was 4,355,821,000 kronor in 1931, divided as follows: Mining and metallurgical products, 1,165,168,000 kronor; food products, 1,056,105,000 kronor; paper and publishing industry, 609,606,000; textiles and garments, 433,917,000; wood and wood products, 349,203,000; chemicals, 208,246,000; leather, skins and rubber, 191,293,000; stone, clay, and earth products, 153,073,000; machinery 188,210,000. The value of industrial production in 1932 was 4,331,000,000 kronor.

COMMERCE. The decline in Swedish imports and exports of merchandise during the period 1929 to 1932 is shown in the accompanying table from the 1933 *Statistisk Årsbok*.

IMPORTS AND EXPORTS OF MERCHANDISE,
1929-32
[In thousands of kronor]

Year	Imports	Exports	Excess of exports (+) or imports (-)
1929	1,782,584	1,812,307	+ 29,723
1930	1,662,175	1,550,351	- 111,824
1931	1,427,541	1,122,408	- 305,133
1932 *	1,154,864	947,398	- 207,466

* 1932 figures are preliminary.

The leading export classes, by values, in 1932 were: Paper pulp and its manufactures, 290,473,803 kronor (346,721,647 in 1931); wood and cork and their manufactures, 152,726,633 kronor (172,848,721); non-precious metals and their manufactures, 140,317,777 kronor (142,501,204); machines, apparatus and electric plant parts, 88,529,828 kronor (122,673,472); minerals and mineral products, 43,381,127 kronor (77,030,241). The leading import items were textile materials and manufactures, coal and metal products, chemicals, machinery, vegetable products, etc.

Great Britain, Germany, and the United States are the leading countries in Swedish foreign trade. The distribution of exports by countries in 1932 (1931 figures in parentheses) was: Great Britain, 239,858,000 kronor (304,697,000); United States, 99,777,000 kronor (132,964,000); Germany, 90,145,000 kronor (114,042,000); Denmark, 61,165,000 kronor (81,590,000); Norway, 61,376,000 kronor (72,065,000). The chief sources of imports in 1932 and 1931, respectively, were (in kronor): Germany, 338,566,000 (472,464,000); Great Britain, 193,585,000 (200,833,000); United States, 124,842,000 (178,128,000); Denmark, 72,887,000 (87,145,000); the Netherlands, 47,088,000 (60,561,000).

United States statistics for 1933 valued imports from Sweden at \$30,971,288 (\$24,479,716 in 1932) and exports to Sweden at \$18,598,307 (\$17,456,743 in 1932).

FINANCE. For the fiscal year ended June 30, 1932, closed governmental accounts showed revenue of 878,720,587 kronor and expenditure of 893,861,786 kronor, compared with revenue of 840,426,575 kronor and expenses of 818,509,668 kronor in the preceding fiscal year. Of the 1931-32 revenues, ordinary receipts accounted for 617,-

640,102 kronor and loans for 72,805,500 kronor. Actual expenses were 765,781,803 kronor and expenditures for the reduction of debt and improvement of state property were 128,089,983 kronor. Preliminary returns for the 1932-33 fiscal year, published by the National Accounting Office, showed receipts (including loans and capital assets employed) of 870,709,000 kronor and expenditures of 907,587,000 kronor, as compared with budget estimates balancing at 896,087,000 kronor.

The national debt on Aug. 31, 1933, totaled 2,381,790,000 kronor, as against 2,160,000,000 kronor on Aug. 31, 1932. The krona (crown) equals \$0.268 at par. The average exchange rate in 1932 was \$0.1847.

COMMUNICATIONS. On Jan. 1, 1933, there were 16,776 kilometers of railway lines in Sweden, of which 6878 kilometers belonged to the state. According to preliminary figures, total receipts of the railways in 1932 were 274,202,000 kronor (303,818,000 in 1931) and operating receipts exceeded operating expenditures by 17,670,000 kronor (34,261,000 in 1931). Electrification of the state railway has been going forward for a number of years. Electrification of the Stockholm-Malmö line was completed in September, 1933. There were 47,139 miles of highways in 1931. Commercial air lines, partially subsidized by the government, connect Stockholm with Helsinki, Finland, and Malmö with Copenhagen and Amsterdam. Swedish telephone connections were extended during 1933 to include Tunis, Algeria, Colombia, and Peru.

GOVERNMENT. Executive power is vested in the King, who acts through a responsible minister known as the Council of State, at the head of which is the Minister of State, or premier. Legislative power rests with the Diet (Riksdag) of two chambers. The composition of the lower chamber elected Sept. 18, 1932, for four years was: Social Democrats, 104; Conservatives, 58; Agrarians, 36; People's party, 20; Communists, 8; Liberals, 4. Prime Minister in 1933, P. A. Hansson.

HISTORY

RECOVERY MEASURES. The energies of the Swedish government and people during 1933 were directed mainly toward checking the economic depression and liquidating the affairs of the gigantic Kreuger interests, which collapsed following Ivar Kreuger's suicide in 1932. At the opening of the new Riksdag on Jan. 11, 1933, the minority Social Democratic government, formed Sept. 24, 1932, submitted a comprehensive programme designed to stimulate economic recovery. It was based on recommendations of the expansionist school of economics, which later were reflected in the, somewhat similar but far more revolutionary recovery programme of the Roosevelt Administration in the United States. The Swedish programme did not pass the Riksdag until June 21, the interim being devoted to discussion and political negotiations. Its adoption was made possible by an alliance between the Social Democrats and the Agrarians. The latter agreed to support the industrial recovery measures in return for the government's pledge to fix the price of butter, wheat, and rye, place an excise on margarine, and regulate the foreign trade in eggs.

The industrial programme provided for the expenditure of 288,000,000 kronor on public works, direct relief, and the underwriting of private en-

terprises, particularly through direct loans to farmers. Of this sum the national government was to provide 180,000,000 kronor, mostly through borrowing, and the balance was to come from local governmental units in districts directly benefited by the public works. The works measures were expected to provide employment for 74,000 men for one year. Funds for repayment of the short-term bonds issued to finance the scheme were to be raised through sharply increased inheritance taxes.

At the same time the government continued its efforts, inaugurated in 1931, to expand domestic credit and increase price levels through monetary measures. According to Prof. Bertil Ohlin, Swedish economist, the Bank of Sweden up to Oct. 30, 1933, had bought gold and foreign exchange to the value of 400,000,000 kronor. The result was a decline in the gold value of Swedish currency and the maintenance of the Swedish price level, despite falling prices abroad. By the end of the year economic conditions showed some improvement, in spite of an extended strike in the building trades, involving 10,000 men, and the adverse effects of the Krueger episode. However, the government's programme had not succeeded in raising prices or in bringing about a real expansion.

THE KREUGER REPORT. The official auditors of the Krueger enterprises submitted their final report Jan. 9, 1933. It showed that the "match king" had raised \$724,000,000 from June 1, 1918, to Mar. 31, 1932, of which \$560,000,000 was obtained for shares and debentures. Of the total, more than \$250,000,000 was raised in the United States. Krueger's original investments of \$458,280,000 had shrunk to \$207,000,000 by Mar. 31, 1932. The Krueger companies had actually earned about 1½ per cent on their investments, or about a tenth of the profits reported. Reorganization and consolidation of the principal Krueger companies was effected as a result of an agreement among the creditors in September, 1933. Meanwhile, the Swedish authorities had prosecuted 50 of Krueger's associates and convicted 20, including his brother, Torsten, and Nils Ahlstrom, former vice director of Krueger & Toll.

FOREIGN RELATIONS. Economic affairs were to the forefront in Swedish foreign relations during 1933, as well as in domestic politics. The announcement on Jan. 15, 1933, that Sweden's negotiations with Germany for a new trade treaty had broken down inaugurated a period of intense irritation between these two formerly friendly countries and turned Swedish sentiment definitely in favor of closer commercial and political relations with Great Britain. This reorientation was accentuated by subsequent developments in Germany (q.v.) and by Nazi propaganda in Sweden. With the expiration of the Swedish-German treaty on February 15, the German tariff on livestock, meat, and lard was doubled. Sweden in turn raised its tariff on luxuries, imported chiefly from Germany, by 10 to 15 per cent. Swedish fears that Great Britain, its other leading market, might be lost as a result of the Ottawa treaties of 1932 were removed with the signing on May 15 of a British-Swedish trade agreement. Sweden agreed to buy not less than 47 per cent of her coal imports from Britain and to grant tariff concessions on certain British manufactures. In return the Swedes were assured that Great Britain would not increase its tariff on approximately nine-tenths of its imports from Sweden. (See GREAT BRITAIN under *History* for

British commercial policy toward the Scandinavian countries).

Antagonized by the German attitude with respect to commercial and political questions, Premier Hansson and the Swedish press generally expressed active sympathy toward Denmark's efforts to prevent alleged German efforts to recapture North Schleswig. Closer economic and political cooperation among the Scandinavian states was envisaged during a conference between Premier Hansson and the Danish Prime Minister. However, sections of Norwegian opinion, irritated by Denmark's victory in the Greenland controversy, were cold to the suggestion. During the year Sweden concluded a new trade agreement with France and opened negotiations for a similar accord with the United States.

ANTI-COMMUNIST MOVEMENT. The Swedish people emphatically reaffirmed their adherence to democracy and parliamentary government on several occasions during the year. Although attacked by most of the political parties and the press, the Nazi movement made some inroads in the southern province of Skane. Much of the emotional basis for Fascism was furnished by the general revulsion against Communism, which had become increasingly active in Sweden. An unusual anti-Communist demonstration was held in Stockholm May 21, 1933, when some 45,000 persons paraded in protest against Communist infractions of law and order. Criticism of the government's laxity in dealing with the Communists also was implied. This demonstration, however, had no connection with the Fascist movement. As a result of activities of Nazis and Communists, the government on July 21 prohibited the wearing of party uniforms or insignia after July 31 and demanded the registration of all fire arms.

SWEDENBORGIANS. See NEW JERUSALEM, CHURCH OF THE.

SWEDISH LITERATURE. See SCANDINAVIAN LITERATURE.

SWIMMING. Among the water sports highlights of 1933 were the shattering of many world's and national records, the notable feats of the three Spence brothers, and the advent of a worthy successor to Miss Helene Madison as all-around freestyle swimming champion in Miss Lenore Kight of Homestead, Pa. Vouchers for fifty-two record performances, thirty-two by men and twenty by women were presented to the A.A.U. for ratification.

The Spence brothers, Walter, Leonard and Wallace, not only captured one or more individual crowns each, a family achievement unprecedented in swimming, but together they won the 300-yard medley relay in the nationals and scored enough points between them to assure the New York A.C. of the indoor national team title. The twenty-one-year-old Miss Kight fittingly stepped into Miss Madison's shoes by winning all the women's freestyle championships from 100 yards to a mile and bettering several of the listed standards.

Among the year's greatest freestyle feats for men and women may be listed 150 yards in 1:24.7 by James Gilhula of Detroit; 440 yards in 4:42.4 and 1000 meters in 12:43.8 by Jack Medica of Seattle; a mile in 21:12.2 by sixteen-year-old Ralph Flanagan of Miami; 440 yards in 5:33.6 (long course) and 500 meters in 7:02.6 (short course) by Miss Kight. Flanagan's mark lowered the American record, the others clipped registered world marks. The Los Angeles A. C. won the national outdoor team title, and the Women's Swim-

ming Association captured the team crown both indoors and outdoors.

The University of Michigan turned in top team score in the N.C.A.A. championships and won the Western Conference title also. Yale captured team honors in the Intercollegiate Swimming Association and Stanford was supreme on the Pacific Coast. In water polo, Navy, Northwestern, and Stanford topped their respective divisions.

SWITZERLAND. A federated republic of central Europe. Capital, Berne (Bern).

AREA AND POPULATION. With an area of 15,944 square miles, Switzerland had a population estimated at 4,120,000 in 1932 (4,066,400 at the 1930 census). In 1930, 1,672,381 inhabitants lived in towns of 5000 or more population. Living births in 1932 numbered 68,650 (16.7 per 1000 inhabitants); deaths, 49,911 (12.1 per 1000); marriages, 31,959 (7.8 per 1000). Overseas emigrants in 1932 numbered 1301 (1707 in 1931). The estimated population of the chief cities in 1932 (1930 census figures in parentheses) was: Zurich, 261,336 (249,820); Basel, 155,944 (148,063); Geneva, 148,767 (142,812); Berne, 116,692 (111,783); Lausanne, 81,985 (75,915); St. Gall, 63,972 (63,947). In 1930, German was spoken by 2,924,314 Swiss, French by 831,100, Italian by 241,985, Romansch by 44,204, and other languages by 24,797. The same census showed 2,330,336 Protestants, 1,666,317 Roman Catholics, and 17,973 Jews. School enrollment in 1931-32 was: Primary, 471,198; secondary and preparatory, 82,351. In 1932-33 the seven universities had 7756 students. Illiteracy is negligible.

PRODUCTION. In 1931, 12 per cent of Switzerland (1,233,000 acres) was arable land; there were 4,161,000 acres of meadow, 2,372,000 acres of forests, 33,000 acres of orchards and shrubs, and 2,301,000 acres of unproductive land. Livestock (1931) included 1,609,000 cattle, 924,000 swine, 184,000 sheep, 236,000 goats, and 144,000 horses, mules, and asses. The 1932 crop yields (thousands of units, bushels except as indicated), with 1931 figures in parentheses, were: Wheat, mixed grain and spelt, 5647 (5489); rye, 1488 (1402); barley, 597 (565); oats, 2342 (2308); potatoes, 24,688 (28,164); wine (gallons), 10,567 (18,228). Dairy products in 1932 (1931 figures in parentheses) were: Butter, 50,510,000 pounds (35,494,000); cheese, 109,569,000 pounds (112,435,000); powdered and condensed milk, 35,274,000 pounds (88,184,000).

Industrial production in 1931, with 1932 figures in parentheses where available, was: Beer, 69,240,000 gallons; watch cases, 753,000 (358,000); jewelry, 1,055,007 pieces (894,057); silk (conditioned), 859,000 pounds (657,000); manufactured gas, 237,785,000 cubic meters; coke, 388,645 metric tons; salt, 85,016 metric tons. The output of electricity was 4,801,000,000 kilowatt-hours in 1932 (5,057,000,000 in 1931).

COMMERCE. Swiss imports for consumption in 1932 were valued at 1,710,087,000 Swiss francs (\$330,047,000 at par), compared with 2,214,808,000 francs (\$427,458,000) in 1931. Exports of Swiss products amounted to 767,511,000 Swiss francs (\$148,130,000), as against 1,334,916,000 francs (\$257,639,000) in 1931. Leading imports in 1932 were: Coal, coke, and briquets, \$23,174,000; machinery, \$20,815,000; iron and steel, \$19,582,000; wheat, \$13,618,000; chemicals, drugs, and explosives, \$14,943,000; and clothing and millinery, \$10,921,000. Germany supplied 29.1 per cent of the 1932 imports, France 14.6 per cent,

Italy 8.3 per cent, and the United States 6.7 per cent. Of the 1932 exports, France took 14.1 per cent, Germany 13.9, United Kingdom 11.3, Italy 8.9, and the United States 7.2 per cent.

FINANCE. The 1931 budget operations resulted in a surplus of 2,255,000 Swiss francs, with expenditures of 426,146,000 and receipts of 428,400,000 francs. In 1932 there was a deficit of 24,173,000 francs, with expenditures of 444,082,000 francs and receipts of 419,909,000 francs. The 1933 budget estimates called for expenditures of 442,020,000 and receipts of 371,220,000 francs. The public debt on Dec. 31, 1931, was 4,885,585,000 francs, including the railway debt of 2,922,299 francs. The Swiss franc (par value, \$0.1929) exchanged at an average of \$0.1940 in 1931 and 1932 and at \$0.2471 paper in 1933.

COMMUNICATIONS. The Swiss railways (excluding tramways and funiculars) had 3354 miles of line (1931). In that year they carried 172,998,000 passengers and 24,978,000 metric tons of freight, the gross receipts totaling \$90,047,000. In 1932 net operating receipts from traffic of the Federal Railways totaled 342,457,566 francs; operating expenses, 259,202,809 francs. At the end of 1933, 1170 miles of line were electrified. Main highways aggregated about 9300 miles in 1932. During 1932 the Swiss and foreign air lines operating in Switzerland made 10,618 flights and carried 32,404 passengers.

GOVERNMENT. The Federal Assembly delegates chief executive authority to a Federal Council of seven members elected for three years. The chief magistrates are the President of the Confederation and the Vice President of the Council, who are elected by the Federal Assembly for one year. President in 1933, Dr. Edmund Schulthess; Vice President of the Council, Dr. Marcel Pilet-Golaz.

HISTORY. The Nazi sweep in Germany during 1933 roused the Swiss people from their sense of security. The German-speaking Swiss viewed the Hitler movement with considerable favor during its early stages, but were antagonized by Hitler's suppression of democratic institutions, ill-conceived Nazi propaganda, and several irritating frontier incidents arising from Nazi demonstrations held near the Swiss border. Germany's withdrawal from the League of Nations and the announcement of Rudolf Minger, Swiss War Minister, that the German general staff had evolved a plan for the invasion of France by way of Switzerland raised widespread fear that Switzerland would not be able to maintain her neutrality in a new European war. In October and November the government voted large credits for the replenishment of Swiss armaments and war materials and took steps to improve the efficiency of the army.

In the cantonal elections held early in November, 1933, the Social Democrats captured eight seats from the bourgeois parties. The Socialists were led by Léon Nicole, who had just completed a prison sentence imposed in connection with the disorders in Geneva on Nov. 9, 1932. The Communists were entirely eliminated. The Federal Assembly on Dec. 14, 1933, elected Marcel Pilet-Golaz, former Vice President, to serve as President of the Confederation during 1934. War Minister Rudolf Minger was elected Vice President.

In accordance with a judgment of the Permanent Court of International Justice rendered June 6, 1932, and a supplementary decision of Dec. 1, 1933, by three experts, France announced that on Jan. 1, 1934, it would withdraw its customs line along the Franco-Swiss frontier and re-

constitute the free zones of Upper Savoy and the district of Gex, established originally in 1815 and 1816.

SYDENHAM OF COMBE, GEORGE SYDENHAM CLARKE, FIRST BARON. A British soldier and administrator, died in London, Feb. 7, 1933. Born in Lincolnshire, July 4, 1848, he attended the Royal Military Academy and in 1868 joined the Royal Engineers. From 1871 to 1880 he taught at the Engineering College at Cooper's Hill and then saw service in Egypt in 1882 and in the Sudan in 1885. On his return he was assigned to the Intelligence Department of the War Office, serving until 1892 as secretary to the Colonial Defense Committee and publishing in 1890 his great work, *Fortification: Past, Present, and Future*. As secretary to the Royal Commission on Navy and Army Administration he was sent during 1892-94 on special missions to Sweden, Germany, France, Belgium, Rumania, the United States, and Canada. He then became superintendent of the Royal Carriage Factory at Woolwich, and spoke with authority on the maintenance of Great Britain's naval and military supremacy in *The Navy and the Nation* (1897) and *Imperial Defense* (1898). For a time also he was a member of the Committee on War Office Reconstitution.

In 1901 Sydenham was appointed Governor of Victoria, Australia, and during his three-year incumbency of this office was widely respected for his sagacious counsel. On his return to England in 1904 he again became a member of the War Office Reconstitution Committee and was largely responsible for the formation of the Committee of Imperial Defense of which he was secretary. In 1907 he was named Governor of Bombay, but his tenure of this post, on account of his conservative views, was less happy than that of Victoria. Recalled previous to the outbreak of the World War, he held the post of chairman of the Central Appeal Tribunal during 1915-16 and was a member of the Air Board during 1916-17. He served also from 1915 to 1921 as chairman of the executive committee of the British Empire League and was president of the British Science Guild during 1917-20. At the time of his death he was vice-president of the Royal Colonial Institute. Created a Knight Commander of the Order of St. Michael and St. George in 1893 and Knight Grand Commander of the Indian Empire in 1907, Sydenham was raised to the peerage in 1913. His later publications included *My Working Life* (1927) and *Studies of an Imperialist* (1928).

SYRACUSE UNIVERSITY. A nonsectarian institution of higher learning for men and women in Syracuse, N. Y., founded in 1870. The 1933 autumn enrollment was 5045, distributed as follows: Liberal arts, 1565; medicine, 225; fine arts, 700; law, 123; applied science, 332; teachers college, 128; forestry, 480; graduate, 221; agriculture, 31; business administration, 772; home economics, 219; library, 49; oratory, 79; and nursing, 121. The extension school enrollment was 1607, and the summer session enrollment 1663. The faculty numbered 558 for the year 1933-34. The productive funds of the university amounted to \$5,018,354 while the income for the year was \$1,630,461. Chancellor, Charles Wesley Flint, D.D., LL.D.

SYRIA. A mandated territory of France situated north of Palestine on the Mediterranean coast. Capital, Beirut (Beyrouth).

AREA AND POPULATION. The total area of the French mandate was estimated at 60,000 square

miles, divided administratively as follows: State of Syria, 49,200; Republic of Lebanon, 3600; Latakia, 2800; and Jebel Druze, 2400. The population in 1932 was about 2,628,150, divided as follows: Syria (capital, Damascus), 1,696,638; Lebanon (capital, Beirut), 592,812; Latakia (capital, Latakia), 286,920; Jebel Druze (capital, El Suweideh), 51,780. The population of the chief cities was: Damascus, 193,912; Aleppo, 177,313; Beirut, 134,655; Homs, 52,792; Hama, 39,960; Tripolis, 37,260; Antioch, 28,000; Latakia, 21,404. Arabic is the language most widely used.

PRODUCTION. The population is engaged mainly in agriculture and stock raising. About 3,000,000 acres were under cultivation in 1932, the crop yield in that year being (in metric tons): Wheat, 267,400; barley, 199,500; tobacco, 1900; cotton, 800; olive oil, 4200; silk cocoons, 3575; sesame, 2800. Grapes, apricots, and other fruits are extensively grown. In 1931 there were 2,621,000 sheep and 977,000 goats. Mineral resources are limited and manufacturing is on a small scale. Flour, oil, soap, silk thread, wine, and tobacco products are the chief manufactured articles.

COMMERCE. Imports and exports, including transit goods, were equivalent to \$39,596,000 and \$16,378,000, respectively, in 1931. In 1932 imports from France were 6,733,149 Syrian pounds (1 Syrian pound equals 20 French francs); from the United Kingdom, 4,833,047 pounds; Italy, 2,260,907 pounds; Turkey, 2,681,232 pounds; United States, 2,312,977 pounds. United States statistics for 1933 showed exports to Syria of \$1,836,264 (\$1,460,192 in 1932) and imports from Syria of \$1,306,480 (\$806,299 in 1932).

FINANCE. The budget estimates for 1932 balanced at 17,057,489 Syrian pounds, compared with actual receipts and expenditures of 19,413,936 and 18,941,905 pounds, respectively, in 1931. Syria's share of the Ottoman Debt was being paid off in six annual installments of about \$1,280,000 each, the first of which was paid in 1930.

COMMUNICATIONS. There were 548 miles of railway lines in operation in 1931. Surfaced highways extended 2240 miles and dirt and gravel roads about 2750 miles. Several automobile lines were operated across the Syrian Desert between Beirut and Baghdad. An air line connected Beirut and Marseilles. In 1931 the number of vessels entering the ports of Lebanon and Syria was 1665. Beirut was the chief port of call.

GOVERNMENT. The Constitution of the Syrian Republic adopted May 14, 1930, granted the republic powers equivalent to those of an independent state, except that control of foreign relations and similar functions were retained by France as the mandatory power. President in 1933, Mohamed Ali bey el Abed; Prime Minister, Hakky bey el Azm. The Constitution of the Lebanese Republic was suspended in May, 1932, and M. Charles Debas, President, was invested with dictatorial powers by the French High Commissioner. He was assisted by an appointive council. Latakia and Jebel Druze were administered by French governors, assisted by partly nominated and partly elected councils. A French army of 301 officers and 13,371 men was in occupation of the country. Auguste Henri Ponsot, French High Commissioner in Syria since 1926, was replaced in October, 1933 by Count de Martel, former French Ambassador to Tokyo. M. Ponsot became Resident General of Morocco.

HISTORY. On Nov. 16, 1933, the French High Commissioner and the President of the Syrian

Republic signed a Franco-Syrian treaty of friendship and alliance designed to pave the way for the termination of the French mandate and Syria's admission to the League of Nations. The treaty followed closely the terms of the Anglo-Iraqi treaty of 1930, under which Iraq was admitted to the League in 1932 (for terms of this treaty see IRAQ under *History* in 1932 YEAR BOOK). The Franco-Syrian treaty provided for the termination of the French mandate after a four-year transition period and the establishment of an independent Syrian state subject to a 25-year military alliance with France, under which France would guarantee Syria's security and assist in the organization, training and equipment of the Syrian army and gendarmerie.

The terms of the treaty were violently denounced on the one hand by the Syrian Nationalists, who declared that it did not meet their demands for an independent Syria, and on the other hand by the Conservative minority, who felt that it went too far. The Nationalists objected particularly to the fact that the treaty excluded Lebanon, Latakia, and Jebel Druze from the proposed independent state. Retention of the French mandate over the Lebanon Republic and Latakia would give France a strategic base in the Near East. It would also cut off Syria from the Mediterranean and, according to the Nationalists, would prevent the formation of a strong Syrian state. The protest against the treaty was marked by numerous demonstrations, student strikes, and cessation of business. When it came before the Syrian parliament for ratification toward the end of November violent scenes were enacted by the Nationalist deputies. Convinced that its defeat was certain, the High Commissioner withdrew the treaty and prorogued Parliament until March, 1934.

TADZHIK S.S.R. See SOVIET CENTRAL ASIA.

TAFT MUSEUM. See ART MUSEUMS.

TAHITI. See OCEANIA, FRENCH ESTABLISHMENTS IN

TAIWAN. See FORMOSA.

TAMPICO HURRICANE. See MEXICO under *History*.

TANGANYIKA, tǎn'gān-yē'kū, **TERRITORY.** An East African territory between Kenya and Mozambique, mandated to Great Britain by the League of Nations. Area, 374,000 square miles; population (1931 census), 5,063,544 including 32,687 Asiatics and 8217 Europeans. Dar-es-Salaam, the capital, had 33,147 inhabitants.

The total area of forests is 4096 square miles, from which is produced pencil cedar, yellow wood, mvule, and ebony. The main exports are sisal fibre, cotton, groundnuts, copra, grains, and beeswax. Livestock (1932): 5,336,412 cattle, 2,281,405 sheep, 3,374,989 goats. In 1932 the value of the chief minerals produced was gold, £149,864; salt, £33,788; tin, £6893; mica, £3808. Imports were valued at £1,871,992 and exports at £2,199,216 for the year 1932. For 1931-32, revenue amounted to £1,522,368; expenditure, £1,820,928. Governor Sir H. MacMichael assumed office during 1933.

TANGIER, tǎn-jēr'. An internationally administered area in northwestern Morocco, near the Strait of Gibraltar. Area, about 225 square miles; population, about 51,000 (35,000 native Moslems, 11,000 Europeans, and 5000 Jews). Most of the inhabitants live in the port city of Tangier. The chief occupations are commerce, the manufacture of cigarettes, farming, fishing, and

preserving. Wheat, barley, and chickpeas are the chief crops. Imports in 1931 were valued at 93,-229,030 francs; exports at 22,276,775 francs. The budget for 1932 was: Revenue, 22,460,000 francs; expenditure, 22,447,000 francs. A railway connects Tangier with Fez in French Morocco. There were 65 miles of highways and air routes connecting with Casablanca, Rabat, and Toulouse. A total of 1426 vessels of 1,666,061 tons entered the port of Tangier in 1930. Under an international protocol of July 25, 1928, Tangier was permanently neutralized and demilitarized. For local government there is an international Assembly of 27 members, whose acts are subject to the veto of a Committee of Control composed of the French, British, Spanish, and Italian Consuls. Native affairs are in the hands of a Mendoub, representing the Sultan of Morocco; he is ex-officio head of the Assembly. Administrator of the Tangier Zone in 1933, M. Le Fur (French); Mendoub, Si Mehemmed Et-Tazi. Consult John R. Tunis, "Tangier: A Test in Internationalism," *Current History*, March, 1933.

TARIFFS. See CANADA, GREAT BRITAIN, IRISH FREE STATE, FRANCE, ITALY, GERMANY, DENMARK, NORWAY, SWEDEN, FINLAND, ETC., under *History*; PAN AMERICAN CONFERENCE; ECONOMIC CONFERENCE, WORLD.

TASMANIA, tǎz-mā'nī-ā. A state of the Australian Commonwealth, consisting of the island of that name and several other smaller islands. Area, 26,215 square miles; population (June 30, 1933 census), 227,605. Hobart, the capital, had 58,750 inhabitants (1933). Births during 1932 numbered 4491; marriages, 1505; deaths, 2022.

In 1931-32 there were 247,353 acres under crops. The wheat production for 1932-33 from 20,-930 acres was estimated to be 431,690 bushels. Livestock (1931) 2,012,055 sheep; 232,434 cattle; 30,659 horses; 41,459 pigs. Wool production for 1932 amounted to 13,875,000 lb. Copper, silver, tin, lead, and coal are the principal minerals produced and the total production of all minerals for 1932 was valued at £739,236. From 891 manufacturing establishments with a total capital investment of £9,230,444, the value of production was £2,808,383. In 1932-33 revenue totaled £2,522,191; expenditure, £2,577,407; public debt, £23,708,532.

Executive power is vested in a governor, acting through a responsible ministry, and legislative power in a legislative council (upper house) of 18 members and a house of assembly (lower house) of 30 members. Governor Sir Ernest Clark assumed office in 1933; Premier, J. C. McPhee. See AUSTRALIA.

TAXATION. Taxation during the year 1933 steadily tended to assume a more and more important place in popular thinking. This was partly the result of the continuous scantiness of revenue, municipal, State, and national, accompanied in many municipalities and some State governments by bankruptcy and open repudiation, but also largely the outcome of the constant demand for adoption of, or reliance upon, taxation as a means of altering the distribution of wealth. Taken together, and resulting as they did, not merely in serious changes of tax burdens throughout the United States, but also in proposals of very far-reaching character, these factors rendered the year 1933 unquestionably a year of marked significance in the fiscal history of the United States.

FEDERAL TAXATION. The outstanding event of the year in the tax field was, in 1933 as in 1932,

found in the readjustment by Congress of the basis of the income tax. The Democratic administration which came into office in March, 1933, found the Treasury exhausted, and public finance in confusion. It had promised to rectify the faults of the régime by which it had been preceded, but speedily found itself unable to do so; and instead of reducing taxation as had been hoped, it set about to increase the load. The result was the adoption of new tax measures whose results were described by the Secretary of the Treasury in his report for the year, submitted at the opening of Congress in January, 1934 as follows:

The uncertainties affecting the estimates of revenues are particularly important under present unusual economic conditions. Estimated receipts from internal revenue and customs for 1934 include the following amounts not covered in estimates presented to Congress last December.

One hundred and fifty million five hundred thousand dollars for taxes levied by the act of Mar. 22, 1933 (chiefly the tax on beer); \$403,000,000 for processing and floor-stock taxes levied by the Secretary of Agriculture; . . . about \$153,700,000 for taxes levied by the national industrial recovery act, exclusive of certain changes in the income tax, and \$174,400,000 for additional receipts from existing internal revenue taxes and customs duties on distilled spirits and fermented liquors as a result of the repeal of the Eighteenth Amendment to the Constitution . . .

Indicated corporation collections in the full calendar year 1933 show a decline of 27 per cent as compared with collections in 1932. An even greater decline in taxable incomes was partially offset by the increased taxes effective on 1932 incomes, due chiefly to the increase in the tax rate from 12 to 13½ per cent, with an additional tax of three-quarters of 1 per cent on net income reported on consolidated returns, and the elimination of specific credit for corporations with small incomes.

Indicated current collections of individual taxes over the full calendar year 1933 show an increase of 30 per cent over the preceding year, the decline in taxable incomes being more than offset by the increased taxes under the revenue act of 1932.

Receipts from miscellaneous internal revenue taxes were \$58,200,000 in the fiscal year 1933 as compared with \$50,700,000 in 1932, an increase of \$34,500,000. In 1933 about 95 per cent of miscellaneous internal revenue came from six sources—tobacco taxes, manufacturers' excise taxes, documentary stamp taxes, the tax on checks, the tax on fermented liquors and the estate tax. . . .

tion of the legislation had, however, increased the revenue of the Treasury. The addition thus accomplished amounted to about 30 per cent of former year's income taxes on persons by the close of December. Taxes on beer and spirits, which were imposed immediately upon the repeal of the 18th amendment to the Constitution, had likewise added somewhat to the current income, though in not nearly the proportions expected. The total thus obtained, during the year, amounted to about \$150,000,000 and the determination to raise the tax on distilled liquors to \$2 per gallon, reached just at the close of the year, bade fair to bring in considerably increased revenue. The short-lived taxes on dividends (5 per cent levied at the source upon corporations which had voted to pay dividends prior to December 31, as well as the capital tax upon corporations) yielded some income, but in an unfair nuisance-form that was galling to investors, already harassed by the inequitable methods of raising revenue which had been installed under previous federal legislation. The Director of the Budget, in a public address just before the close of the calendar year, thought it necessary to warn the "middle class" that it would have to contemplate new sacrifices if it desired to provide for its own preservation. At about the same time, an assistant Secretary of Agriculture likewise thought well to announce in public that the cost of the new measures and "reforms" of the administration at Washington would have to be borne out of the incomes of industrial corporations. These warnings and threats had unquestionably a sobering effect upon many minds; and served as serious forecasts of the danger to which the tax-paying element of the community was subjected by the policies of the national government. Class prejudice and discrimination continued to be exhibited in very high degree by the income tax returns which showed a continuing high concentration upon the shoulders of the saving classes as the accompanying table illustrates:

COMPARISON OF NUMBER OF RETURNS AND INCOME TAX FOR THE CALENDAR YEARS 1930, 1931, AND 1932, INDIVIDUAL RETURNS OF NET INCOME OF \$5,000 AND OVER^a

Net income classes	Number of returns			Income tax (thousand dollars)			Percentage decrease			
	1930	1931	1932	1930	1931	1932	Number of returns 1930 1931 1932	to 1931	to 1932	to 1932
\$5,000—\$10,000	505,715	385,837	237,273	16,590	11,693	34,372	23.7	38.5	29.5	193.9 ^b
10,000—100,000	251,490	167,141	100,347	208,134	114,344	179,164	33.5	39.9	45.1	56.6 ^b
100,000 and over	6,152	3,142	1,787	237,716	107,896	109,009	48.9	43.1	54.6	1.0 ^b
Total	763,357	556,120	339,407	462,440	233,933	322,545	27.1	38.9	49.4	37.8 ^b

^a Preliminary Statistics of Income; returns filed to Aug. 31, 1931, 1932, and 1933, respectively. For sake of comparability with available figures for 1932, preliminary rather than final figures are used for 1930 and 1931.

^b Percentage increase.

Customs receipts declined from \$327,700,000 in the fiscal year 1932 to \$250,800,000 in the fiscal year 1933, or \$76,900,000. . . . This represented the smallest total for any year since 1919.

During the fiscal year \$169,629,609 of additional (income) taxes were made available for collection as compared with \$218,521,219 in the fiscal year 1932. This amount includes \$168,150,762 of assessments and \$1,478,847 of rejected abatement and credit claims.

The measures were thus of very qualified success. The new rates of income taxation were not retroactive; and hence did not take effect as governing the income tax returns of Mar. 15, 1933, which accordingly continued under the old system so that a full trial had not been accomplished during the calendar year. The other elements of taxation coming into effect soon after the adop-

STATE CHANGES IN TAXATION. Legislation on the tax question became during 1933 practically universal in our States. Not a State where the legislature was in session during the year failed to make tax changes. The most general and striking of these changes moreover did not relate to the amounts or rates of the levies but to the conditions of payment by the tax-bearer—showing that tax loads were already too heavy to be borne. In some instances, payment of general property taxes on the installment plan has been omitted, in others delinquent tax penalties have been reduced (in New York City increased), in other cases cancelled, and in still others interest has been reduced. Tax sales have been cancelled or

postponed and bonuses offered for advance payment. Tax limitations have likewise been reduced. The general changes made in specified kinds of State taxes may be summarized as follows (see *Tax Digest*, September-October, 1933).

THE SALES TAX. One of the important developments of the past year in State taxation has been the general attempt to apply the Sales Tax in the several commonwealths. The effort to adopt the Sales Tax as a Federal resource has not thus far succeeded, but the measure has attained a very wide application throughout the several States. During the past year, the matter has been discussed in Arizona, Georgia, Illinois, Indiana, Michigan, New Mexico, New York, North Carolina, North Dakota, Oregon, South Dakota, Utah, Washington, and West Virginia. The measures adopted in these several States have varied considerably, both as to the measure of the tax, the exemptions, and the rate. Gross income or gross receipts have been a favorite basis of measure and are found in a substantial majority of the cases where legislation has been actually adopted. In some other cases, the basis has been the sales price of all goods produced or manufactured, and there has been a difference among the States as to whether the basis to be adopted should be gross sales of personal property alone or should include also real estate, admissions, receipts from services, and the like. Exemptions have also varied considerably, a favorite basis being \$1200 of gross sales; while in other cases (isolated or incidental) actual sales of personal property are freed from the tax. In those States where fairly heavy taxes are already imposed on such special products as gasoline, alcoholic liquors, and the like, exemption of these receipts is frequent; and in a number of States the revenue from sales made to Federal, State, or municipal governments is also provided for. Organizations not created for profit are frequently exempted, and the same is true of insurance companies, while in one or two cases, staples and necessities of life and implements used in primary industries are freed from taxation. In most cases the incidence of the tax is on the consumer, and the rate is usually one-half of 1 per cent; in a few cases higher than the latter figure. The purposes for which the proceeds are to be used are in a good many cases designated as the support of unemployment or the relief of emergency conditions; although in a few cases some specific object is specified as the recipient of the benefits of the tax.

INCOME TAXES. New legislation concerning income taxes has been adopted in some half dozen States including Alabama, Arizona, Kansas, Montana, Minnesota, and New Mexico, while in others the subject was still under advisement. The tendency has been to increase the rate, and in some States it now runs as high as 6 per cent, most commonwealths applying a graduation of rates. Exemptions have been reduced as low as \$750 in Kansas, but the more usual exemption is \$1000 or \$1500. In New York an additional tax of 1 per cent on gross income is made without personal exemption—applicable to those who pay the regular income tax. In other States the proceeds of the income tax are used for education. The taxation of intangible property still continues in twenty-six States, where the personal income tax is measured by net income, but in two States only income from intangible property is so used as a measure. In other States taxation of intangible property is still under consideration and in one

or more States an income tax is levied upon such intangible property at varying rates progressive according to the character of the property so taxed.

CHAIN STORES. Several States have been added to the list of those which impose taxes on chain stores. They include Idaho, Maine, Maryland, Michigan, Minnesota, Montana, and West Virginia, while enactments have been made in three other States; and in still one or two others a so-called "occupational tax" applies to chain stores. The rates vary from one-quarter of 1 per cent to about three-fifths of 1 per cent, according to the amount of the income subject to taxation, the proceeds generally being used for general expenses of the State.

INHERITANCE TAXATION. Inheritance taxation has been less resorted to during the past year than previously. There has been some progress in making adjustments with the Federal government so as to provide a partial exemption on inheritances which paid a Federal tax, and in some States a law uniform with that of the Federal government has been adopted. Some increases have taken place; notably in North Dakota where the rates in some cases now range up to 23 per cent. A rate ranging from about 1 per cent up to about 10 per cent is now much more common. There has been a tendency to eliminate exemptions or refuse them, particularly in the case of life insurance. The excuse is offered that these changes are intended as emergency proposals and will be subject to repeal when the present necessities are over.

BEER TAXES. Taxes on beer have been applied in more than thirty-three States, these taxes taking the form of licenses and excises. The latter run from 50 cents a barrel to \$4.00 a barrel, while licenses in some cases are heavy. The sale of beer is subject to retail sales tax where the latter plan obtains. The beer taxes are also in addition to those of the Federal government and the proceeds are applied to general expenses, except in those instances where they are specifically earmarked for education. The idea of taxes upon beer is also seen reflected in the increase of taxes upon the so-called luxuries, and particularly upon cosmetics, which has been greatly extended in Ohio, while admissions taxes have also been added in the case of public amusements; and severe taxes upon golf club memberships and other associations for amusement have been established. Taxes upon lottery operations and horse races, as well as license fees for race tracks, have reappeared; while in a number of States special taxes on cigarettes, liquors, and other items artificially classed as "luxuries" have also come into vogue. The changes in the rates of taxation upon automobiles including both those used for pleasure and commercial transportation have been noteworthy. Fees for registration have been reduced for pleasure automobiles in a few States, and in a few others readjustments have taken place in the taxes levied upon commercial vehicles; while taxes have been enacted here and there upon freight carried in proportion to weight. A mileage tax is still applicable in a number of States and this year has seen it added by the State of Washington.

Gasoline taxes have continued substantially as heretofore, except for an increase made by the Federal government. Some changes have been made in the use of the proceeds of the tax, a few States specifying its application to the relief of unem-

ployment, while in other cases it is used for schools, or in a few instances for other carefully specified purposes. A few changes of administration have also taken place.

TAX COMMISSIONS. In New York the State Commission for the revision of Tax Laws has been continued for another year, while an investigating committee has been named in Texas and another one in Maine. Connecticut has appointed a commission for the study of taxation, while in two States tax research bodies have been abolished. In Washington an Interstate Commission for the study of conflicting taxation has been set up. Some other minor changes have been introduced. See **LAW** in 1933; **AGRICULTURE**; **PUBLIC FINANCE**.

TAXONOMY. See **BOTANY**.

TAYLOR, SIR WILLIAM. An Irish surgeon, died in Dublin, Jan. 29, 1933. He was born in Co. Donegal, Sept. 21, 1871, and attended the Royal College of Surgeons and Dublin University, being qualified as a licentiate in 1893. At Meath Hospital, Dublin, he served successively as house surgeon (1893-95), assistant surgeon (1898-1900), and full surgeon after 1900. He had also been at different times surgeon to Sir Patrick Dun's Hospital, the National Children's Hospital, and St. Ultan's Infant Hospital and consulting surgeon to the Coombe Lying-in Hospital. During the World War and throughout the period of Civil War in Ireland he was consulting surgeon to the Forces in Ireland, attaining the rank of colonel and assistant military secretary. After 1922 Sir William had held the regius chair of surgery at Dublin University and after 1927 was president of the Royal Academy of Medicine in Ireland. He was also a past president of the Royal College of Surgeons in Ireland (1916) and of the Association of Surgeons of Great Britain and Ireland, and in 1920 was honored by election to the American College of Surgeons. Besides numerous papers upon the surgery of the stomach, for which he had won a European reputation, Sir William wrote on intestinal obstruction, renal surgery, œsophageal diverticulum, and infection of the intracranial sinuses. He was created a Companion of the Bath in 1919 and a Knight Commander of the Order of the British Empire in 1920.

TEASDALE, SARA. An American poet, died in New York City, Jan. 29, 1933. She was born in St. Louis, Mo., Aug. 8, 1884, and was privately educated there. She first attracted attention with *Sonnets to Duse and Other Poems* (1907) and *Helen of Troy and Other Poems* (1911). A further maturity was revealed in *Rivers to the Sea* (1915), and with the publication of *Love Songs* (1917) and *Flame and Shadow* (1920) she was acclaimed the most popular woman poet of the decade. The charming lyric quality and fine rhythmic feeling of her work appealed to an age that still delighted in sentiment, provided that it were translated into sensibility rather than sentimentality. Her later collections were *Dark of the Moon* (1926) and *Stars Tonight* (1930). Miss Teasdale edited *The Answering Voice: One Hundred Love Lyrics by Women* (1917, 2d ed., 1928) and *Rainbow Gold, Poems Old and New* (for children, 1922). In 1918 *Love Songs* won the prize of \$500 awarded by the Poetry Society of America and the Pulitzer Prize presented by Columbia University "for the book of poems deemed the best of the year." At the time of her death she was writing a biography of Christina Rossetti, to whom she had often been compared. Her former husband was Ernst B.

Filsinger. A collection of her unpublished poems appeared posthumously as *Strange Victory*.

TELEGRAPH AND CABLE. The census of the telegraph industry for the five-year period ending with 1932 was published in 1933. It showed that the industry of the United States had 1,956,000 miles of overhead and 310,000 miles of underground wire, an increase of 51 per cent; 96,500 nautical miles of ocean cable, a decrease of 3 per cent; and that 158,000,000 messages were sent during the year, a decrease of 33 per cent as compared to 1927.

A new type of repeater was developed to facilitate repeating multiplex telegraph channels individually into other multiplex circuits without the necessity of maintaining synchronism. Teletypewriter service was provided for the government to distribute all over the country the information for making up the daily weather maps. Teleprinters and typewriters with suitable channels were developed for person to person service and used by many firms for sending information from the main office to sub-offices all over the country. The Western Union improved its new high speed ticker service by increasing the speed from 300 characters per minute (1930) to 500 characters per minute. This will keep up with a four million share day on the New York Stock Exchange. Some of the existing telegraph cables in Great Britain have been "loaded" so that each one now carries from 12 to 18 telegraph channels by carrier current. Carrier current telephone service over underground telegraph cables has been much improved. In Great Britain there have been installed some automatic exchanges which serve some lines having 10-party selective service. The cities of Basel and Zurich now have a common automatic system so that a subscriber in one city may dial for a number in either city.

A new submarine cable was laid between Italy and Sardinia which is 150 miles long, the longest in the world for giving both telephone and telegraph service (cf. Havana-Key West 110 miles). It is loaded by permalloy and has four channels. There are now 16,000 miles of submarine cable loaded with permalloy.

The Mackay Co. opened three more stations, Chicago, New Orleans, and Seattle, in their point to point radio service and also put into operation two new transoceanic radio telegraph services, one to Vatican City and one to Shanghai. Radio telegraph communication with land stations was maintained continuously by the Italian Flying Squadron under General Balbo, during the whole time of the flight. In many municipal fire alarm systems and railway signal systems copper oxide rectifiers are now being used to supply the required direct current from an alternating current power supply.

TELEPHONY. During 1933, world-wide intercommunication by telephone was brought nearer to reality as a result of the extension of the oversea telephone service from the United States to the following places: Panama and the Canal Zone, the city of San José in Costa Rica, the island of Luzon in the Philippines, the cities of Jerusalem, Haifa and Jaffa in Palestine, Guatemala City in Guatemala, the Republic of Nicaragua, and Bombay and several other cities in India. At the end of the year telephone conversations could be carried on between the United States and all continents of the world; in fact, 92 per cent of the 32,400,000 telephones in commercial service throughout the world could be

reached from any Bell System telephone. Ship-to-shore telephone service was extended to five additional liners during 1933, making nineteen in all with which such service was available at the end of the year.

During the year 1933 there was a net loss in the number of telephones in the United States. This loss, however, was only a little more than one-third of the loss experienced during the preceding year. Improvement in general conditions was reflected by a net gain of 53,000 telephones in the Bell System during September, 1933, which was the first monthly gain since September, 1931. On Jan. 1, 1934, there were approximately 16,750,000 telephones in this country, and during 1933 there was a daily average of about seventy-two and one-half million telephone conversations, divided between 70,100,000 local conversations and 2,400,000 toll conversations. Investment in telephone plant and equipment on Jan. 1, 1934 amounted to \$4,700,000,000, representing a slight decrease during the year. There was no material change in the 87,000,000 miles of telephone wire in service a year ago.

The year 1933 showed continued improvement throughout the companies of the Bell System in the efficient maintenance and operation of telephone plant and property. All possible repair work was undertaken, plant troubles were reduced, and operating efficiency reached new high levels. The practice of advancing repair and maintenance work and the continuance of shorter working schedules kept thousands of people employed for whom work would otherwise have been lacking; and during the latter part of the year there was some increase in the number of telephone workers.

Research work was carried on during 1933 at the Bell Telephone Laboratories, as in former years, in order to assure those technical advances in the art which are necessary for added economy and efficiency. Experiments were made with such things as carrier circuits entirely contained in cable, ultra-short wave transmission, one-pair loaded emergency cable for carrier circuits, X-ray examination of telephone equipment, improved Wheatstone bridges for toll test boards, improved radio equipment for transport planes, etc.

The telephone exhibit at the Century of Progress Exposition at Chicago proved to be one of the main attractions of the Fair. It is estimated that more than six million people visited the exhibit. Even the visitor who gave but a casual glance probably obtained some impression of the complexity of the apparatus behind the telephone service, but to those who were willing to "stop, look, and listen" the wonders of the art were explained by personal participation in the demonstrations and by the experts in charge.

Scientists of Bell Telephone Laboratories discovered how to obtain auditory perspective in music transmitted and reproduced electrically, as a result of fundamental investigations in acoustics and telephonic transmission. Auditory perspective is to music what the stereoscope is to photography. It provides a third dimension to give depth and realism to an otherwise flat sound. In April, 1933, a demonstration was given in Constitution Hall, Washington, of long distance transmission and reproduction of symphonic music in full auditory perspective. This demonstration, which marked the completion of several years' work and study, was heartily acclaimed by a distinguished audience of musicians and scientists.

The demonstration gave the illusion of hearing each separate instrument from its proper position on the stage. The tonal effects, from pianissimo passages reproduced at the threshold of hearing to a crashing finale carried in loudness almost to the point where hearing is no longer possible, was greatly superior to the effects when auditory perspective is lacking.

TELETYPEWRITER. See TELEGRAPH AND CABLE.

TELEVISION. The Television Committee of the Radio Manufacturers' Association has asked the Federal Radio Commission to set aside the range of frequencies between 40,000,000 and 110,000,000 cycles (7.5 to 2.7 meters) for television, with wave bands separated by 4,000,000 cycles, thus making room for about 17 stations. As the range of signals in this band is only about 50 miles these bands could be duplicated in cities 100 miles apart. The television broadcasting station W2XBS being built by the National Broadcasting Company which was to have gone into operation Jan. 16, 1934 will not be completed until three months later.

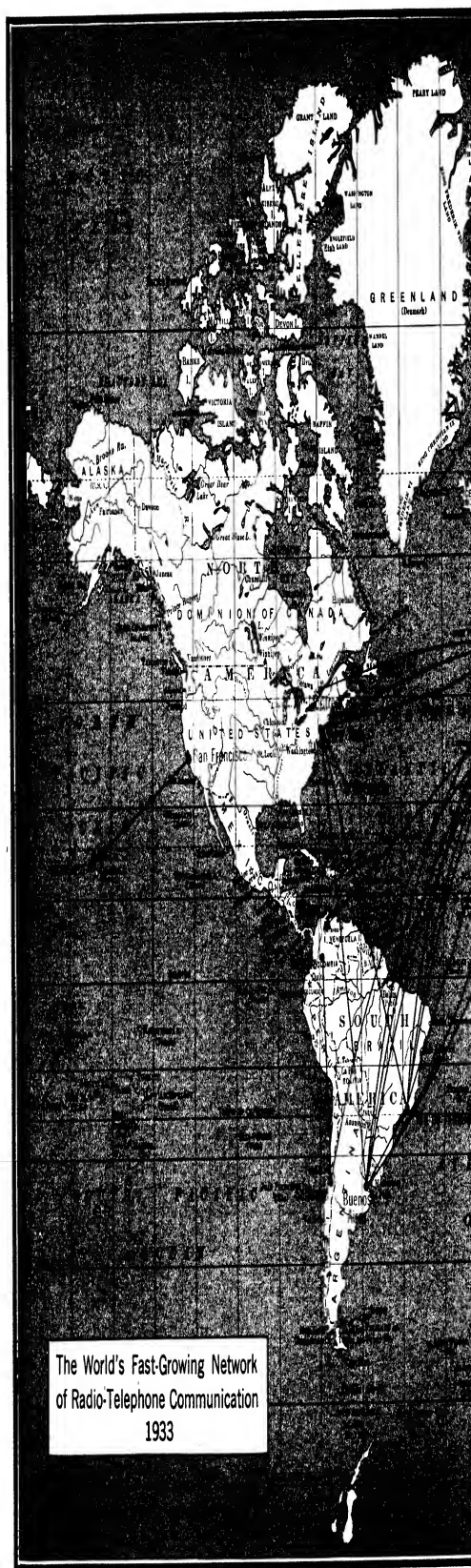
A new method of providing television was announced by the Radio Corporation of America in which cathode ray vacuum tubes are used both for transmitting and receiving. By this means outdoor scenes may be picked up by a device using a lens and photographic image as in a camera. This will operate with as little light as a camera with an f 4.5 lens and is about as portable as the recording mechanism for talking movies. At the receiving end is a mechanism encased in a console of the size of the usual radio receiver or phonograph talking machine. It has a hinged top on the under side of which is a mirror. On opening this top to an angle of 45° there may be seen in the mirror a reflection of the receiving screen which lies in a horizontal plane in the position usually occupied by the revolving table of a talking machine. Thus the scene may be viewed while sitting alongside the set instead of standing over it. The picture is 6½ x 7½ inches, consists of 240 lines per frame and shows 48 frames (pictures) per second. (The usual amateur movie shows 16.)

The picture is picked up for transmitting by throwing the photographic image on a specially prepared plate on the flat end of a cathode ray tube. This plate consists of a large number of very small elements each forming a minute photoelectric cell. This plate is scanned by the moving beam of electrons of the usual cathode ray tube. The beam causes each cell to give a discharge of electricity proportional to the intensity of the illumination on that particular element. Thus the beam sends out the modulated impulses which are amplified and transmitted in the usual way.

At the receiving end is another cathode ray tube whose beam is moved synchronously with that of the transmitter and whose intensity varies in accordance with the modulation produced in the transmitter. This beam produces luminescence in the prepared surface at the flat end of this tube, which luminescence is proportional to the intensity of the beam and thus to the light on each element of the transmitter plate and therefore the original image is reproduced upon the receiving screen.

The two great advantages of this system are:

(a) It does not require a motor nor other moving mechanical parts and thus avoids mechanical inertia; (b) the transmitting screen stores up light energy during a large part of each cycle, and re-



The World's Fast-Growing Network
of Radio-Telephone Communication
1933



leases the stored energy in the very short period during which the beam passes over one element. This latter feature enormously increases the sensitivity or power as in most of the earlier systems the energy per element was not stored but was only that which could be taken from the light as the beam passed a given element.

TELL EL ARMARNA. See **ARCHÆOLOGY.**

TEMPLE UNIVERSITY. A coeducational institution of higher learning in Philadelphia, Pa. The 1933 autumn enrollment was 9495. The faculty had 758 members. The income totaled \$1,820,898.27. President, Charles E. Beury, LL.D.

TENNESSEE. POPULATION. The population of the State on Apr. 1, 1930, according to the Fifteenth Census, was 2,616,556, as against 2,337,885 in 1920. Memphis, the most populous city, had (1930) 253,143 inhabitants; Nashville, the capital, 153,866; Chattanooga, 119,798; Knoxville, 105,802.

AGRICULTURE. The following table shows the acreage, production, and value of the principal crops for 1933 and 1932:

Crop	Year	Acreage	Prod Bu	Value
Corn	1933	2,810,000	66,035,000	\$32,857,000
	1932	2,927,000	59,418,000	17,231,000
Cotton	1933	898,000	460,000 ^a	21,520,000
	1932	1,064,000	480,000 ^a	12,960,000
Hay (tame)	1933	1,175,000	1,132,000 ^b	11,546,000
	1932	1,187,000	1,039,000 ^b	9,039,000
Tobacco . .	1933	158,000	136,210,000 ^c	14,325,000
	1932	135,000	107,187,000 ^c	10,627,000
Sweet potatoes .	1933	50,000	4,500,000	2,700,000
	1932	75,000	6,600,000	2,112,000
Potatoes . .	1933	57,000	3,762,000	3,800,000
	1932	53,000	3,657,000	2,158,000
Wheat . .	1933	272,000	2,774,000	2,580,000
	1932	272,000	2,584,000	1,395,000

^a Bales ^b Tons ^c Pounds.

MINERAL PRODUCTION. There occurred in 1932 the sharpest decrease in the yearly production of coal since the industrial depression had started in 1929; the mines' output of coal fell to 3,240,000 net tons (1932), from 4,271,548 (1931), or by 31.4 per cent; as compared with the total quantity produced in 1929 that for 1932 was less by 40.1 per cent.

The production of phosphate rock declined sharply to 169,026 long tons (1932), from 343,622 (1931); in value, to \$673,636, from \$1,545,607. The Tennessee Copper Company continued its operations on a somewhat reduced scale in 1932.

EDUCATION. A study of the State's system of public education, conducted by the Tennessee Educational Commission, made progress in 1933. Public schools in the neighborhood of camps of the Civilian Conservation Corps were made available to members of the corps who needed schooling. The State carried about one-third of the expense of operation of the county schools.

There were enrolled in the public schools of the State, in the academic year 1931-32, 641,551 pupils. Of these, 562,387 were in common schools or elementary grades; in high schools, 79,164. The expenditures of the academic year 1932-33 for public-school education totaled \$20,690,065, or less by some 11 per cent than for the year before. Salaries of teachers averaged \$625 by the year, for 1932-33; they were reduced some 20 per cent for 1933-34.

LEGISLATION. A regular session of the Legislature convened on January 2. It dealt with the plight of the State-chartered banking institutions,

involved in the nation-wide banking collapse of March, by passing an emergency act: the Governor was empowered to declare "days of emergency," which would count as legal holidays in respect of payment of obligations; banks that so desired, however, might continue business on such days; but those so continuing were subjected to such restrictions as the superintendent of banking might prescribe, with approval of the Governor.

As to prohibition, a State convention was created, to act for the State, on the proposed repeal of the Federal Eighteenth Amendment. It was to consist of 63 delegates, who were to be elected at large by popular vote on July 20. No action was taken with regard to repealing the existing prohibition law of the State, as a whole, but beer of the alcoholic strength of 3.2 per cent was legalized, with provision for a tax of \$1.20 a barrel; proceeds of this tax were assigned in the proportion of one-third each, to the State school funds, to the counties (equally), and to cities (according to population).

An effort was made to put State finances in order by funding the accumulated deficit of the two-year period then closing, through an issue of State bonds. These bonds were to be secured by the proceeds of 1 cent on the gallon of the State tax on gasoline: the bonds were to take care of some \$10,000,000 in open accounts, a sum incurred almost wholly for State aid to public schools, the State University, and the normal schools. The State budget for the ensuing two years was cut to a total some \$14,000,000 less than that for the two years previous. The date on which unpaid State and county taxes would become delinquent was put off to June 1, from March 1. The State railroad commission was asked by legislative resolution to investigate railroad and utility rates with a view to reducing them by 25 per cent.

POLITICAL AND OTHER EVENTS. The bank panic caused many State banking institutions in February and early March to declare on their own account restrictions on the withdrawal of deposits. The Governor lacked authority to close banks by proclaiming legal holidays; this power was given him by the Legislature only after the general Federal closure of banks had gone into effect. The State Superintendent of Banking took no immediate action against banks that had curtailed, on their own initiative before March 6, payments to their depositors. Governor McAlister declared a series of bank holidays while the banks were still closed by Federal order, making it permissive but not obligatory for institutions not to pay depositors. On March 18 he extended this permission until April 18. Municipal scrip was issued in large amounts early in the year in Nashville and Knoxville in the absence of funds and became current for purchases from merchants in these cities.

At an election on July 20 there were chosen by popular vote 63 delegates-at-large, who favored the repeal of the Federal Eighteenth Amendment; the popular vote was close, the repealist delegates winning by 126,940, against 120,130 votes reported as cast for the candidates opposed to repeal. Delegates met on August 11 in State convention and unanimously voted the State's adoption of repeal through the superseding amendment proposed by Congress. The manufacture and sale of 3.2-per cent beer became lawful on May 1.

Cordell Hull having resigned from the United States Senate to become Secretary of State, Governor McAlister appointed Judge Nathan L. Bachman of Chattanooga on February 28 to succeed him. The Federal Tennessee Valley Authority established its offices in Knoxville on July 6. It proceeded with plans to build a dam, to be called the Norris dam, at Cove Creek on the Clinch River, 20 miles north of Knoxville, to cost \$35,000,000. Knoxville in a popular election on November 25 voted \$3,250,000 of bonds to be issued either to buy out the privately owned electric distribution plant or to build a municipal plant in order to purvey current from the Tennessee Valley Authority.

OFFICERS. The chief officers of the State, serving in 1933, were: Governor, Hill McAlister; Treasurer, James J. Bean; Comptroller, Roy C. Wallace; Secretary of State, Ernest N. Haston; Auditor, Lyon Childress; Attorney General, Roy H. Beeler; Commissioner of Education, Walter D. Cocking.

Judiciary. Supreme Court: Chief Justice, Gratton Green; Associate Justices, A. W. Chambliss, Colin P. McKinney, W. H. Swiggart, William L. Cook.

TENNESSEE, UNIVERSITY OF. A State institution of higher education, nonsectarian and co-educational, in Knoxville, with colleges of medicine and dentistry and schools of pharmacy and nursing in Memphis and a junior college in Martin, founded in 1794. The total enrollment for 1932-33 was 5174, of whom 1593 were registered in the summer session. The faculty numbered 221. The endowment funds amounted to \$453,000; the income for the year 1932-33 was \$1,855,294. There were 138,945 volumes in the library. Leave of absence was granted President H. A. Morgan so that he might devote his entire time to his duties as a member of the Tennessee Valley Authority. Acting President, James D. Hoskins, LL.D.

TENNESSEE VALLEY AUTHORITY. See UNITED STATES; TENNESSEE under *Political and Other Events*; WATER POWER; RECLAMATION.

TENNIS. For excitement and uncertainty the lawn tennis season of 1933 was unequalled. The tale of the sport is merely a recital, for the most part, of the valiant deeds of players from Great Britain. England herself won the Davis Cup, emblem of international supremacy; Fred Perry, English public courts graduate, and Jack Crawford, Australian, divided in the search for individual laurels.

England's conquest in the Davis Cup play was surprising. If any nation was to take the trophy from the French, who had held it since 1927, it would be the United States team, was the general opinion before the play started. England conquered the United States in the zone final and then downed France in the challenge round at Auteuil. The United States youngsters, led by the two-time national champion, H. Ellsworth Vines, failed to cope with the wizardry of Perry and Bunny Austin, as did the French veterans, Cochet and Brugnon.

The mediocrity of Vines' play all season was one of the features of the lively year. The acknowledged 1932 champion of the world had toured the world since winning in September, 1932, at Forest Hills and his first 1933 championship venture, at Wimbledon, in June, was a failure. He fell before the English later in the Davis Cup play, and in defense of his national

crown at Forest Hills, in September, bowed in an early round to Bryan Grant, from Atlanta, Ga.

With Vines playing below form all year, world honors went to Perry and Crawford. Crawford won the Australian championship before blasting his way to the All-England title at Wimbledon. He then won the French title but fell before Perry in Davis Cup play. In the United States national singles final, Perry and Crawford met, and Perry outlasted his opponent to succeed Vines as titleholder.

Comparable with the surprising triumph of Great Britain's victories in world male tennis, and the collapse of Vines, was the decline of the star of Mrs. Helen Wills Moody, queen of women's tennis for a decade. Mrs. Moody showed signs of slipping down hill at Wimbledon, where Dorothy Round, British girl, pressed her in the final. In the United States national tournament Mrs. Moody pushed to the final round, despite the stiffest opposition from Betty Nuthall of England in the semi-final. Helen Jacobs, winner of the women's title in 1932 when Mrs. Moody did not defend, was the other finalist. After losing the first set and trailing in the second, Mrs. Moody retired, defaulting the match and title to Miss Jacobs. The action, almost unprecedented in major tennis, created a furor. Mrs. Moody gave as her reason for resigning an injured back, which was taped and strapped all week and which had kept her out of the Wightman Cup matches the week previous. Whether she should have continued in a sportsmanlike manner to certain defeat, or whether she was right in retiring when she did and sparing her physical condition was debated at length in the press and wherever people congregated. That Mrs. Moody's physical condition was seriously impaired was brought out later in the year when, after almost two months in a hospital upon her return to San Francisco, her doctor declared that she must refrain from tennis for more than a year.

Vines also lost his national doubles crown and then came his astonishing defeat by Bryan Grant in the singles championship. A few weeks later Vines turned professional and with Henri Cochet, French star, enlisted with William T. Tilden. Almost as surprising as the decline of Vines, omnipotent in 1931 and 1932, was the rise of England, which won the Davis Cup for the first time since 1912.

The outstanding American of the season was Frank Shields, who won every major American singles tournament, with the exception of the national, taking the bowls at Seabright, Southampton, Newport and working his way to the doubles final at Longwood with Frank Parker as partner. In that event George M. Lott and Lester Stocfen won.

Miss Betty Nuthall and Miss Freda James, of England, won the women's national doubles and Vines and Miss Elizabeth Ryan won the national mixed doubles title. Donald Budge of San Francisco was crowned national junior champion and Ben Dey and Gene Mako of Los Angeles won the junior doubles. John Tidball of Southern California won the intercollegiate singles and the University of California team, Joseph Coughlin and Samuel Lee, the doubles. Gregory Mangin, of Newark, won the national indoor title in New York in March and the doubles went to Clifford Sutter and Eugene McCauliffe. Miss Dorrance Chase took the women's indoor crown and Mrs. George Wightman and Miss Sarah Palfrey cap-

tured the doubles. Frank Parker, who entered Lawrenceville School in the fall, won the national clay courts championship and the national indoor junior. Alfred L. Jarvis of Tenafla, N. J. won the boys' indoor singles and doubles laurels with William Winslow. The public parks crown went to Arnold J. Simons, of Louisville, Ky., and the doubles title to W. Schommer and Charles Britzius.

Hans Nusslein of Germany defeated Tilden for the world's professional championship but Tilden and Bruce Barnes took the doubles. The national professional title fell to Vincent Richards who also figured in the doubles title, paired with Charles M. Wood, Jr.

TERRITORY OF NEW GUINEA. See under NEW GUINEA.

TERRY, FRED. A British actor, died Apr. 17, 1933, in London where he was born Nov. 9, 1863. He came of a distinguished theatrical family, four of his sisters, Kate, Ellen, Marion, and Florence, achieving fame on the stage, and likewise his two brothers, George and Charles. He received his education at private schools in Guines, France, and Geneva, Switzerland. After making his debut in *Money* at the Haymarket Theatre, London, in 1880 he joined the company of Mr. and Mrs. Chippendale, which toured the provinces in *The Lady of Lyons*, *The School for Scandal*, and other plays. A period of Shakespearean performances then followed, with Marie de Grey in *Macbeth*, *Twelfth Night*, and *The Merchant of Venice* (1882), with Ben Greet in *Romeo and Juliet* and *Much Ado about Nothing* (1883), and with his sister Ellen and Henry Irving in *Twelfth Night* (1884). While touring the United States in *Dark Days* in 1885 he was engaged by Daniel Frohman to appear in *Gretchen*, *Frou-Frou*, *Moths*, and *Pygmalion and Galatea*. On his return to England he appeared in *Nina* (1887), *The Pompadour* (1888), *King John* (1889), and *Dr. Bull* (1890).

Mr. Terry next joined Beerbohn Tree's company, with which he appeared during 1890-94 in a large repertoire, including *A Village Priest*, *Comedy and Tragedy*, *The Red Lamp*, *Beau Austin*, *Called Back*, *The Dancing Girl*, *Peril*, *A Man's Shadow*, and *The Charlatan*. In *The Dancing Girl* was Julia Neilson, who later became his wife. He subsequently established a reputation as a romantic hero and occasional stage villain in *The Home Secretary* (1895), *His Little Dodge* (1896), *A Court of Honor* (1897), *The Tree of Knowledge* (1897), *The Ambassador* (1898), *The Gipsy Earl* (1898), *Grierson's Way* (1899), *Change Alley* (1899), and *Tess* (1900).

In 1900, with his wife, Mr. Terry assumed the management of the Haymarket Theatre where they appeared together, he as Charles II and she as Nell Gwynn, in *Sweet Nell of Old Drury*. Their joint acting continued thereafter in some of the most distinguished pseudo-historical melodramas, many of which played an annual season of about six months' duration at the New Theatre, London. Among these were *The Heel of Achilles* (1902), *For Sword or Song* (1902), *The Scarlet Pimpernel* (1905), *Dorothy o' the Hall* (1906), *The Popinjay* (1907), *Matt o' Merrymount* (1908), and *Henry of Navarre* (1909).

Mr. Terry again assayed the rôle of actor-manager with the production in 1915 of *Mistress Wilful* at the Strand Theatre, playing Robin Fairfellow to Miss Neilson's Margaret Goodman. Their subsequent productions were *The Borderer* (1921), *The Marlboroughs* (1925), and *The Wooing of*

Katherine Parr (1927). Until 1930 *Sweet Nell of Old Drury*, *The Scarlet Pimpernel*, and *Henry of Navarre* were frequently revived. The acting tradition was carried on by their children, Dennis Neilson-Terry, who died in 1932, and Phyllis Neilson-Terry.

TERRY, MARSHALL ORLANDO. An American soldier-surgeon, died at Coronado, Calif., Oct. 11, 1933. Born at Watervliet Centre, Albany Co., N. Y., June 21, 1848, he was graduated from the Cleveland Homeopathic Hospital in 1872, later studying in New York City at the Ophthalmic and Aural Institute, the Manhattan Eye and Ear Infirmary, and the New York Eye and Ear Infirmary. In 1880 he was appointed surgeon with the rank of major in the National Guard of New York and in 1895 surgeon-general with the rank of brigadier-general. The stretcher and field case, ambulance, and regimental chest which he invented were adopted by the New York National Guard. He presented also conclusive evidence that the house fly is a disseminator of typhoid fever as the result of observations during a typhoid epidemic at Camp Thomas, near Chickamauga, Ga., during the Spanish-American War. After practicing in New York City he served from 1895 until his retirement in 1905 as surgeon-in-chief of the Utica Homeopathic Hospital, Dr. Terry was president of the Association of Medical Officers of the National Guard and Naval Militia of New York. He wrote *The Soldier's Medical Friend*.

TEXAS. POPULATION. The population of the State on Apr. 1, 1930, according to the Fifteenth Census, was 5,824,715, as against 4,663,228 in 1920. Houston had (1930) 292,352 inhabitants; Dallas, 260,475; San Antonio, 231,542; Fort Worth, 163,447; El Paso, 102,421; Austin, the capital, 53,120.

AGRICULTURE. The following table shows the acreage, production, and value of the principal crops for 1933 and 1932:

Crop	Year	Acreage	Prod. Bu.	Value
Cotton ..	1933	11,467,000	4,475,000*	\$205,850,000
	1932	13,334,000	4,500,000*	126,000,000
Corn ...	1933	5,422,000	74,824,000	38,160,000
	1932	5,707,000	102,726,000	23,627,000
Wheat ..	1933	1,973,000	13,022,000	8,985,000
	1932	3,330,000	28,293,000	7,922,000
Gram sorghum	1933	4,228,000	46,508,000	19,068,000
	1932	4,065,000	63,008,000	11,341,000
Oats ...	1933	1,189,000	20,808,000	7,907,000
	1932	1,749,000	41,976,000	5,457,000
Hay (tame) ..	1933	515,000	508,000*	4,013,000
	1932	558,000	642,000*	3,467,000
Rice ...	1933	141,000	7,473,000	6,053,000
	1932	185,000	9,065,000	3,626,000
Potatoes ..	1933	57,000	3,648,000	2,991,000
	1932	62,000	4,154,000	3,199,000
Sweet potatoes	1933	78,000	6,240,000	3,432,000
	1932	100,000	7,600,000	2,432,000

* Bales. † Tons.

MINERAL PRODUCTION. The production of petroleum continued in 1932 to be the greatest in quantity for any of the States of the Union. It declined moderately, by 6 per cent, to 311,069,000 barrels (1932), from 332,437,000 (1931). Declines in the output of six out of the seven main producing districts were partly offset by an increase of 10,528,000 barrels for the East Texas field, to 120,158,000 barrels for 1932, despite strict measures of proration on the part of the Texas Railroad Commission.

There were completed, in 1932, 134 wells yielding natural gas; their combined initial open flow

of gas was 1,940,500 M cu. ft. of gas daily. The railroad commission shut in, for lack of a useful outlet, wells delivering 1,364,750 M cu. ft. There were produced in the State 352,500,000 gallons of gasoline derived from natural gas (1932); the quantity was less by 74,200,000 gallons than that for 1931.

In spite of the obstacles to interrupting the production of sulphur by the Frasch process the production was much curtailed; it totaled 875,947 long tons for 1932. Producers' stocks above ground were sufficient to supply sales at the current (1932) rate of outgo for an extended period. Sales, however, increased materially in the course of 1933.

FINANCE. State expenditures in the year ended August 31, 1932, as reported by the U. S. Department of Commerce, were: for maintaining and operating governmental departments \$68,028,361 (of which \$28,820,034 was for local education); for interest on debt, \$15,976; for permanent improvements, \$32,778,510; total, \$100,822,847 (of which \$39,269,080 was for highways, \$10,716,123 being for maintenance and \$28,552,957 for construction). Revenues were \$101,795,009. Of these, property and special taxes furnished 28.2 per cent; departmental earnings and compensation to the State for officers' services, 3.0; sale of licenses, 44.5 (in which was included a gasoline sale tax that produced \$28,213,021). Funded debt outstanding on Aug. 31, 1932, totaled \$7,583,200. Net of sinking-fund assets, the debt was \$7,560,756. On an assessed valuation of \$3,962,841,346 the State levied in the year ad-valorem taxes of \$27,343,605.

EDUCATION. The State's contribution toward the support of the public schools for the academic year 1933-34 was not reduced. An apportionment was made, on the per-pupil basis, at the same rate as for the year 1932-33. The number of persons of school age in the State was reckoned in 1933 as 1,571,378. For the year 1931-32 the current expenditures of the public schools totaled slightly more than \$60,000,000 and were not quite three-fourths of the total for the year before. Figures for the academic year 1932-33 were not available.

CHARITIES AND CORRECTIONS. Special measures, outside the work of the permanent charitable organization of the State, were taken in 1933 in Texas, as in other States, to aid the great group rendered destitute by adverse economic conditions. The bond issue voted to provide the State's part of the means to be devoted to this purpose from the latter months of the year onward did not find ready sale in December. An improvement in the revenue of cotton-growers, however, tended to limit the need for public aid.

Control and supervision of the chief part of the State's institutions for the care and custody of persons, under the system in force in 1933, rested in the State Board of Control, a body composed of three members serving overlapping terms of six years, by appointment. The board purchased supplies both for these institutions and for the State's governmental departments. Its division of child-welfare examined and licensed local institutions and agencies performing work of this type. State institutions under the board's authority were: Confederate Home (for men), Austin, which had 219 inmates on Aug. 31, 1932; Confederate Women's Home, Austin, 96 inmates; School for the Blind, Austin, 214 pupils; School for the Deaf, Austin, 515 pupils;

Deaf, Dumb, and Blind Institute (for colored youth), Austin, 232; State Orphans' Home, Corsicana, 855 inmates; Home for Dependent and Neglected Children, Waco, 290; Girls' Training School, Gainesville, 229; Juvenile Training School, Gatesville, 809; Austin State School, 1044; Rusk State Hospital, Galveston Psychopathic Hospital, Austin State Hospital, Terrell State Hospital, San Antonio State Hospital, and Wichita Falls State Hospital (all for the insane), an aggregate of 10,241; Abilene State Hospital (epileptics), 962; Tuberculosis Sanatorium, at Sanatorium, 639; State Colored Orphans' Home, Gilmer, 87. The State Prison, at Huntsville, was administered by a prison manager.

LEGISLATION. A regular session of the Legislature convened on January 10. It created a State convention to act for the State on the proposed repeal of the Eighteenth Amendment to the Federal Constitution. This convention was to be composed of 23 delegates, who were to be elected at large by popular vote on August 26. An amendment to the State constitution, to legalize traffic in 3.2-per cent beer, was proposed for popular approval, also in the vote of August 26.

Broad powers were given the Governor and the State banking commissioner, in the height of the nation-wide banking panic of February and March, to take action so that banking institutions under State charter might avoid immediate and full payment of their depositors without incurring bankruptcy. The collapse of local taxation having greatly curtailed the operation of public schools, the Legislature sought for ways to provide State school-aid; it sought also to provide means for contribution from the State to the support of great numbers of the needy unemployed. To raise money, it submitted to popular vote a proposal for a \$20,000,000 State bond issue; placed a tax of 2 cents a barrel on petroleum produced in the State; subjected "intangible assets" of oil pipe-lines (in effect, their earnings capitalized at 6 per cent) to ad-valorem taxation.

The Legislature sent to the voters for their approval a State constitutional amendment to permit counties to exercise great liberty in devising their own forms of government. The State was reapportioned, for the election of Federal Representatives, into 21 districts in place of 18. Procedure with regard to deficiency judgments was greatly modified in favor of foreclosed owners, who were allowed to establish the "actual" value of property at time of sale. The law requiring three days' notice of intent before parties might marry was repealed. Betting at racetracks under the pari-mutuel system was made lawful.

Special Session. The Legislature was called to meet in special session on September 14, chiefly to authorize an issue of bonds to provide means for aiding the indigent unemployed, for which the voters had passed a constitutional amendment on August 26. It authorized the issue of \$5,000,000 such bonds. Compliance with a code approved by the National Recovery Administration was made an admissible defense against prosecution for infringement of the State's anti-trust laws. The sale of machine guns to any but peace officers was prohibited. Kidnaping was rendered a capital offense.

POLITICAL AND OTHER EVENTS. Governor Ferguson dealt with the bank panic by issuing a proclamation on March 2 requiring all banking

institutions to close until the 8th. Reopenings as provided by Federal authority were general in Dallas on March 11 and elsewhere in the next few days. At an election on August 26 there were chosen by a light vote, reported as 304,696 to 191,966, 23 repealist delegates at large, to meet in State convention on November 27 and declare the State's adoption of the repeal of the Federal Eighteenth Amendment through the superseding amendment proposed by Congress. At the election of August 26 voters also adopted an amendment of the State constitution to render lawful the traffic in beer having not over 3.2 per cent of alcohol; an issue of \$20,000,000 of State bonds to meet the cost of public relief for the needy was likewise approved.

A hurricane struck the southern part of the State on September 4; 22 persons were reported killed, some 1500 injured; the damage to property was estimated at \$5,000,000. A movement was carried on for the combination of the northwestern counties of Texas and those of the Oklahoma Panhandle to be erected into a separate State having its capital at Amarillo.

OFFICERS. The chief officers of the State, serving in 1933, were: Governor, Mrs. Miriam A. Ferguson; Lieutenant-Governor, Edgar E. Witt; Secretary of State, W. W. Heath; Treasurer, Charley Lockhart; Comptroller, George H. Sheppard; Attorney General, James B. Allred; Superintendent of Public Instruction, L. A. Woods.

Judiciary. Supreme Court, Chief Justice, C. M. Cureton; Associate Justices, T. B. Greenwood, William Pierson.

TEXAS, UNIVERSITY OF. A State institution of higher education in Austin, with a medical branch in Galveston; the main university was opened in 1883. For the autumn of 1933 the enrollment at the main university totaled 6050, of

State appropriations amounted to \$324,967, and the income from student fees to approximately \$100,000. The library contained 38,710 catalogued volumes and public documents. Equipment valued at \$5000 was received from the Carnegie Foundation for the Advancement of Teaching for the study of art. President, Bradford Knapp, D.Agr.

TEXTILE INDUSTRY. On the basis of average activity as determined from the normal years 1923-25, the textile industry as a whole showed an activity for the year 1933, 4 per cent above the average and 25 per cent above the activity of 1932, according to the annual review number of *Textile World* on which the accompanying information is largely based. In 1932 the activity of the industry was 17 per cent below the average. The total improvement, however, was effected by a short-lived spurt which, in June, carried production to its highest point in four years and was followed by a decline in activity to a point in December not much better than the low mark of the previous year.

The production of cotton goods followed the curve of general textiles very closely and was about 24 per cent above that of 1932, and approximated the 1923-25 average. Total consumption of American cotton was approximately 14,564,700 running bales of which 8,353,449 bales were exported. The output of rayon goods showed an amazing increase during the year, as recorded under RAYON. Woolen goods shared the upward trend and rose about 35 per cent above 1932 consumption, though remaining about 9 per cent below the 1923-25 average. Silk textiles, in part due to rayon competition and in part to the continued depression, fell in output 15 per cent below that of 1932, although still remaining above the 1923-25 average.

UNITED STATES FOREIGN TRADE IN TEXTILES AND TEXTILE FIBRES

[From U. S. Department of Commerce]

	Exports		Imports	
	1932	1933	1932	1933
Cotton, unmanufactured	\$345,164,534	\$398,212,263	\$ 6,690,247	\$ 7,904,798
Cotton, semi-manufactures	9,276,255	7,506,070	.....	1,970,245
Cotton, manufactures	36,248,341	31,845,014	28,969,488	30,054,056
Jute manufactures	1,388,805	1,101,157	22,468,685	31,128,532
Flax, hemp, and ramie, and manufactures	101,549	105,455	20,430,366	22,652,979
Other vegetable fibre and manufactures	1,013,995	650,253	14,836,011	14,906,074
Wool and mohair, unmanufactured	31,651	13,184	6,028,804	21,456,784
Wool, semi-manufactures	393,413	315,186	1,156,867	2,840,082
Wool manufactures	832,628	1,081,309	2,746,482	13,438,452
Hair and manufactures	903,325	1,475,893	1,363,758	1,855,260
Silk, unmanufactured .....	.....	.....	114,325,309	103,594,564
Silk manufactures	4,543,828	4,878,086	5,915,126	6,282,604
Rayon or other synthetic textiles	2,492,177	2,485,577	2,620,578	4,521,261
Miscellaneous textile products	6,411,215	6,101,123	8,441,840	7,661,206
Total	\$408,801,741	\$455,770,570	\$244,035,305	\$270,451,651

whom 4014 were men and 2036 women; the enrollment in the medical branch was 502. The 1933 summer session had an enrollment at the main university of 2809, of whom 1455 were men and 1354 women. There were 357 members on the faculty. The libraries contained 493,155 volumes. President, Harry Yandell Benedict, Ph.D. LL.D.

TEXAS TECHNOLOGICAL COLLEGE. A State coeducational institution at Lubbock, Texas, opened in 1925. The enrollment for the fall semester of 1933-34 was 1952 (agriculture, 187; engineering, 370; home economics, 196; arts and sciences, 1199). Of this number 1171 were men and 781 women. During the summer session there were 531 men and 757 women enrolled. The teaching staff for 1933-34 numbered 106. The

The codes for the entire industry had been approved and became effective by the end of the year, or, in a few instances, within the early months of 1934. The Cotton Textile Code, the earliest of all codes to be approved, became effective July 17. Writing in *Textile World*, George A. Sloan, president of the Cotton-Textile Institute, said, after six months of experience:

The industry has definite knowledge of improvements effected in many directions. Wage and labor situations have been given stability perhaps not equalled, certainly not surpassed at any other time in the industry's history. While improvement and benefits have been chiefly on the side of the working personnel, this stability has not been without advantages for the mills. Over-capacity, for the first time, has been brought under reasonable control, making for a better balancing of production with current market requirements. Influences formerly contributing to

ruinous competition are now held in restraint with a resultant improvement in conditions for the industry and those who deal with it

THAYER, WEBSTER. An American jurist, died in Boston, Mass., Apr. 18, 1933. He was born at Blackstone, Mass., July 7, 1857, and was graduated from Dartmouth College in 1880. Upon his admittance to the Massachusetts bar in 1882, he established a practice in Worcester, in which he was engaged until his appointment in 1917 by Governor McCall as justice of the Superior Court of Massachusetts. He was the presiding judge in the Sacco-Vanzetti case, a murder prosecution which, after extending over seven years, resulted in the execution by the State of Massachusetts on Aug. 23, 1927, of the two defendants, Nicola Sacco and Bartolomeo Vanzetti. Their crime had been the murder at South Braintree, Mass., on Apr. 15, 1920, of Frederick A. Parmenter, paymaster, and Alessandro Berardelli, guard, for the Slater and Morrill Shoe factory.

The Sacco-Vanzetti case aroused international interest and protests, many believing that the defendants, on account of their known radical affiliations, had failed to receive a fair trial. After the rendering of the first verdict of guilty in 1921 there were argued before Judge Thayer seven motions for a new trial and five supplementary motions. The charges of prejudice against the judge became more pronounced after he denied the petition based on the confession of Celestino Madeiros that he, and not Sacco or Vanzetti, had participated in the South Braintree crime. After Governor Fuller's rejection of the defense's plea for clemency and its failure to obtain from the United States Supreme Court a writ or stay of execution, demonstrations were staged by radicals in many American and foreign cities, the most conspicuous being the attempt to bomb the American embassy in Paris. There was another repercussion five years later when the Thayer home in Worcester was completely destroyed by bombing. Despite abuse and condemnation, and even threats to his life, Judge Thayer maintained that he had conscientiously discharged his duty "to God and country" in the decision which he had handed down.

THEATRE. See **DRAMA**; **GERMAN LITERATURE**; **FRENCH LITERATURE**; **LITERATURE, AMERICAN AND ENGLISH, ETC.**

THEATRE GUILD. See **DRAMA.**

THEOSOPHICAL MOVEMENT, THE. The year 1933 saw a strengthening of the Theosophical Movement, which, though aided by various working organizations, is above them all. Traceable down the centuries wherever thought has struggled to be free, it is visible to-day in the widespread modern reaction against dogmatic creeds on the one hand and scientific materialism on the other. Additional progress has been made in clearing modern Theosophy of the fantastic accretions of the past few years and reviving the study of Madame H. P. Blavatsky's writings.

Her restatement of the truths of Theosophy, which every great teacher has but reiterated in different words, rests upon three fundamental propositions: Deity, or the Absolute, the Rootless Root of all that is, has been, or will be, is an infinite, eternal, and immutable Principle, utterly beyond the powers of human conception; the law of periodicity, of action and reaction, ebb and flow, operates always and everywhere, on the moral no less than on the physical plane; thus the alternation of day and night, inbreathing and

outbreathing, are paralleled by alternate periods of life and death for the universe and every man; and evolution is not alone physical but includes the unfoldment of consciousness through the lower kingdoms and the gradual progress toward perfection of each human soul, a spark of the universal Oversoul.

During 1933 important articles by Madame Blavatsky, long out of print, were made available in pamphlet form, including *Memory in the Dying*, *The Origin of Evil*, *The Fall of Ideals*, and *On the New Year*.

Two old-time Theosophists, prominent in the early days of the Movement, died in 1933—Dr. Annie Besant, widely known defender of unpopular causes and champion of India's political freedom, and G. R. S. Mead, scholar and thinker, the founder of the Quest Society and editor of the quarterly review, *The Quest*.

THEOSOPHICAL SOCIETY, AMERICAN. The American section of the Theosophical Society, a world-wide organization founded in 1875 by Mme. Helena P. Blavatsky and Col. Henry S. Olcott. World Headquarters were later established at Adyar, India, near Madras. In 1933 branches existed in 48 nations, on six continents. The American Theosophical Society had, in 1933, 178 local lodges. The president of the society was Sidney A. Cook. Headquarters are in Wheaton, Ill.

THIRD INTERNATIONAL. See **COMMUNISM.**

THOMPSON TROPHY. See **AERONAUTICS.**

THOMSON, SIR (JOHN) ARTHUR. A British naturalist, died in London, Feb. 12, 1933. Born in East Lothian, July 8, 1861, he was educated at the Universities of Edinburgh, Jena, and Berlin. He was for a time lecturer on zoölogy and biology in the school of medicine of the University of Edinburgh. In 1899 he was called to the University of Aberdeen where until his retirement as professor-emeritus in 1930 he held the regius professorship of natural history. He was also Gifford Lecturer at St. Andrews University in 1915. In 1924 he came to the United States to deliver the Terry Lectures at Yale University and the Morse Lectures at Union Theological Seminary. Among his writings which "popularized" science were: *The Study of Animal Life* (1892); *The Science of Life* (1904); *Progress of Science in the Nineteenth Century* (1904); *Herbert Spencer* (1906); *Heredity* (1908); *Darwinism and Human Life* (1910); *Introduction to Science* (1911); *The Wonder of Life* (1914); *Secrets of Animal Life* (1919); *The Control of Life* (1921); *What Is Man?* (1923); *Science, Old and New* (1924); *The New Natural History* (1925-26); and *Scientific Riddles* (1932).

Sir Arthur was also one of the first compilers of those comprehensive works, known as "outlines," which are a means of bringing to the layman knowledge of a technical subject: *Outlines of Zoölogy* (8th ed., 1929); *Life: Outlines of General Biology* (2 vols., 1931); and *The Outline of Natural History* (1932). In *The Bible of Nature* (1909); *Science and Religion* (1925), and *The Gospel of Evolution* (1925) he contributed toward breaking down the antagonism between science and religion. Knighthood was conferred on him in 1930.

THORNTON, SIR HENRY (WORTH). A British railway expert, died in New York City, Mar. 14, 1933. He was born at Logansport, Ind., Nov. 6, 1871. On his graduation from the University of

Pennsylvania in 1894 he began his career as a draughtsman with the Pennsylvania Railroad. The following year he was promoted to assistant engineer of construction with the Cleveland and Marietta Railroad, a subsidiary of the Pennsylvania. After serving as assistant engineer with the Cincinnati division he became in 1899 engineer of maintenance of way for the Erie and Ashtabula division of the Pennsylvania's Northwest System and in 1901 superintendent of the Cleveland, Akron, and Columbus Railroad. In 1902 he returned to the Erie and Ashtabula division as superintendent and, when the Pennsylvania System bought the Long Island Railroad in 1911, acted first as assistant general superintendent and then as general superintendent. In the latter capacity he was instrumental in the electrification of that line.

Thornton was offered in 1914 the post of general manager of the Great Eastern Railway, which serves principally the eastern counties of England. He succeeded so well in improving the line's efficiency that on the outbreak of the World War he was able to cope with the problem of transporting troops and war materials to Harwich and thence via the company's steamers to Antwerp. He was also appointed a member of the executive committee of general managers which, under the direction of the British government, controlled and operated all railroads. In 1916 he was made deputy director of inland waterways and docks, with the rank of colonel in the Royal Engineers, and the following year assistant director general of movements and railways. Promoted to deputy director-general of movements and railways with the rank of brigadier-general in 1918, he held after the Armistice the office of inspector-general of transportation with the rank of major-general. Naturalized as a British subject in 1919, he was created later in that year a Knight Commander of the Order of the British Empire in recognition of his war services. He received also the decorations of Companion of the French Legion of Honor, Officer of the Order of Leopold of Belgium, and the Distinguished Service Medal of the United States.

On the organization in 1922 of the Canadian National Railway Co. to operate the lines owned by the Dominion government, such as the National Transcontinental Railway, the Intercolonial Railway, and the Prince Edward Island Railway, Sir Henry accepted at the government's request the office of president and general manager. The following year the Grand Trunk Railway Co. became part of the system. Under Thornton's management the operating efficiency of the line's 23,000 miles of tracks was so improved that by 1926 it was receiving a net revenue of almost \$50,000,000. In 1927 there was organized under the auspices of the Canadian National Railways the Canadian National Steamships, comprising the Canadian National Steamships, Ltd., and the Canadian Government Merchant Marine, Ltd. Sir Henry succeeded also in freeing these services to a great extent from political interference. He resigned his position as president and chairman of the board in July, 1932. After 1928 he was a member of the advisory committee of the League of Nations Committee on Transport.

THYROID, REMOVAL OF IN HEART DISEASE. See MEDICINE AND SURGERY.

TIBET, *tí-bét'* or *tib'et*. A central Asian territory extending eastward from the Pamirs to the border of China; nominally under the suzerainty of China. Area, 463,200 square miles; popula-

tion, approximately 2,000,000. Lhasa, the capital, had some 20,000 inhabitants. On Dec. 17, 1933 the temporal ruler of the country, the Dalai Lama (Ngag-Wang Lobsang Thubden Gya-Tsho) died at the age of 57 years. See CHINA under *History*.

TICK FEVER, ERADICATION OF. See VETERINARY MEDICINE.

TIFFANY, LOUIS COMFORT. An American decorative designer and painter, died Jan. 17, 1933, in New York City where he was born Feb. 18, 1848. He studied under George Inness and Samuel Coleman, and in Paris with Léon Bailly, making a special study of the decorative arts in their relation to architecture. After his return to New York City about 1878, he devoted himself to stained glasses, enamels, jewelry, and other decorative work, organizing the company of Louis C. Tiffany and Associate Artists. There was later organized, principally for carrying out ecclesiastical commissions, the Tiffany Studios, of which he became president and art director. With the aid of his assistants, many of whom were master European craftsmen, he revived the artistic production of stained glass in the United States, producing designs of strength and fine decorative quality. His best-known invention was the Tiffany favrile glass, which possesses delicate refracting powers capable of iridescent effects and which for many years was manufactured by the Tiffany Furnaces at Corona, L. I., N. Y.

Mr. Tiffany designed the stained glass windows in Memorial Hall, Harvard, and in the Chittenden Library, Yale, as well as those in numerous churches, such as the Church of the Pilgrims, Brooklyn, and All Angels Church, New York. Good examples of his paintings, principally water colors, are "Algerian Shops," "A Street in Tangiers," "The Pool," "Market Day in Nuremberg," "Grand Canyon of the Colorado," "Cathedral Steps, Morlaix, Brittany," and "Street Scene in Old Chinatown, San Francisco." He was elected an associate of the National Academy of Design in 1871 and an academician in 1880. The French government made him in 1900 a Chevalier of the Legion of Honor. His numerous prizes included gold medals at the expositions in Paris (1900), Buffalo (1901), Dresden (1901), St. Louis (1904), Jamestown (1907), San Francisco (1915), and Philadelphia (1926). At the Chicago exposition (1893) he exhibited a miniature chapel in which glass mosaic formed the principal decorative note and which won several medals. In 1918 he established the Louis Comfort Tiffany Foundation for art students, deeding to it his art collections, Laurelton Hall, an 80-acre estate at Oyster Bay, L. I., N. Y., and a \$1,000,000 maintenance fund.

TIMOR ARCHIPELAGO. See NETHERLAND INDIA.

TIROL, *tê-rôl'*. A former crownland of Austria-Hungary, divided between Italy and the Republic of Austria by the Treaty of St. Germain. See ITALY under *History*.

TOBACCO. The tobacco crop in the United States in 1933 was estimated at 1,396,174,000 pounds, 37 per cent larger than the 1932 crop of 1,022,558,000 pounds but 31 per cent less than the 1931 crop. The harvested acreage totaled 1,753,700 acres, compared with 1,413,800 in 1932, while the 1933 average acre yield was 796 pounds, 73 more than in 1932. Based on the December 1 estimate of the average farm price of 12.9 cents per pound, the farm value of the 1933 crop would total \$180,647,000. The estimated production by types was for flue-cured, 708,488,000 pounds;

fire-cured, 138,455,000; air-cured, light, mostly Burley, 433,962,000; air-cured, dark, 41,801,000; cigar types, 73,150,000, comprising filler 35,010,000, binder 31,987,000, and wrapper 6,153,000; and miscellaneous, 318,000 pounds. Estimates for the cigar types allow for acreage and production removed under contract with the Agricultural Adjustment Administration. North Carolina regained the lead of the producing States with 518,522,000 pounds, and was followed by Kentucky with 369,780,000; Tennessee, 136,210,000; Virginia, 90,725,000; South Carolina, 85,850,000; Georgia, 58,124,000; Pennsylvania, 26,563,000; Ohio, 24,945,000; Maryland, 17,710,000; Connecticut, 15,683,000; Wisconsin, 14,868,000; and Indiana, 12,920,000 pounds.

The Agricultural Adjustment Administration began in the summer of 1933 a tobacco acreage and production reduction plan in the cigar-leaf area with aim of better balance of supply and demand and lifting cigar-leaf prices up to the parity contemplated in the Agricultural Adjustment Act. Farmers cooperating in the plan were to be compensated by the government with funds raised through a processing tax to be applied on all processed cigar-leaf tobacco and collected from the manufacturer. A similar plan for flue-cured tobacco was launched early in the fall, and production adjustment programmes were to be inaugurated for the 1934 crops of the Burley, Maryland, dark air-cured, and dark fire-cured types.

The 1933 crops of tobacco in other important producing countries, as estimated by different official agencies, were for Japan, 139,200,000 pounds; Greece, 107,865,000; China, 130,000,000; Italy, 85,563,000; Cuba, 36,352,032; Bulgaria, 38,612,000; Chosen, 35,634,500; Algeria, 33,069,000; Czechoslovakia, 30,479,000; Puerto Rico, 17,500,000; Spain, 14,330,000; and Belgium, 13,726,000. In 1932-33, Germany produced 62,097,000 pounds, Southern Rhodesia, 14,150,000; Union of South Africa, 10,258,000; and New Zealand, 2,207,100 pounds. The 1932 crop of the Philippine Islands was reported to be 99,511,147 pounds; France 70,112,640; Alsace, 21,547,500; and Mexico, 8,489,000 pounds; and Sumatra, 140,605 bales. Of the 1932 Canadian crop of 54,093,730 pounds, Ontario produced 45,759,390, and Quebec, 7,952,000 pounds.

The collections from internal revenue taxes on tobacco in the United States for the fiscal year 1933 amounted to \$402,739,059.25, an increase of \$4,160,440.69 or 1.04 per cent compared with the previous year. The receipts from taxes on small cigarettes amounted to \$328,418,413.58, which was 81.55 per cent of the total taxes collected on tobacco, and \$10,885,333.56 over 1932. The taxes collected on smoking and chewing tobacco declined to \$55,450,340.99 in 1933 from \$58,030,155.75 in 1932; on large cigars to \$11,304,995.91, a decrease of \$2,902,683.59; and on snuff to \$6,404,999.69, a decrease of \$441,302 compared with 1932. More than 90 per cent of the total tobacco receipts were collected in North Carolina, Virginia, Kentucky, New Jersey, Ohio, and California in the order named. The Commissioner of Internal Revenue reported that in the calendar year 1932, there were manufactured 106,632,433,834 cigarettes weighing less than 3 pounds per 1000, about 10,431,781,000 less than in 1931. Exports of leaf tobacco rose from 411,159,483 pounds in 1932 to 438,936,121 in 1933. Consult also *Tobacco Markets and Conditions Abroad* (weekly, ed. by B. D. Hill, United States Department of Commerce); *American Tobacco Types, Uses, and Markets*; and

International Trade Restrictions and Other Governmental Measures Affecting Tobacco and Tobacco Prices in the United States (both by the United States Department of Agriculture, 1933). See CHILD LABOR.

TOBAGO. See TRINIDAD.

TOGOLAND, or Togo, tō'gō. A former German protectorate in West Africa; divided between Great Britain and France, Sept. 30, 1920, as mandated territory of the League of Nations.

TOLEDO, UNIVERSITY OF THE CITY OF. A municipal, coeducational institution of higher learning in Toledo, Ohio, founded in 1872. The enrollment for the autumn of 1933 totaled 2026, of whom 1245 were men and 781 women. The 1933 summer session enrollment totaled 250, of whom 112 were men and 138 women. The faculty had 73 fulltime members. The income for the year amounted to approximately \$258,800. The library contained approximately 30,000 volumes. President, Philip Curtis Nash, M.C.E.

TOLEDO MUSEUM OF ART. See ART MUSEUMS.

TONGA (FRIENDLY) ISLANDS. A British protectorate in the South Pacific, some 350 miles east of Fiji. Total area, 385 square miles; population (1932 census), 29,454 of whom 412 were Europeans. Agriculture is practically the only industry of the people. Copra is the chief crop. In 1932, imports were valued at £86,006; exports, £96,103. Revenue amounted to £57,224 and expenditure to £63,986 for 1931-32. Capital, Nukualofa. Queen in 1933, Salote; High Commissioner, Sir A. G. M. Fletcher.

TONGKING (TONKIN). See FRENCH INDO-CHINA.

TORONTO, UNIVERSITY OF. An institution of higher education in Toronto, Ont., Canada, founded in 1827 and supported by the provincial government. The 1933 autumn enrollment was 7103. The faculty numbered 937 members. The total expenditure for the year 1932-33 for salaries and maintenance was \$2,668,251. The library contained 289,128 volumes and 107,291 pamphlets. President, Henry John Cody, M.A., D.D., LL.D.

TORPEDO BOATS. See NAVAL PROGRESS.

TRADE UNIONS, GERMANY. The Nazi régime in Germany effected a number of changes in the labor set-up in the country, the two most important being the creation of a compulsory labor service, and the dissolution of the old line trade unions and the substitution for them of the so-called German Labor Front. The latter was, in effect, a government corporation under the strict surveillance of an official appointee of the Chancellor. The inauguration of the compulsory labor service for all young German men was announced on May 1, 1933 to go into effect on Jan. 1, 1934. It has not as yet been decided whether the class of 1914 or that of 1915 would be the first to be called into service. It was estimated that there were 600,000 young men in the class of 1914, 480,000 in the class of 1915, 390,000 in the class of 1916, and 300,000 in the class of 1917. The plans call for the calling into service of one-half of the first class on January 1, and their retention under orders in labor camps until June 30; upon their discharge on that date they will be replaced by the second half of the class which will also continue in service for six months. Apparently, therefore, from 240,000 to 300,000 men will be in service at one time during 1934. It has been reported that the extension of service in future

years will depend almost entirely upon the budget involved. On the basis of the cost of the voluntary labor service inaugurated by the German Republic, the expenditure per man per year will be about 1000 marks plus 40 pfennigs daily for pocket money. On this basis the total cost for the compulsory labor service in 1934 will be between 240,000,000 and 300,000,000 marks. It was declared by an official of the Ministry of Labor, under whose aegis the labor service was to be conducted, that the only ground for exemption would be physical disability. The plans call for the performance of real manual labor for six hours daily with one or two hours' instruction in political science. Apparently primary attention was to be given to the construction of land and suburban settlements; other work was to consist of general land improvement, water-ways development, road work, and reforestation. No wages were to be paid the men except for the small sum cited above for pocket expenditures. However, clothing, food, shelter, and all necessary equipment were to be furnished by the government.

On May 2, 1933 functionaries of the National Socialist party seized possession of the offices and other properties of the labor unions throughout Germany, arrested the former officers, and abolished the labor press and other educational, cultural, and mutual welfare activities which had heretofore been conducted by the great Socialist and Communism trade unions of the Reich. Before the Nazi counter-revolution, the German trade unions had had a membership of 7,000,000 persons and property worth hundreds of millions of marks. Unquestionably the German trade movement had been the strongest and richest in the world; also, its leaders had occupied important positions in the government and had been among the functionaries and politicians who had ruled Germany during the second Reich (November, 1918–February, 1933). The unions thus seized were originally put under the charge of the National Socialist Shop Cell Organization (*Der National-Sozialistischen Betriebszellen-Organisation*). It was declared that the labor union and the shop cell were two different things, the labor union standing for the economic interests, and the shop cell for the political interests of the wage earner. On May 5, six government ordinances were published having to do with the future status of labor unions, as follows: (1) The management of the entire labor movement in Germany was placed under one person appointed by the government; (2) the money and property of labor unions were placed in the charge of a treasurer appointed by the government; (3) provision was made for a national organizer of labor unions; (4) the entire labor union press was placed under the authority of the press and publicity manager of the "committee of action for the protection of German labor"; (5) the existing collective trade agreements were continued in force until the formation of the "German Labor Front"; (6) independent action of a general character, such as conclusion of collective and economic agreements, without authorization by the "committee of action for the protection of German labor" were prohibited.

Subsequently all wage earners were organized into one body called the German Labor Front under the direct control of the Nationalist Socialist party. The central office of the Labor Front was to include all the existing occupa-

tional organizations in Germany, was to supervise and direct the activities of the Front, and was to decide the disputes that might arise within it. Subordinate to the central office were two labor councils and two main occupational organizations, the General Federation of German Wage Earners, and the General Federation of the German Salaried Employees. The first congress of the German Labor Front was held on May 10 and 11, 1933, in Berlin, with participation of 500 workers' delegates and of representatives of employers and the government. This congress gave formal approval to the steps already taken by the government in regard to labor and to the organization of the German Labor Front. The chairman of the "committee of action for the protection of German Labor" was chosen as the chief of the Labor Front, and two assistant chiefs were chosen, one to head the wage earners' organization, and the other to head the salaried employees' organization.

The General Federation of German Salaried Employees was formed on May 18 and 19 by a congress of salaried employees held in Berlin. It includes the German Commercial Employees' Union (males only), Union of German Technical Workers (engineers, chemists, etc.), Foremen's Union, Union of Office Clerks (public and private, not engaged in commercial work), Union of Agricultural and Forestry Employees and Tenant Farmers, Union of Physicians and Chemists (employed under contract), Union of Maritime Employees, Union of Theatrical Employees, and Union of Woman Salaried Employees. The decree of May 19, 1933, established the office of labor trustee (*Treuhänder der Arbeit*), whose principal duties are the regulation of wages, hours, and other conditions of labor. These functions were formerly exercised by the employers' associations and labor unions. Thus, collective bargaining between employers and their workers was ended. The labor trustees for the various industrial districts in Germany are to be appointed by the federal government, on recommendation of the state or provincial governments or at least in agreement with them. The decisions of these labor trustees are binding on both workers and employers. By this step, the federal government takes upon itself the responsibility of fixing, through the labor trustees, wages and hours of work, and of shaping the nation's general labor policy.

It was also stated that German wage earners repudiate international Marxism. As the Marxian branches in Germany served as a basis for the second and third internationals, these branches will now go out of existence. It was said that relations will be maintained with the workers in other countries as well as with the International Labor Office in Geneva, on the condition, however, of equality and of non-interference in the internal affairs of Germany. Dr. Robert Ley, who had never been a worker but had been an employee of the German Chemical Trust, was named leader of the German Labor Front.

JAPAN. At the beginning of 1933, there were 932 trade unions in Japan, with a membership of 377,625, an increase of 114 unions and 8650 members over the preceding year. The expansion in membership in 1932 was not so great as in 1931—a result of the business slump and the change in the social situation since the campaign in Manchuria. The number of trade unionists constitutes 7.8 per cent of all the workers employed in mines,

factories, transportation, and postal, telephone, and telegraph services, and also casual and other laborers. Trade union statistics for each year, 1930 to 1932, are given in the table following:

TRADE UNIONS IN JAPAN, 1930, 1931, AND 1932

Year	Number of trade unions	Number of trade- union members	Number of workers	Per cent of workers organized
1930 . . .	712	354,312	4,713,002	7.5
1931 . . .	818	368,975	4,670,275	7.9
1932 . . .	932	377,625	4,860,276	7.8

TRANEBERG ARCH. See BRIDGES.

TRANSCAUCASIAN SOCIALIST FEDERATED SOVIET REPUBLIC. One of the seven constituent republics of the Soviet Union, occupying the region between the Caspian and Black seas south of the Caucasian Mountains and north of Persia and Turkey. It is divided into the three republics of Armenia (including the autonomous republic of Nakhichevan); Azerbaijan (including Nagorny Karabakh); and Georgia (including Abkhaz, Adjara, and South Ossetia). See ARMENIA, AZERBAIJAN, GEORGIA, and UNION OF SOVIET SOCIALIST REPUBLICS.

TRANS-JORDAN. An Arab territory in Asia Minor forming a part of the British Mandate of Palestine but which is governed by an independent local Arab administration under Emir Abdullah Ibn Hussein. The area is uncertain; population, approximately 260,000 of whom 220,000 are Arab Moslems. The capital is Amman. Revenue for 1933-34 was estimated to total £P361,595; expenditure, £P352,976; public debt, £P1381. There is a legislative council of six official and 16 elected members. High Commissioner in 1933, Sir A. G. Wauchope who is also High Commissioner for Palestine.

TRANS-URETHRAL PROSTATECTOMY, EVALUATION OF. See MEDICINE AND SURGERY.

TRANSVAAL. See SOUTH AFRICA, UNION OF.

TRAPSHOOTING. See SHOOTING.

TRENGGANU. See UNFEDERATED MALAY STATES.

TRIBOROUGH BRIDGE. See BRIDGES.

TRIENNALE EXPOSITION IN MILAN. See ARCHITECTURE.

TRINIDAD. A British West Indian Colony near the mouth of the Orinoco River in South America, consisting of the islands of Trinidad and Tobago. Total area, 1976 square miles of which 114 represented Tobago. Population (1931 census), 412,783; estimated (Jan. 1, 1933), 419,559. Port of Spain, the capital, had 70,641 inhabitants (1931).

The chief products are cacao, sugar, coconuts, petroleum, and asphalt. In 1932, imports were valued at £4,695,137; exports, £4,577,211; revenue, £1,694,137; expenditure, £1,698,114. The public debt on Jan. 1, 1933 amounted to £3,032,401. The government is administered by a governor assisted by an executive council and a legislative council. Governor in 1933, Sir A. C. Hollis.

TRINITY COLLEGE. An institution for the higher education of men in Hartford, Conn. For the autumn term of 1933 the enrollment was 453. There were 50 members on the faculty. The endowment fund of the college was \$3,100,000, and the income totaled \$300,000. The library contains 110,000 volumes and 50,000 pamphlets. President, Remsen B. Ogilby, Litt.D., LL.D.

TRIPOLITANIA, trē'pō-lē-tā'nyā. The western district of the Italian colony of Libia on the

north African coast. Area, 347,500 square miles; population (1931 census), 552,663 of whom 29,749 were Europeans. Tripoli, the capital, had 71,793 inhabitants (1931). Governor, Marshal Italo Balbo.

TROY, ANCIENT. See ARCHAEOLOGY.

TRUCKS, MOTOR. See AUTOMOBILES.

TRUST COMPANIES. See BANKS AND BANKING.

TUAMOTU ISLANDS. See OCEANIA, FRENCH ESTABLISHMENTS IN.

TUBERCULOSIS IN LIVESTOCK, ERADICATION OF. See VETERINARY MEDICINE.

TUFTS COLLEGE. A nonsectarian institution for the higher education of men and women in Medford, Mass., founded in 1852. The registration for the autumn term of 1933 was 2047. There were 511 faculty members. The productive funds of the college amounted to \$7,685,000, and the income for the year was \$880,845. The library contained 107,796 volumes. In October, 1933, the Fletcher School of Law and Diplomacy, for graduate students, was opened. President, John Albert Cousins, LL.D.

TULANE UNIVERSITY OF LOUISIANA, THE. An institution of higher education in New Orleans, founded in 1834. The total enrollment for the autumn of 1933 was 2928, of whom 647 were in the H. Sophie Newcomb College for Women. The distribution in the coeducation departments and professional schools was as follows: Arts and sciences, 549; engineering, 268; graduate, 118, law, 110; medicine, 496; graduate medicine, 18; pharmacy, 5; commerce and business administration, 411; courses for teachers, 193; social work, 113. There were 748 students enrolled in the 1933 summer session. The faculty numbered 402. The productive funds for the fiscal year ending Aug. 31, 1933, amounted to \$10,055,419; the income for the year to \$1,105,777; and gifts and bequests to \$105,393. The library contained 107,912 volumes. President, Albert Bledsoe Dinwiddie, Ph.D., LL.D.

TULAREMIA. See VETERINARY MEDICINE.

TUNISIA. A French protectorate in North Africa. Capital, Tunis.

AREA AND POPULATION. The area is 48,332 square miles and the population in March, 1931, was 2,410,692 (195,293 Europeans and 2,159,151 Arabs and Bedouins). Tunis, the capital city, had 202,405 inhabitants; Sfax, 39,969; Sousse, 25,324; Bizerta, 23,206. The school attendance (1931) was 80,569.

PRODUCTION. Agriculture and stock raising are the chief occupations, although there is considerable mining. Arable land (1931) totaled 7,249,000 acres. The crops in 1932 (thousands of units) were: Wheat, 14,697 bu.; barley, 15,616 bu.; wine (gallons), 45,173; olive oil (gallons), 17,382. Livestock in 1931 included 540,000 cattle, 2,475,000 sheep, 1,404,000 goats, 25,000 swine, 99,000 horses, 299,000 mules and asses, and 162,000 camels. Wool production totaled 5,270,000 pounds in 1932 (4,360,000 in 1931). Mineral production in 1932 (1931 in parentheses) was, in metric tons: Phosphates, 1,678,000 (2,148,000); iron ore, 209,000 (447,000); lead ore, 24,200 in 1931; zinc ore, 800 in 1931.

COMMERCE. General imports of Tunisia in 1931, converted at par, were equivalent to \$73,403,000 (\$82,612,000 in 1930), while general exports were equivalent to \$32,706,000 (\$44,188,000 in 1930). The chief imports were: Cotton piece goods, \$6,634,000; machinery, \$5,209,000; refined sugar,

\$3,193,000; iron manufactures, \$2,910,000. The important exports were: Wheat, \$11,423,000; phosphate rock, \$4,197,000; olive oil, \$2,427,000; wine, \$1,885,000. France purchased 63.3 per cent of the total exports in 1931 and supplied 60.7 per cent of the imports. Imports in 1932 totaled 1,771,517,000 francs, of which the United States supplied 34,915,000 francs.

FINANCE. Budget estimates for the fiscal calendar year 1933 placed revenue at 617,348,130 francs and expenditure at 617,276,579 francs. The public debt at the beginning of 1931 totaled 538,958,000 francs.

COMMUNICATIONS. Railways in 1931 extended 1282 miles (469 miles of broad and 813 miles of narrow gauge). During 1932 the net tonnage of vessels in the overseas trade entering the ports was 4,480,000; net tonnage cleared, 4,354,000.

GOVERNMENT. Government is administered by the French Foreign Office, acting through a French Minister Resident-General who is also Minister of Foreign Affairs for Tunis. There is a ministry of 11 department heads (8 French and 3 Tunisian). The occupant of the throne in 1933 was Sidi Ahmed Bey. French Minister Resident-General, M. Manceron.

TUNNELS. The outstanding tunnel achievement of the year was the completion, one year ahead of schedule, of the Antwerp Tunnels and their opening on September 10. Satisfactory progress was also made during the year on the great Mersey Tunnel. There were several interesting smaller works under way, the 38th Street Tunnel in New York has also been started, and the greatest simultaneous tunneling operation ever attempted has been inaugurated on the Los Angeles-Colorado River Aqueduct. (See **AQUEDUCTS**.)

ANTWERP TUNNEL. Although probably inspired by the success of the Holland Tunnel in New York and also benefiting by the advice of American tunnel experts, this construction under the Scheldt (noted in the 1931 YEAR BOOK) has a number of unique features. The final accepted plans (it will be remembered that combined plans and bids were called for and 60 tenders were received) called for two tunnels—one for vehicular traffic, the location of which was determined by the need for long approach ramps, and a pedestrian tunnel, located at the most convenient point for foot passengers.

The material under the Scheldt consisted of sand deposits to a depth of 85 feet where a firm clay was encountered. Both tunnels were located in this clay. The pedestrian tunnel was constructed entirely through this clay and, with a 10 foot cover, no air pressure was required. The vehicular tunnel was driven by the shield method, using air where necessary, and employing the usual cast iron lining. Interest centres largely in the ramp and ventilator shaft construction.

Work was started on the west side where 1460 feet of approach ramp and tunnel were built in the open. The first lift was 23 feet deep and when an intermediate, impervious layer of clay and peat was encountered, surface drains, supplemented by well points driven back from the cut, were used to prevent the surface water of the upper sands entering the excavation. The second lift, with sloping sides like the first, was confined by steel sheet piling to a depth of 46 feet. Special wells made by driving 20 inch casings with 10 inch inner pipes were used to further lower the ground water.

From the other portal, located at the end of a 560 foot open approach, some 900 feet of tunnel was constructed in open cut and the shield was then erected. In the final stages of the shield work, wells were again used to reduce water pressure and for the first six weeks no compressed air was used in the heading.

The shaft sinking operations, both for the two ventilating shafts of the vehicular tunnel and for the escalator shafts of the pedestrian tunnel, were constructed by the freezing method. This has been noted under **FOUNDATIONS**.

European engineers, particularly in Holland and Belgium (see for example the IJmuiden Lock, 1930 YEAR BOOK under **CANALS**) have had to meet this problem of handling huge volumes of ground water when excavating in the deep coastal sands, and have developed the well and the freezing methods to a high degree of effectiveness. American engineers have had far less experience with this particular problem and, therefore, follow these European developments with great interest.

MERSEY TUNNEL. Although this vehicular tunnel, to connect Liverpool and Birkenhead under the estuary of the Mersey, is the largest shield driven sub-aqueous tunnel (44 feet diameter) ever attempted, the conditions are far different from those usually associated with shield operations. Indeed the use of the shield and of cast iron lining is primarily for the purpose of safety and securing a watertight construction in the heavily water bearing rock. On the Liverpool end the separate drift, 7 feet in diameter and below the tunnel elevation, is used to remove water. It is expected that the tunnel will be completed by the summer of 1934. The 36 foot four lane vehicular traffic deck is being placed and surfaced. Curving "dock-side approaches" are an interesting feature of the approach plans.

HETCH HETCHY WATER TUNNEL. Attention has been called to the difficulties of tunnel operations in water bearing, highly shattered or recent volcanic rocks. The rock encountered in this work (sandstone and shale) is softened by the presence of water, and, in addition, hydrogen sulphide gas is prevalent. Following a serious explosion, work was suspended for 6 months and the U. S. Bureau of Mines recommended changing the ventilating system from a positive pressure to an exhaust type. This plan, combined with the elimination of power and lighting circuits, testing for gas before and after firing, etc., is being used to complete the tunnel.

In combating moving ground various timbering plans were tried but have been abandoned for concrete, using a rapid setting high strength cement.

COLORADO RIVER AQUEDUCT. During the year contracts were let for practically all of the 29 tunnels, totaling about 90 miles, for this great aqueduct which will serve the Metropolitan District of Southern California. In fact the first tunnel, the Wind Canyon No. 2, 790 feet long, was holed through in late September. In spite of the fact that a storm of protest was aroused over the plans of the district to undertake some of the construction work with its own forces, this plan has been followed for ten tunnels aggregating 33.3 miles. The first of the contract jobs was let on March 17, the San Jancinto, a 12.7 mile bore, and the last major contract on June 28, the total being 57.8 miles. While none of the individual tunnels are of record length the entire operation makes a record breaking tunneling programme.

MID-TOWN TUNNEL, NEW YORK. The 38th Street, or Mid-town Tunnel, New York, was held up through lack of funds and failure of the Port of New York Authority to secure cooperation with the City authorities. On August 30, however, the P.W.A. authorized a loan to the Port Authority of \$37,500,000 for this work. The contract was signed on September 1 and, thereafter, matters moved swiftly forward. The first contract, that for the delivery of cast iron tunnel lining, was let September 28.

One tube of the proposed twin tube vehicular tunnel is to be built at present. The New York plaza will be located at 39th Street between 9th and 10th Avenues, while the New Jersey end at Weehawken will have connections to Union City and north and south to the Palisades and to Jersey City and Hoboken.

In spite of protests by shipping interests a permit was granted September 30 by the War Department for a temporary clay blanket to come to a depth of 40 feet and to cover the river bottom during construction.

TURBINES. See STEAM TURBINES.

TURBO-GENERATOR, LARGEST. See ELECTRIC POWER STATIONS.

TURCOMAN REPUBLIC. See SOVIET CENTRAL ASIA.

TURKEY. A republic comprising parts of Asia Minor and the Balkan peninsula as well as Imbros, Tenedos, and the Rabbit Islands in the Aegean Sea. Capital, Ankara (Angora).

AREA AND POPULATION. The estimated area is 294,492 square miles (285,258 square miles in Asia and 9257 in Europe). The population on Jan. 1, 1932, was estimated at 14,700,000 (13,600,000 in Asia), compared with the 1927 census population of 13,648,270 (12,607,601 in Asia). Populations of the chief cities (1927) were: Istanbul (Constantinople), municipality, 490,857 (city proper, 245,982); Izmir (Smyrna), 153,924; Ankara (Angora), 74,553; Adana, 72,577; Bursa (Brusa), 61,690; Konya, 47,596. The population is overwhelmingly Moslem in religion.

EDUCATION. The Turkish people were about 92 per cent illiterate in 1930. School enrollment in 1931 was: Primary, 497,330; secondary, 32,836; higher, 4429. The University of Istanbul had 2312 students.

PRODUCTION. There were 4,368,061 persons engaged in agriculture at the 1927 census. Arable land in 1930 aggregated 14,217,000 acres; woods and forests, 21,783,000 acres. Livestock in 1932 included 5,315,000 cattle, 11,768,000 sheep, 10,825,000 goats, 1,460,000 horses and mules, and 555,000 buffaloes. The crop yields in 1932 (thousands of units, bushels except as indicated), with 1931 figures in parentheses, were: Wheat, 69,344 (102,426); barley, 53,499 (74,877); corn, 14,762 (20,398); oats, 8729 (8095); tobacco (pounds), 46,296 (112,679); olive oil (Aegean region, 1932-33 and 1931-32 seasons, in gallons), 8699 (4336); raisins (Aegean region, in pounds), 112,434 (57,268); figs (Aegean region, pounds), 66,138 (61,729); cotton lint (1932-33 and 1931-32 seasons, pounds), 13,384 (43,398); wool (pounds), 10,150 (14,800); mohair (pounds), 7937 (8207); opium (Aegean region, pounds), 161 (705).

Mineral output (1932) was: Coal, 1,178,000 (metric) tons; emery, 5822 tons; chrome, 55,195 tons; boracite, 4993 tons; meerschaum, 935 cases in 1931; argile, 8475 tons; mercury, 239 flasks in 1931. Industries were relatively unimportant, but

were expanding in 1933 with government aid.

COMMERCE. General imports into Turkey in 1932 were valued at 85,984,000 Turkish pounds (\$40,662,000), compared with £T126,660,000 (\$59,758,000) in 1931. General exports totaled £T101,301,000 (\$47,905,000), as against £T127,275,000 (\$60,048,000) in 1931. The principal 1932 imports, in order of value, were cotton fabrics, iron and steel, machinery, coal and mineral oils. Exports, in order of value, were leaf tobacco, raisins, eggs, shelled filberts, and live animals. Germany supplied 23.2 per cent of the imports in 1932 (21.4 in 1931); Italy, 12.9 (14.6); United Kingdom, 12.4 (11.3); France, 8.4 (10.1). Of the 1932 exports, Italy purchased 16.1 per cent (24.2 per cent in 1931); Germany, 13.5 (10.7); United States, 11.9 (10.0); United Kingdom, 9.8 (8.5). Imports from the United States (1933) were valued at \$1,342,756 (\$1,539,485 in 1932); exports to the United States, \$8,191,379 (\$5,388,150 in 1932).

FINANCE. Budget estimates for the fiscal year 1933-34 (June 1-May 31) balanced at approximately £T170,477,000, compared with estimates balancing at about £T169,354,800 in 1932-33 and at £T186,705,000 in 1931-32. An agreement on the Ottoman public debt was signed April 22, and ratified by the Turkish National Assembly on May 28, 1933. It reduced the debt to 962,636,000 French paper francs (about £T35,000,000 gold) and provided for annual payments of £T700,000, guaranteed by the gross receipts of the Istanbul customs. The Turkish pound (par, \$4.3962 United States currency) exchanged at an average of \$0.4718 in 1931 and \$0.4729 in 1932.

COMMUNICATIONS. Turkey in 1931 had 3552 miles of railway line and about 9867 miles of roads, the latter mostly in bad repair. Air lines connected Istanbul with the most of the European countries. Legislation for the establishment of government commercial air services in Turkey was passed during 1933. The Turkish merchant marine on June 30, 1932, aggregated 178,000 gross tons (vessels of 100 tons and more). In 1931, 6306 ships of 16,222,709 tons called at Istanbul, including those in transit. Also see *History*.

GOVERNMENT. The Constitution, as amended Apr. 20, 1924, vested executive and legislative power in the Grand National Assembly as the sole representative of the people. The Assembly exercised executive power through the President of the Republic elected by itself and through the Council of Ministers chosen by him; it could at any time dismiss the government. The President and the Grand National Assembly members are elected for four years. President in 1933, Mustafa Kemal Pasha, who was reelected May 4, 1931, for a third term. Premier, Gen. Ismet Pasha (People's party). The Grand National Assembly elected Apr. 24, 1931, included 304 representatives of the People's party and 13 Independents.

HISTORY

PROGRESS OF MODERNIZATION. The tenth anniversary of the Turkish republic, celebrated on Oct. 29, 1933, found the process of modernizing Turkey still in full swing under the able and aggressive leadership of President Mustafa Kemal. The year 1933 was marked by notable advances in various fields of activity. The government's energies were devoted particularly to the reorganization and further development of industry. Early in the year a group of American experts, headed by Walker D. Hines, former director general of

American railways, was engaged to make a survey of Turkey's industry and resources and present recommendations for their reorganization and coordination. Other American experts had previously been engaged. In accordance with their recommendations, the President and his Council of Ministers on Dec. 7, 1933, approved a five-year industrial plan. Among other things, it provided for the construction of 14 factories, 12 of them state-owned, for the conversion of Turkish raw materials into coke, yarns, glass bottles, tissue paper, cellulose, and chemical products. The funds required were to be obtained partly through a budget appropriation of 25,000,000 Turkish pounds (about \$11,750,000 at the 1932 exchange rate) and partly through a credit of about \$12,000,000 advanced by the Soviet government for the purchase of Soviet textile and other machinery.

The Turkish government already operated 13 monopolies and had almost monopolistic control of railroads, mines, and coastal shipping. In addition it had advanced more than 50 per cent of the capital for many other industries. The economic theory on which the government was operating was defined as "state capitalism" by Premier Ismet Pasha. It was indicated that eventually the government planned to take over all private industry, transportation, mining, banking, and the general direction of foreign commerce, but that it would not seek to collectivize agriculture or the activities of small merchants and artisans.

Other steps taken toward the development of Turkish industry and transportation were (1) the granting to a purely Turkish capitalist group of the contract for the construction of a 420-mile railway line between Sivas and Erzerum; (2) the oversubscription of the first voluntary internal loan issued by the Kemal régime, an issue of 4,000,000 Turkish pounds for the construction of a 50-mile branch railway line opening up the Argana copper deposits in Central Anatolia; (3) the establishment of a special organization in the Ministry of National Defense for the operation of commercial air lines in Turkey; (4) the renewal by the Grand National Assembly on June 10, 1933, of the Ottoman Bank concession for a period of 20 years; and (5) the adoption of the metric system, effective Jan. 1, 1934. A new import tariff designed to encourage local industry and maintain the balance between imports and exports went into effect May 31, 1933.

In the cultural field, also, important steps toward the westernization of Turkey were taken. Istanbul University was completely reorganized on July 31, 1933, in accordance with a law passed by the Grand National Assembly on May 31. The law embodied recommendations made by M. Albert Malche, a Swiss professor hired by the government to make a study of the Turkish educational system. The old university was abolished and all the faculty members discharged, although about one-third of them were later reengaged by the new institution. The university opened in December, with a faculty which included 36 distinguished foreigners, most of them German-Jewish scientists and educators, who had been expelled from German universities. Three Turkish women scientists were appointed assistant professors. The new institution was organized along the most modern lines. Moslem sensibilities were disregarded in the reorganization of the theological school at Istanbul University in April when it was decided to introduce courses on com-

parative religion and non-Islamic philosophy. By another new rule, English replaced French as the principal foreign language taught in Turkish colleges and schools.

Mustafa Kemal's determination to introduce the Turkish version of the Koran in religious services in place of the Arabic encountered additional opposition. The muezzin of the Ulu mosque in Brusa was attacked by orthodox worshippers when on February 5 he called the faithful to prayer in Turkish for the first time. Two days later the President ordered the use of Turkish in the Istanbul mosques. He made a personal investigation of the disorders at Brusa. The 23 priests and muezzins arrested in connection with the disturbance were tried by a military court and 19 were sentenced to one or two years' imprisonment at hard labor. On Sept. 1, 1933, a government-subsidized Stage Academy, with foreign teachers, opened at Ankara. It provided training in the drama, opera, music, and ballet. Establishment of a National Opera and a State Theatre in connection with the academy was planned.

FOREIGN RELATIONS. Turkish diplomacy achieved no less impressive results during 1933 than did the government's activity at home. Substantial progress was made toward Mustafa Kemal's ideal of a Balkan federation which would end the century-old rôle of the Balkan states as cat's-paws of the great powers. New treaties of friendship were signed with all of the Balkan states except Albania during 1933 and similar pacts with Hungary and the Soviet Union were signed. The most important of these was the ten-year pact of non-aggression signed with Greece at Ankara on September 14. Besides guaranteeing the inviolability of their common frontiers, the two states agreed to follow a common policy in all international questions affecting them. At international conferences where only one of the two states was represented, the delegate would defend the common and individual interests of both. The adherence of other Balkan states to the treaty was invited.

In connection with the visit of the Greek Premier and other officials to Ankara to sign the treaty a settlement of all other outstanding questions between Greece and Turkey was arranged. It was agreed to set up a special mixed commission to coordinate Greek and Turkish economic policies. Premier Ismet Pasha and Tewfik Rushdi Bey, the Foreign Minister, visited Sofia in mid-September and renewed for five years the Turko-Bulgarian treaty of amity which was due to expire in March, 1934. They failed to secure Bulgaria's adherence to the Turko-Greek pact, however. The treaty of friendship with Rumania was signed in Ankara on October 17, with Foreign Minister Titulescu of Rumania acting on behalf of his government. About the same time Premier Gömbös and Foreign Minister Kanya of Hungary visited Ankara and signed a Turko-Hungarian treaty of amity. The Turkish Foreign Minister signed a friendship pact with Yugoslavia in Belgrade toward the end of November. There had previously been a meeting between President Mustafa Kemal and King Alexander at the President's summer palace near Istanbul (October 4), at which the Balkan situation was discussed.

Turkey signed the pact renouncing and defining aggression concluded by the Soviet Union at London on July 3 with seven neighboring countries. This treaty, which was ratified Nov. 24, 1933,

supplemented the Turko-Soviet non-aggression treaty of 1925. Turkey was also a party to a second non-aggression treaty signed at London by the Soviet Union with the Little Entente states. On July 10 Tewfik Rushdi Bey conferred with Premier Mussolini in Rome, apparently to assure him that Turkey's network of treaties signed or under negotiation with the Balkan and Little Entente states was not prejudicial to Italy.

Other developments of the year in the foreign field were (1) the ratification by the Grand National Assembly of the 1931 Geneva Convention for the limitation of manufacture of narcotic drugs; (2) the demand of the Turkish delegate to the Geneva Disarmament Conference for the abolition of those clauses of the Lausanne Treaty which demilitarized the zone along the Dardanelles and Bosphorus Straits; (3) ratification by the Grand National Assembly on May 28 of the Ottoman Debt Agreement (see *Finance* above); and (4) the decree of Jan. 24, 1933, which authorized the importation of American goods free of quota restrictions up to the amount of Turkish exports to the United States. See GREECE, BULGARIA, HUNGARY, RUMANIA, and YUGOSLAVIA under *History*; UNITED STATES OF EUROPE.

TURKS AND CAICOS ISLANDS. See JAMAICA.

TUSKEGEE NORMAL AND INDUSTRIAL INSTITUTE. An institution for the training of colored young men and women in Tuskegee, Ala., founded in 1881 by Booker T. Washington. The enrollment for the term beginning September, 1933, was 1465, of whom 650 were in the high school division and 815 in the college division. There were 228 members on the faculty. The endowment for the year ending May 31, 1933, was \$7,701,520; the income was \$445,027. The library contained 40,000 volumes. Principal, Robert Russa Moton, LL.D., Litt.D.

TUTUILA. See SAMOA.

TWENTY-FIRST AMENDMENT. See PROHIBITION.

UBANGI-SHARI. See FRENCH EQUATORIAL AFRICA.

UGANDA, ō-gān'dā, PROTECTORATE. A British East African protectorate between Tanganyika and the Anglo-Egyptian Sudan. Area, 94,204 square miles (13,616 sq. miles water); total population (1931 census), 3,553,534 of whom 3,536,267 were natives belonging to the Bantu, Nilotic, and Hamitic racial groups. Entebbe is the capital; Kampala is the commercial centre. The principal product is cotton of which the estimated production for 1932-33 was 295,000 bales (400 lb. bales) from a total of 1,071,410 acres. In 1932, imports were valued at £1,326,220; exports, £2,224,878; revenue, £1,402,528; expenditure, £1,298,895. Governor in 1933, Sir B. H. Bourdillon.

UKRAINE. A region in southwestern Russia known officially as the Ukrainian Soviet Socialist Republic. See UNION OF SOVIET SOCIALIST REPUBLICS.

UNEMPLOYMENT. The article on AMERICAN FEDERATION OF LABOR will indicate the nature of the unemployment estimates commonly accepted in the country. There it has been pointed out that on the basis of unemployed trade unionists the A. F. of L. estimated there were at least 13,000,000 people unemployed in the United States during the low point of the depression in March, 1933, and that by October reemployment had absorbed back into industry at least 3,000,000 wage earners.

In addition to the creation of new jobs, with the beginning of the operations of the Civil Works Administration and the Civil Works Service Bureau before the year was over another 2,000,000 to 3,000,000 persons had become reemployed; so that by the end of the year it would not be far from the truth to say that the total of unemployed in the United States was still in the neighborhood of 7,000,000 persons.

WISCONSIN. Attention was called in the YEAR BOOK for 1932 to the passage by Wisconsin of an unemployment insurance law, the first such enactment by an American commonwealth. The Wisconsin legislature, in the passage of the act, indicated its intention that by July 1, 1933 a majority of the employees working for industrial companies in the State were to have some adequate system of unemployment compensation. It was incumbent upon the employers of at least 175,000 employees, before June 1, 1933, to establish voluntarily some unemployment insurance plan which met the standards prescribed by the act. In the event that the employers failed to take such action, the law was to become compulsory automatically on July 1, 1933. However, the legislature of Wisconsin, during the year, postponed indefinitely, the effective date of the law and declared that it was not to be enacted until such time as the State Industrial Commission found that business recovery had sufficiently progressed to permit of a successful operation. The 1933 law described business recovery in these terms: "Until a finding of fact by the industrial commission either that the number of manual employees in Wisconsin manufacturing establishments has for three successive months been at least 20 per cent greater or that the aggregate weekly pay rolls for such employees have for three successive months been at least 50 per cent greater than for December, 1932, as shown by monthly indexes of employment and pay rolls computed by the commission and appearing in its Wisconsin Labor Market Bulletin."

UNEMPLOYMENT IN FOREIGN COUNTRIES. The following figures indicate unemployment in the more important countries of the world on the basis of official reports submitted by the agencies interested. Figures are given for the latest month available during 1933, and are compared with the high point reached during the same year. It will be observed that throughout the world, as the result of increase of industrial activity beginning with the fall of 1932, unemployment seems generally to have decreased in size. In Australia, including only trade unionists unemployed, there were out of work 104,560 persons in September, 1933, as compared with the high for the year, 109,182 persons in March, 1933. In Austria, including only the number of unemployed persons in receipt of benefits under the compulsory insurance law, there were 280,401 persons out of work in October, 1933, as compared with 401,321 in February, 1933. In Belgium, including only the wholly unemployed persons receiving benefits from the unemployment insurance societies, there were 135,105 persons out of work in August, 1933, as compared with 207,136 in January, 1933; also partially unemployed persons receiving such benefits totaled 162,361 in August, 1933, as compared with 196,237 in January, 1933. In Canada, including only per cent of trade unionists unemployed, there were out of work 19.8 per cent in October, 1933, as compared with 25.5 per cent in January, 1933. In Czechoslovakia, including only number

of unemployed persons on the live register, there were out of work 627,121 persons in October, 1933, as compared with 920,182 persons in February, 1933; also unemployed persons in receipt of benefits from trade-union insurance funds totaled 224,375 in August, 1933, as compared with 305,036 in February, 1933. In Danzig, including only number of unemployed persons registered, there were 25,219 persons out of work in September, 1933, as compared with 40,726 in January, 1933. In Denmark, including only unemployed persons receiving trade union unemployment funds, there were 82,300 persons out of work in October, 1933, as compared with 141,354, in January, 1933. In Estonia, including only unemployed persons remaining on live register, there were 3881 persons out of work in September, 1933, as compared with 16,511 persons in January, 1933. In Finland, including only number of unemployed persons registered, there were 17,134 persons out of work in September, 1933, as compared with 23,178 in January, 1933. In France, including only the number of unemployed persons in receipt of benefits, there were 232,632 persons out of work in October, 1933, as compared with 330,874 in February, 1933. In Germany, including only unemployed persons registered, there were 3,744,860 persons out of work in October, 1933, as compared with 6,013,612 in January, 1933; also unemployed trade unionists in receipt of benefits totaled 1,530,452 in August, 1933, as compared with 2,455,428 in February, 1933. In Great Britain and Northern Ireland, including only wholly unemployed persons in receipt of benefits under the compulsory insurance law, there were 1,974,000 persons out of work in October, 1933, as compared with 2,422,808 in January, 1933; also temporary stoppages under compulsory insurance totaled 362,000 in October, 1933, as compared with 536,882 in April, 1933; also, in Great Britain, including only persons registered with unemployment exchanges, there were 2,298,753 unemployed persons in October, 1933, as compared with 2,903,065 in January, 1933. In Hungary, including trade unionists unemployed, there were 938 Christian (Budapest) and 24,881 Social Democratic persons out of work in July, 1933, as compared with 1210 Christian (Budapest) in February, 1933 and 31,431 Social Democrats in February, 1933. In the Irish Free State, including only unemployed persons receiving benefits under the compulsory insurance law, there were 71,586 persons out of work in October, 1933, as compared with 95,577 in January, 1933. In Italy, including only number of unemployed registered, there were 962,868 persons wholly unemployed in October, 1933 as compared with 1,229,387 in February, 1933. In Japan, the official estimates of unemployed persons totaled 418,177 persons in July, 1933, as compared with 444,032 in January, 1933. In Latvia, including only the unemployed persons remaining on live register, there were 3017 persons out of work in September, 1933, as compared with 14,777 in January, 1933. In Netherlands, including only unemployed in unemployment insurance societies, there were 119,092 in October, 1933, as compared with 226,709 in January, 1933. In New Zealand, including the unemployed registered by unemployment exchanges, there were 56,694 persons out of work in September, 1933, as compared with 57,169 in July, 1933. In Norway, including only unemployed trade unionists in ten unions, there were 14,204 persons out of work in August, 1933 as compared with 19,673 in February, 1933; also,

the unemployed remaining on live register totaled 35,223 in October, 1933, as compared with 42,400 in February, 1933. In Poland, including only the unemployed registered with employment offices, there were 211,926 in October, 1933, as compared with 287,219 in February, 1933. In Rumania, including only the unemployed remaining on live register, there were 17,551 in September, 1933, as compared with 45,371 in February, 1933. In Saar Territory, including only unemployed persons registered, there were 35,287 persons out of work in September, 1933, as compared with 45,700 in January, 1933. In Sweden, including only trade unionists unemployed, there were 77,013 persons out of work in September, 1933, as compared with 121,456 in March, 1933. In Switzerland, including only persons receiving benefits from unemployment funds, there were 38,578 persons wholly unemployed in September, 1933, as compared with 83,400 in January, 1933; and 38,400 partially unemployed persons in August, 1933, as compared with 57,400 in February, 1933. In Yugoslavia, including only unemployed persons registered, there were 10,043 persons out of work in September, 1933, as compared with 25,346 in February, 1933.

UNFEDERATED MALAY STATES. A group of five states in the Malay Peninsula which are under British protection but are not included in the Federated Malay States (q.v.). They are divided in area and population as shown in the accompanying table. See **BRITISH MALAYA**.

State	Sq. mi.	Pop (1931)	Capital
Johore	7,678	505,309	Johore Bharu
Kedah	3,648	429,691	Alor Star
Kelantan .	5,713	362,517	Kota Bharu
Perlis	816	49,296	Kangar
Trengganu .	5,000	179,664	Kuala Trengganu
Total . .	22,355	1,526,477	

UNION COLLEGE. A nonsectarian college for men at Schenectady, N. Y., founded in 1795. The 1933 enrollment of regular students totaled 813, included in the following divisions: Arts, 609; electrical engineering, 90; chemistry, 53; civil engineering, 48; and physics, 13. The faculty numbered 73. The amount of endowment and income for the year was more than \$3,000,000. The library contained 84,900 volumes. Acting president, Edward Ellery, Ph.D., Sc.D.

UNION OF SOUTH AFRICA. See **SOUTH AFRICA, UNION OF**.

UNION OF SOVIET SOCIALIST REPUBLICS (U. S. S. R.). A republic comprising the greater part of the former Russian Empire. Capital, Moscow.

AREA AND POPULATION. According to the Soviet Union Information Bureau, which supplied much of the material used in this article, the area of the Union of Soviet Socialist Republics is 8,199,258 square miles, of which 21.6 per cent lies in Europe, 78.4 per cent in Asia. The population in the autumn of 1933 was estimated at 165,700,000. The population was estimated at 162,700,000 on July 1, 1931, it was 147,013,600 by the census of December, 1926, and 138,200,000 in the same territory in 1914. The census of 1926 gave 71,024,300 males, and 75,989,300 females.

The Union of Soviet Socialist Republics in 1931 was composed of seven constituent republics, which in turn included 16 autonomous republics and 17 autonomous areas. The Russian Socialist Federated Soviet Republic contained 94

per cent of the area and 76 per cent of the population of the entire Soviet Union. The estimated area and population of the seven constituent republics on July 1, 1931, is shown in the accompanying table from the *Economic Review of the Soviet Union*. Also see SIBERIA; SOVIET CENTRAL ASIA.

Republic	Area *	Population (thous.)	Cities	Soviets Rural
R.S.F.S.R.	19,662.9	112,181.0	515	50,139
White Russia ...	126.8	5,275.0	29	1,418
Ukraine	425.0	31,625.6	80	11,040
Uzbekistan	176.1	4,746.2	18	1,698
Transcaucasia	185.5	6,495.9	49	2,534
Turkmenistan	491.2	1,149.1	7	457
Tadzhikistan	141.6	1,186.5	6	376
Total	21,236.1	162,686.3	703	67,662

* Thousands of square kilometers (1 square kilometer = 0.386 square miles).

Population of cities of over 200,000, by official estimate of 1931: Moscow, 2,781,300; Leningrad, 2,228,300; Baku, 575,200; Kiev, 539,500; Kharkov, 521,500; Odessa, 475,500; Rostov-on-Don, 457,100; Tashkent, 421,800; Nizhni Novgorod (Maksim Gorki), 350,300; Tiflis, 347,900; Dnepropetrovsk, 322,800; Stalingrad, 294,500; Saratov, 277,500; Sverdlovsk, 223,300; Samara, 220,400; Kazan, 202,000.

EDUCATION. Public education in the Soviet Union is a charge against each of the seven constituent republics and of the localities concerned. Expenditures for education during recent years, in rubles: 1928-29, 1,493,000,000; 1929-30, 2,316,000,000; 1931, 4,399,000,000; 1932, 6,508,000,000. (The ruble has a theoretical par value of \$0.514.)

Universal compulsory education for a three-year period (children of 8-10 years) was introduced for the first time in Russian history at the close of 1930. This was being extended to a seven-year period during 1933. At the opening of the school year in the fall of 1933 the number of children registered in elementary and secondary schools was 25,600,000. Attendance for previous years was as follows:

Year	Elementary	Secondary
1914	7,236,000	563,500
1930	11,775,500	1,599,200
1931	17,342,200	1,980,200
1932	19,001,000	4,684,800

In addition there were close to 10,000,000 children in kindergartens at the close of 1932. This pre-school education is a growth of recent years. There were no kindergartens for the general population in Tsarist Russia.

ATTENDANCE IN HIGHER EDUCATIONAL INSTITUTIONS [Thousands]

Institutions	1914	1930	1931	1932
Higher education	109.9	291.4	358.2	501.3
Technicums	46.1	578.7	609.8	1,034.4
Factory training schools		568.9	1,197.8	1,863.0
Workers' faculties		247.5	351.7	500.0

In 1914 the population of Russia was 67 to 70 per cent illiterate. By 1933 illiteracy had been reduced to between 8 and 10 per cent.

PRODUCTION, ETC. In the Soviet Union transport and communications are conducted as federal departments. Banking is centralized in a State Bank under governmental control. Distri-

bution is socialized, conducted partly by the co-operative societies, partly by factory stores. Industrial production is carried on largely by state enterprises under the general direction of three Commissariats or government departments, denominated respectively Heavy Industry, Light Industry, and Lumber. Similarly in the field of agriculture there are Commissariats for Agriculture and for State Farms. A State Planning Commission (Gosplan) plots the objectives for each year and for five-year periods. A Council of Labor and Defense (STO) acts as a coordinative and standardizing body.

State planning is an essential of Soviet economy. The planning system is designed to direct and coordinate the employment of the energies and resources of the country for orderly development. The planning system, however, goes beyond the economic field. It includes development in science, education, public health, and the extensive social services designed to safeguard the comfort and security of the citizenship.

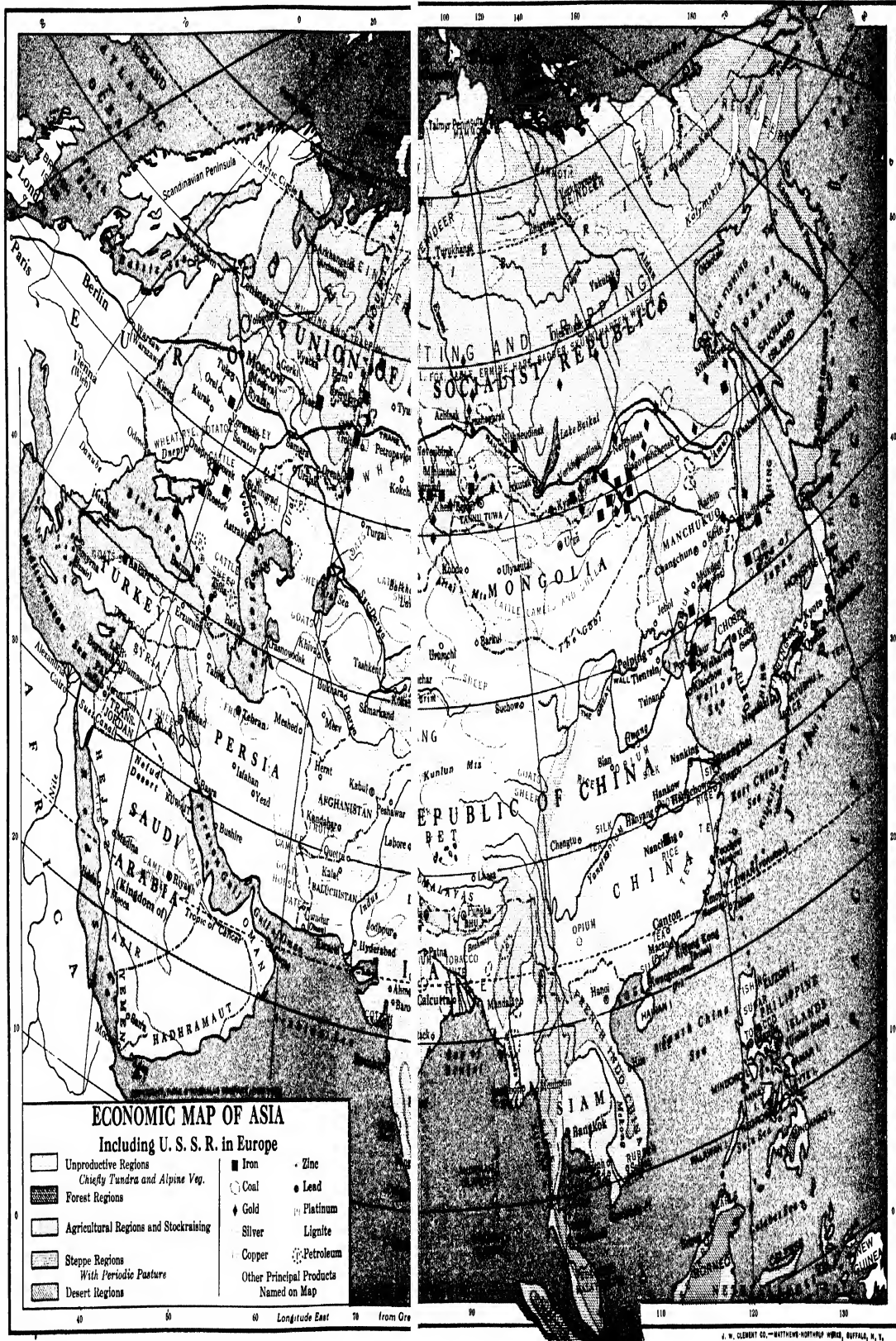
Under the Soviet system the work of Gosplan has assumed a position of primary importance. Its personnel in Moscow includes a considerable body of permanent specialists reinforced by consultants who are authorities in every field. Under the central body each Constituent Republic has its Gosplan, and there are subordinate planning boards in the various cities and districts. Through these bodies and through individual key men in every factory and village Gosplan keeps in intimate touch with developments and needs, and is constantly advised as to the fulfillment of its programme.

The first Five-Year Plan was completed December 31, 1932, in four and a half years. Under it the industrial output was increased by 119 per cent and substantial bases in heavy industry were established. In agriculture the whole set-up was recast and in 80 per cent of the agricultural area the small strip farms of the individual peasant were replaced by large-scale collective farms, in most cases with a high degree of mechanization, and by State farms mechanized in all departments and run on industrial lines.

During the period of the first Five-Year Plan the Soviet Union advanced from fifth to second place among the nations in industrial production. Its share in total world output increased from 4.9 to 17.5 per cent. By 1932 it has taken first place in the world in the output of timber, peat, agricultural machinery and tractors. It held first place in Europe in output of oil, pig iron, steel, and industrial machinery.

A second Five-Year Plan was inaugurated Jan. 1, 1933. Tentative schedules for the second Plan had been drawn up by the close of 1932, but were turned back for thorough revision while the economic organs of the government proceeded with the programme for 1933 as outlined by Gosplan in its control figures for that year. This method enabled Gosplan to make a thorough study of results and tendencies during 1933 before issuing its detailed programme for the five-year period. This programme was being completed toward the close of 1933.

The control figures of Gosplan for 1933 envisaged an increase in the industrial output of 16.5 per cent. The programme embraced new capital investments of 16 billion rubles for industry, transportation, and agriculture. In agriculture the plans called for further mechanization and improvement of methods and processes



under the new socialized set up, but no increase in acreage.

During 1933 many new industrial plants were opened, including such important mass production units as the new machine construction works at Sverdlovsk and the tractor plant at Cheliabinsk which will have an eventual annual capacity of 40,000 high-power caterpillar tractors. The Cheliabinsk works reinforces the big tractor manufactories at Stalingrad and Kharkov which by the autumn of 1933 were producing virtually at full capacity of 4000 tractors per month.

During 1933 the output of large-scale industry increased 8.8 per cent. Particularly good gains, well above the average, were shown in the coal industry (19.5 per cent) and in pig iron and steel production (17.8 and 17.5 per cent respectively). The oil industry registered a small gain of 1 per cent and the electric power output increased nearly 18 per cent. The output of automobiles increased 86 per cent and of tractors 46 per cent.

The output of key indicators in Soviet industry for 1933, with comparison of 1932 and of the fiscal year 1927-28 (the year preceding in the beginning of the first Five-Year Plan) follows:

	1933	1932	1927-28
Coal . . .met. tons	76,700,000	64,000,000	35,400,000
Oildo.	21,432,000	21,381,000	11,600,000
Pig iron . . .do.	7,250,000	6,206,000	3,280,000
Steel ingots . .do.	6,920,000	5,885,000	3,370,000
Power out-			
put . . .mill. kwh	15,800	13,500	5,000
Motor cars			
and trucks units.	49,743	25,000	680
Tractors . . .do.	73,370	50,250	1,490

AGRICULTURE. Small scale individualist farming was disappearing in the Soviet Union in 1933. During the period of the first Five-Year Plan the "socialized" sector of collective and state farms increased from 3,105,000 hectares (hectare = 2.47 acres) in 1928 to 104,879,000 hectares in 1932, or from 2.7 per cent of the total farm area to nearly 80 per cent. In the summer of 1933 there was a further advance to 85 per cent. The individual peasant farmer is expected to become entirely a figure of the past by the end of the second Five-Year Plan.

In 1933 the Soviet leaders made efforts to insure a better coordination of agricultural forces. Marketing rules were liberalized and the farm tax system rationalized, so that both the collective and individual farmers knew from the beginning of the season how much of their yield must be sold to the State, and could count on the surplus to be disposed of at their own wills. The supervisory powers of the machine and tractor stations were increased and their organizations were strengthened in order to put them in a position to assist the individual collectives in improving their technical methods and securing a better integration of effort.

The machine and tractor stations have become a key factor in the new Soviet agriculture. They now furnish the bulk of the draft power, both for the collective and the state farms. At the beginning of 1933 there were 2650 of them scattered through the country, each one of them serving a whole group of collective farms in the surrounding territory. In 1932 they plowed and sowed over half the area of the collective farms. In 1933 they tended close to 70 per cent of the entire collectivized area.

The strengthening of the machine and tractor

stations, as well as the other reformatory measures greatly improved the agricultural picture in 1933. Throughout the whole area of the collectives the work of preparing for and tending the crops was performed more effectively than in previous years.

Gross grain crops in thousands of metric tons were: (1913) 80,100; (1929) 73,796; (1930) 83,743; (1931) 69,480; (1932) 69,870; (1933) 89,800.

LABOR. Membership in labor organizations rose from 10,900,000 in 1928 to 17,260,000 at the beginning of 1933.

An important development of labor autonomy occurred in June, 1933, when the People's Commissariat for labor was abolished and its functions were taken over by the All Union Central Council of Labor Unions. By the close of the first Five-Year Plan industry generally was operated on a six day week with a uniform rest day on the sixth day. The seven hour working day was in general use by 1933.

ELECTRIFICATION. In 1917 there was only one power plant in the country of 20,000 kilowatt capacity. By the end of 1932 there were 10 plants of 100,000 kilowatt capacity or over. In 1928 there were 18 regional power plants with a capacity of 610,000 kilowatts. At the beginning of 1932 there were 43 regional plants with a capacity of 2,624,000 kilowatts. Statistics of power capacity of all plants, and of power output, for the years 1913 and 1928-32, are given in the accompanying table.

SOVIET ELECTRIC POWER OUTPUT

	Capacity of stations (thousand kw.)	Power output (million kw.)
1913	1,098	1,945
1928	1,874	5,003
1929	2,344	6,386
1930	2,894	8,231
1931	3,878	10,433
1932	4,567	13,500

TRANSPORTATION. Total length of railways in 1932 was 83,400 kilometers (51,750 miles), compared with 76,900 kilometers in 1927-28, and 58,500 kilometers in 1913. Freight operations in 1932 were 169.3 billion ton-kilometers, compared with 88.2 billion ton kilometers in 1927-28 and 65.7 billion ton kilometers in 1913. A new railway line of 1200 kilometers, connecting Moscow with the Donetz Basin, was nearing completion in the fall of 1933. In 1933 air lines in regular operation totaled 30,771 miles, over four times the mileage of 1928. Passengers carried in 1932 were 27,200, as compared with 9532 in 1928. Mail and freight carried in 1932 aggregated 1006 metric tons, as compared with 229 metric tons in 1928.

Freight carried on inland waterways in 1932 was 67,000,000 metric tons as compared with 39,900,000 metric tons in 1927-28 and 48,162,000 metric tons in 1913. Two major projects in Soviet water transport were completed in the first half of 1933. One was the canal and lock system around the rapids at the site of the Dnieper River dam. This artificial waterway opened the river to navigation for the first time for 1000 miles, to a point far within the rich black soil region of the Ukraine. The other development was the Baltic-White Sea waterway, linking Leningrad, by way of a series of canals and lakes, with the White Sea port of Archangel. Formerly vessels plying between Leningrad and Archangel were

compelled to circle about the Scandinavian countries and dare the hazards of the northern ocean. The distance was 2840 miles. The new inland waterway shortened the route to 674 miles.

SHIPPING. The Soviet mercantile marine in 1932 was composed of 367 steamships of 502,531 gross tonnage, 79 motor ships of 180,092 gross tonnage, and 3 sailing vessels of 3001 gross tonnage.

COMMERCE. Soviet foreign trade, which held up well during the first two years of the depression, fell off 33 per cent in 1932 and showed a further decline during 1933. Figures for recent years are shown in the accompanying table in millions of rubles (par value of gold ruble is \$0.51455).

SOVIET FOREIGN TRADE
[Millions of rubles]

Year	Exports	Imports	Total
1927-28	799.8	945.5	1,723.3
1928-29	877.6	836.3	1,713.9
1929-30	1,002.8	1,068.7	2,071.5
1931	811.2	1,105.0	1,916.2
1932	563.9	608.7	1,262.6
1933 *	495.7	348.2	843.9

* Figures from U. S. Department of Commerce, in gold rubles.

Exports of gold are not included in Soviet customs figures. The principal Soviet exports in 1932 were: Oil products, \$54,220,000; lumber and lumber products, \$40,420,000; grain, \$26,500,000 (including wheat, \$9,650,000); textiles, \$26,400,000; furs, \$21,460,000. The principal imports were: Industrial machinery and equipment, \$175,000,000; ferrous metals, \$39,490,000; articles manufactured of iron and steel, \$21,970,000; wool, \$13,330,000; cotton, \$9,190,000.

The principal countries taking Soviet exports in 1932 were: England, 23.8 per cent; Germany, 17.4 per cent; Mongolia, 7.3 per cent; France, 5.1 per cent; Italy, 4.6 per cent. Principal countries furnishing Soviet imports were: Germany, 46.4 per cent; England, 13.0 per cent; Persia, 7.1 per cent; United States, 4.5 per cent; Italy, 3.9 per cent.

Trade between the Soviet Union and the United States developed rapidly during the six years up to 1930, despite the handicap attendant on diplomatic non-intercourse. By 1930 the Soviet Union ranked sixth among the foreign customers of the United States and it furnished the principal foreign market for American agricultural and industrial machinery. At this point Germany, England, and Italy began to make extraordinary efforts to secure the Soviet market. Their special trade arrangements included a system of long-term credits guaranteed by the governments, to meet Soviet needs. As a result of this competition American exports to the Soviet Union fell off 88 per cent between 1930 and 1932, while the Soviet imports from Germany, England, and Italy increased 30 per cent. The United States, which furnished 20 per cent of all Soviet imports in 1930, provided only 4.5 per cent of Soviet imports in 1932.

Principal American exports to the Soviet Union in 1932 were: Industrial machinery and equipment, \$5,817,500; automobiles and parts, \$2,690,500; electrical machinery and apparatus, \$2,097,700; aircraft engines and accessories, \$406,700; scientific apparatus, \$200,500. Principal American imports from the Soviet Union were: Furs and skins, \$1,922,400; anthracite coal, \$1,498,000; sausage casings, \$705,700; manganese ore,

\$521,900; pulpwood, \$480,700; caviar, \$450,600.

Figures of the United States Department of Commerce for Soviet-American trade for the years 1925 through 1933 are given in the accompanying table.

SOVIET-AMERICAN TRADE, 1925-33

Year	American exports to U.S.S.R.	American imports from U.S.S.R.	Total
1925	\$ 68,900,000	\$13,200,000	\$ 82,100,000
1926	48,900,000	14,100,000	64,000,000
1927	64,900,000	12,800,000	77,700,000
1928	74,100,000	14,000,000	88,100,000
1929	84,700,000	22,500,000	107,200,000
1930	114,356,000	23,839,000	138,195,000
1931	103,669,000	13,206,000	116,875,000
1932	12,600,000	9,600,000	22,200,000
1933	8,971,465	12,120,000	21,092,000

THE BUDGET. In a country with a high degree of socialization that obtains in the Soviet Union, the growth of the budget reflects to a large extent the degree of economic progress. The first "firm"

SOVIET BUDGET FOR 1932

Revenues:	
Revenues from socialized sector	25.20
Funds provided by population	4.65
of which state loans	2.76
Miscellaneous	0.64
Total revenues	30.49
Expenditures:	
Financing national economy	22.81
of which Industry	11.82
Agriculture	3.62
Transport and Communication	3.85
Financing social and cultural construction	1.79
Administration and Defense	1.84
Miscellaneous	3.72
Total expenditures	30.16

* Expenditures for these purposes are in greater part local and do not figure in the federal budget.

^b Upwards of 40 per cent of the miscellaneous expenditures represent subventions of local budgets.

budget after the stabilization of the currency, that of 1924-25, balanced at 1,400,000,000 rubles. The budget of 1928-29, the initial year of the first Five-Year Plan, was carried out with receipts of 8,020,000,000 rubles. The budget for 1933 envisaged receipts of 35,010,920,000 rubles, with expenditures somewhat below that figure. Over four-fifths of the budgetary revenues are now derived from the "socialized sector." The structure of the budget in 1932 is shown in the accompanying table, in billions of rubles.

During the four and a quarter years covering the first Five-Year Plan actual budgetary revenues were 72.76 billion rubles. Expenditures were 71.96 billion rubles. Actual budgetary receipts and expenditures, in recent years, in billions of rubles, were:

	1928-29	1929-30	1931	1932
Receipts	8.04	12.53	23.76	30.49
Expenditures	8.02	12.25	23.07	30.16

GOVERNMENT. A description of the constitution of the Union of Soviet Socialist Republics will be found in the YEAR BOOK for 1923. In January, 1934, the Council of People's Commissars (executive cabinet of the government) was composed as follows: Chairman of the Council, V. M. Molotov; Vice-Chairman of the Council, J. E. Rudzutak, V. V. Kuibyshev, A. A. Andreyev; Commissar for Foreign Affairs, M. M. Litvinoff;

Army and Navy, K. E. Voroshilov; Internal Supply, A. I. Mikoyan; Foreign Trade, A. Rosenholtz; Transportation, A. A. Andreyev; Water Transportation, N. M. Yanson; Communications, A. I. Rykov; Finance, G. T. Grinko; Workers' and Peasants' Inspection, J. E. Rudzutak; Heavy Industry, G. K. Ordjonikidze; Light Industry, I. E. Liubimov; Lumber Industry, S. S. Lubov; Chairman State Planning Commission (Gosplan), V. V. Kuibyshev; Commissar for Agriculture, Y. A. Yakovlev; State Farms, T. A. Yurkin; Chairmen of the Central Executive Committee, U.S.S.R., M. I. Kalinin, G. I. Petrovsky, A. G. Chervyakov, Gazanfar Mussabekov, Netyrbay Aitakov, Faizulla Khodzhaev, and Maksim Nusratulla.

Joseph Stalin, General Secretary of the Communist party of the Soviet Union, while holding no governmental office beyond membership in the Central Executive Committee or congress, was the most powerful political figure in the country by virtue of his party leadership.

HISTORY

Internal Developments. A distinguished American correspondent who has been stationed in Moscow for over 12 years remarked during a visit to the United States in the autumn of 1933 that news sensations had become so scarce in the U. S. S. R. that his job was no longer interesting. The country had settled down, social and political forms had solidified, and, in a domestic sense, "nothing ever happened."

There is much truth in the observation. It would appear that the critical years of sharp transition ended with the first Five-Year Plan. The socialist forms seem securely established. There is virtually no private industry any longer and no private trade. In the rural regions the collectivist organization has struck deep roots in the soil. There remain grave economic problems, such as the problems of transportation and distribution, but the indications are that these will be solved gradually without tearing the present structure apart. Within its new socialist forms the Soviet Union has evolved formulas for operating large-scale mass production industry and it has adapted a new agricultural set-up to suit its peculiar needs.

During 1933 there were few serious internal changes. The most far-reaching of these were the reorganization and liberalization of the agricultural tax laws and the establishment of "political departments" in connection with the machine-tractor stations which are in effect key motor-power organizations serving the collective farms. The "political departments" have both executive and educational functions. They will increase the local initiative of the machine-tractor stations, improve the leadership in agriculture in their sections and assist in educating the peasants in the technical and social problems involved in the change to large-scale, mechanized farming.

By summer this device had brought such good results in agriculture that it was also adapted to the railroad system, which had lagged behind its rapidly growing tasks for several years. A decree adopted July 4 provided for a complete reorganization of the railroads with the object of eliminating bureaucracy and making more effective use of facilities. The new "political departments" were expected to assist in this work.

Another change adopted during 1933 was the appointment of a federal Public Prosecutor. This

officer has the duty of coordinating court and police procedure throughout the country, and of seeing that local and republican decrees and ordinances are consistent with the constitution and with federal laws, so that he is expected to fulfill an important coordinating function in the legal system.

A decree of greater significance, issued early in December, was designed to attract settlers from European U. S. S. R. to Siberia. The decree provided for special tax exemptions and other favorable discriminations for settlers over a period of from 5 to 10 years and special wage-rates for workers accepting employment in Siberia. It is expected that millions of Russians will take advantage of this offer during the next few years.

FOREIGN RELATIONS. It is probable that future historians will look upon 1933 as the year in which the Soviet Union finally succeeded in normalizing its relations with other countries. It is true that the formalities of normal relations with the more important nations of Europe were accomplished as far back as 1924. It is true that in succeeding years Soviet representatives met with the representatives of other countries at international conferences, shared in formal international debates, and were cosignators of various multilateral agreements. By the diplomatic rules the Soviet Union was a member of the family of nations; in fact the Soviet Union was a nation apart. Its ambassadors abroad usually found themselves in a bleak isolation. The Soviet government lived, it may be said, in amity, but without friends. Its relationship with most other governments was that of an uneasy truce.

This chilly atmosphere gave signs of thawing late in 1932 when the Soviet government signed treaties of non-aggression with Poland and with France. A substantial breach in the ice-dam was made in the summer of 1933, when, in the course of the Economic Conference at London, Mr. Litvinoff, Commissar for Foreign Affairs, signed new non-aggression treaties, one with seven countries bordering on the Soviet Union, one with the countries of the Little Entente, a third with Lithuania.

These treaties differed from those signed previously by the Soviet government, or by other countries, in that they not only renounced aggression as among the contracting nations, but they contained a comprehensive definition of the aggression which the signers agreed to renounce, a definition based on that proposed by Mr. Litvinoff before the Disarmament Conference at Geneva earlier in the year.

At the same time Mr. Litvinoff patched up the differences with England, which for some months had been drifting from bad to worse. The trial and conviction of three British engineers in the Soviet Union at the beginning of the year had resulted in a partial embargo on Soviet goods by Britain. Moscow had retorted by clapping an embargo on British goods and British shipping. There had been threats on both sides of a break in diplomatic relations. After some conversations between Mr. Litvinoff and Sir John Simon, British Foreign Secretary, the disputes were composed, the embargoes were lifted, the imprisoned engineers were set free and negotiations for a new trade treaty were begun. (See GREAT BRITAIN under *History*.)

A few weeks after the compositions in London, Italy signed with the Soviet Union a treaty of

non-aggression similar to that concluded between the Soviet Union and France at the close of 1932. Shortly thereafter Spain opened diplomatic relations with the Soviet Union. Finally, in November, the United States government ended its long policy of non-recognition, that had endured through the administrations of Wilson, Harding, Coolidge, and Hoover, and President Roosevelt announced (November 17) that formal relations with the Soviet government were established.

These were the forms. More significant of the change in Soviet relations with the outside world was the manner. Mr. Roosevelt, who carried on conversations with Mr. Litvinoff in Washington over a period of 10 days prior to the exchange of notes which constituted formal recognition, made it clear that he was inaugurating a cordial friendship between the two countries, as well as an exchange of ambassadors and trade agents. The French government entertained the Soviet Commissar of Foreign Affairs as its honored guest in Paris with every manifestation of friendship. In return M. Herriot, former Premier of France, made a triumphal visit to the Soviet Union, and a French air mission was entertained in Moscow amid popular acclaim. In Italy Mussolini invited M. Litvinoff for a visit and favored him with high personal attentions. In Poland Marshal Pilsudski played host to Soviet officials amidst the most cordial exchanges. There was also a marked secession of the semi-official acerbities which since the formation of the Soviet government had marred its relations with the border states.

By the close of 1933 the Soviet Union had non-aggression pacts with 14 countries, of which conventions with 11 countries included a strict definition of aggression. The treaty with the countries bordering on the Soviet Union, signed in London July 3, 1933, included Afghanistan, Estonia, Latvia, Persia, Poland, Rumania, and Turkey. Finland also acceded to this treaty later in the year. In the case of the treaty signed July 4 with the Little Entente (Czechoslovakia, Rumania, and Yugoslavia), Turkey was also made a party. The non-aggression treaty with Germany dates back to 1926.

American recognition was the most important event of the year in Soviet foreign relations. President Roosevelt took the initiative when he sent a note to President Kalinin October 10 asking him to send a representative "to explore with me personally all questions outstanding between our countries." President Kalinin warmly accepted the overture, and Commissar Litvinoff arrived in Washington November 7, on the day when the people of the Soviet Union were celebrating the sixteenth anniversary of the formation of the Soviet Republic.

Conversations between President Roosevelt and Mr. Litvinoff and between Mr. Litvinoff and officers of the State Department began immediately and continued until shortly before midnight November 17, when diplomatic relations were established after an exchange of notes.

In the exchanges each government agreed to respect the territorial integrity of the other, not to interfere in the internal affairs of the other, to tolerate no group within its territory planning violation of the other, to tolerate within its territory no organization "which has as an aim the overthrow or the preparation for the overthrow of, or bringing about by force of a change in the political or social order" of the other. Mr. Lit-

vinoff on behalf of his government guaranteed the right of American residents in the Soviet Union to worship as they please, assuring them the same right in this respect that is guaranteed to Soviet citizens under the fundamental laws of the Soviet state, and has in practice always been extended to foreign nationals. Each government agreed that in the event of the arrest of an American national in the U.S.S.R. or of a Soviet national in the United States the respective consuls would be promptly notified by the authorities. Mr. Litvinoff, following his examination in the State Department of "certain documents of the years 1918 and 1921 relating to the attitude of the American government toward the expedition into Siberia," waived on behalf of his government all claims for American military activities in the Siberian intervention.

Financial claims and counterclaims generally were left for negotiation after the arrival of the Soviet Ambassador, Mr. A. A. Troyanovsky. Mr. Troyanovsky since the beginning of 1933 had held the important position of vice-chairman of the State Planning Commission, and prior to that he was for five years Soviet Ambassador to Japan. Mr. William C. Bullitt, appointed American Ambassador to Moscow, was sent by President Wilson on a special mission to Lenin as early as 1919. Recently he has served as a special assistant to the Secretary of State. See *UNITED STATES under Administration*.

There were two exceptions to the general rule of improvement in Soviet foreign relations during the year. After the accession of the Nazi government in Germany certain German officials were quoted in the public press as making statements purporting to threaten the integrity of Soviet territory. One such statement, in the form of a memorandum presented by a member of the German delegation at the London Economic Conference, aroused a formal protest from the Soviet government. See *GERMANY under History*.

The other exception was in the East. After the formation by Japan of the state of Manchoukuo the Soviet-owned Chinese Eastern Railway became an increasing cause of friction. In consonance with its policy of avoiding foreign imbrolios the Soviet government in May, 1933, offered to sell the road to Japan. (The road was built by the Russian government in the nineties at a cost of \$225,000,000.) Negotiations for the sale were begun in the summer at Tokyo, with the Manchoukuoan government as the prospective buyer. The negotiations not only dragged fruitlessly, but they were accompanied by increasing harassment of Soviet officials of the road by Japanese-Manchoukuoan authorities. As far back as December, 1931, the Soviet government proposed to the Japanese government the conclusion of a non-aggression pact between the two countries. The proposal had not been accepted by the end of 1933. See *JAPAN under History*.

UNITARIAN CHURCH. A denomination whose name is derived from its belief in one God in one person and, consequently, in the purely human personality of Jesus.

The American Unitarian Association held its one hundred and eighth annual meeting in Tremont Temple, Boston, May 23, 1933. At this meeting the denomination voted to join with the Universalists in the formation of the Free Church of America, in which there would be merged for administrative purposes, by a council of nine representatives from each denomination, the depart-

mental activities of the American Unitarian Association and the Universalist General Convention.

According to the latest available statistics, the denomination has 419 churches, 372 of which are active; 136,204 members; 3170 Sunday school officers and teachers; and 20,823 Sunday school pupils. The official publication is the *Christian Register*, a weekly. The officers of the association in 1933 were: President, the Rev. Louis C. Cornish, D.D.; secretary, the Rev. Walter R. Hunt, D.D.; and treasurer, Parker E. Marean. Headquarters are at 25 Beacon Street, Boston, Mass.

UNITED BRETHREN IN CHRIST, CHURCH OF THE. A denomination which resulted from the religious awakening of Philip William Otterbein and Martin Boehm, and formally organized in Frederick County, Md., in 1800. The church is divided into 33 annual conferences, including those in China, Japan, the Philippines, Puerto Rico, and West Africa. In 1933 there were 1642 charges, 2986 organized churches, 1808 active ministers, 417,433 church members, 2873 Sunday schools with an enrollment of 426,035, including teachers and officers. The amount raised by the church for all purposes in 1933 was \$3,765,051. The net increase in church membership for the year was 3620.

The Evangel is the paper published by the Women's Missionary Association; *The Religious Telescope* is the official paper of the church; and *The Watchword* is the young people's paper. The United Brethren printing establishment and church headquarters are in Dayton, Ohio.

UNITED CHURCH OF CANADA. See CANADA. UNITED CHURCH OF.

UNITED KINGDOM. See GREAT BRITAIN.

UNITED STATES. AREA AND POPULATION. The area of the 48 States and District of Columbia, in 1930, was 3,026,789 square miles, exclusive of ocean areas, the Gulf of Mexico, and the Great Lakes. Non-contiguous lands under the government of the United States (Alaska, Hawaii, the Philippine Islands, the Panama Canal Zone, Puerto Rico, Guam, the Virgin Islands, and American Samoa) had an aggregate area of 711,606 square miles. The total area of the Union and the outlying possessions and territories of the United States was 3,738,395 square miles.

The population of the 48 States and the District of Columbia as determined by the Fifteenth Census was 122,775,046 on Apr. 1, 1930. According to the Fourteenth Census it had been 105,710,620 on Jan. 1, 1920. On July 1, 1933, as estimated by the Census Bureau, it was 125,693,000. The population of the outlying possessions and territories (in most cases as enumerated in 1930 but, for the Philippines, according to an estimate of 1929) was 14,233,389. (For the respective populations of States, territories and possessions see the articles on each.)

AGRICULTURE. See AGRICULTURE; AGRICULTURE, U. S. DEPARTMENT OF; sections on *Agriculture* under the various States; and articles on CORN, WHEAT, ETC.

COMMERCE. Domestic trade made a substantial net improvement in the course of the year. The gain was not uniform: until the middle of March trade was depressed by the banking panic; from April through July it surged forward in many lines, by reason of forward buying due to anticipation of depreciated currency and of higher prices to follow; from August through October the establishment of Federal restrictions on manufac-

tures, merchandising, and agriculture, with attendant labor trouble, checked much of the expansion; thereafter, increasing Federal disbursements and prospects of stabilization for the dollar helped support rising prices and heavier transactions in a wide variety of lines, which included some sorts of capital goods.

Foreign trade (summarized in the table below) exceeded the totals for the previous calendar year (1932) as to both exports and imports; but the rise in the value of imports was the greater.

EXPORTS AND IMPORTS BY MONTHS

Months	Exports	
	1933	1932
January	\$120,589,000	\$150,022,000
February	101,515,000	153,972,000
March	108,014,000	154,876,000
April	105,217,000	135,095,000
May	114,203,000	131,899,000
June	119,790,000	114,148,000
July	144,109,000	106,830,000
August	131,473,000	108,599,000
September	160,119,000	132,037,000
October	193,069,000	153,090,000
November	184,256,000	138,834,000
December	192,619,000	131,614,000

Total (12 months) \$1,674,975,000 \$1,611,016,000

Months	Imports	
	1933	1932
January	\$96,006,000	\$135,520,000
February	83,748,000	130,999,000
March	94,860,000	131,189,000
April	88,412,000	126,522,000
May	106,869,000	112,276,000
June	122,197,000	110,280,000
July	142,980,000	79,421,000
August	154,916,000	91,102,000
September	146,641,000	98,411,000
October	150,857,000	105,499,000
November	128,505,000	104,468,000
December	133,218,000	97,087,000

Total (12 months) \$1,449,208,000 \$1,322,774,000

MINERAL PRODUCTION. The article MINERAL PRODUCTION IN THE UNITED STATES gives the latest available official figures for mineral production in the United States. The more important minerals mined in the United States are treated in separate articles. There are also paragraphs on mineral production in the articles on the individual States.

RAILWAYS. See separate article on RAILWAYS.
SHIPPING. See articles on SHIPPING and SHIPBUILDING

FINANCE. See the article on PUBLIC FINANCE.

EDUCATION. See the articles EDUCATION IN THE UNITED STATES and UNIVERSITIES AND COLLEGES. Separate articles on the most important universities and colleges also are given under their respective titles. Sections on education are included in the articles on the several States.

ADMINISTRATION

CLOSE OF THE HOOVER TERM. The influence of President Hoover in the nine weeks of 1933 prior to the inauguration of his successor was not dominant in the course of affairs. A Congress chiefly of the party opposed to his paid little attention to his policies and shaped its course largely with a view to the plans of President-elect Roosevelt. Mr. Hoover sent Congress a special message on February 20 recommending anew the ratification by the Senate of the treaty with Canada for a ship route via the St. Lawrence, the passage of the bankruptcy bill and of the Glass banking bill in its general lines, authoriza-

tion to the Reconstruction Finance Corporation to increase loans to States and municipalities to assist the distressed, rejection of the allotment plan for farm relief, abandonment of publicity for the loans made by the Reconstruction Finance Corporation, and consideration of the need to expand the Federal provisions for loans to home owners.

With regard to the nature of the interview of Premier Laval of France with Mr. Hoover in October of 1931 there was published in the daily press of Jan. 13, 1933, a statement from an unnamed source "in close touch" with the President, representing him as having given M. Laval no encouragement of revision or delay regarding the intergovernmental debt owed by France to the United States government. M. Laval controverted this statement by citing the joint Hoover-Laval communiqué that had been issued at the end of the conference of 1931.

Events incidental to the retirement of Mr. Hoover were the resignation on February 23 of Chairman Stone of the Federal Farm Board, an institution of the Hoover Administration which had been marked for extinction, and the deeding by Mr. Hoover to the State of Virginia of the summer camp that had been built for him on the Rapidan River. The evacuation of Nicaragua was completed on January 2 by the withdrawal of the last detachment of Marines. American experts collaborated at Paris, beginning early in January, with a committee to draw up the agenda of the World Economic Conference to be held later in the year.

The financial position of the government at the close of the Hoover Administration showed some further deterioration. The Treasury's deficit for the period of eight months ended February 28 was reported as \$1,360,279,739, exclusive of service of the statutory retirement of debt and of the Treasury's advances to the Reconstruction Finance Corporation. The public debt, reported as totaling \$20,934,729,209 on February 28, had risen about \$1,448,000,000 in the eight months, despite a reduction of \$505,000,000 from estimates, in the disbursements listed as expenditures. The Reconstruction Finance Corporation had outstanding loans of \$838,651,876 on January 6.

Start of Bank Panic. During the last three weeks of the Hoover Administration there developed a nation-wide banking crisis, starting with a run on two great institutions in Detroit (see MICHIGAN); the Governor of Michigan declared a closure of banking under the guise of a succession of legal holidays; runs followed on banks in other States, which in turn closed their banks, until, with the closing of banks by New York State and several others on the morning of March 4 the suspension of banking throughout the country became practically universal. It was reported that Mr. Hoover, in the last days of his term, had drawn up an order to close all banks under Federal authority, similar in tenor to that later issued by President Roosevelt, but had not issued it, failing to reach an agreement on the subject with his successor.

Proclamation of the Twentieth Amendment. The Twentieth Amendment became formally part of the Constitution on February 6 through proclamation issued by Secretary of State Stimson declaring it adopted by the requisite number of State ratifications. Colorado, the 36th State to ratify, sent notice actually received by the De-

partment of State on February 2. The amendment provided that terms of President and Vice President end at noon on January 20 and terms of Senators and Representatives on January 3 of the terminating years; that the regular session of Congress assemble yearly at noon on January 3 unless Congress set another time by statute; that Presidency and Vice Presidency be filled, respectively, by prescribed means in cases of non-qualification, non-election, or death before inauguration.

INAUGURAL DAY CRISIS. The moment of the inauguration of Franklin Delano Roosevelt as President, at noon of March 4, coincided with a virtually complete suspension of banking operations throughout the country, likewise of the organized markets for securities and commodities and the chief foreign facilities for monetary exchange with the dollar. While banks in some localities were permitted to let depositors draw necessary cash in small sums, currency in considerable quantities became suddenly unprocurable, except to depositors in the Postal Savings system. Even Postal Savings Banks were momentarily, in some cases, drained of ready cash by the rush to withdraw. Checks tendered in the ordinary course of payments became useless for deposit and were commonly accepted "for collection" and not as presumptive payment. Fractional coin momentarily disappeared, its holders evidently fearing that if they gave it up to change bills they would find themselves without means to make necessary petty payments. In a number of areas where monetary stringency had developed before March 4, issues of scrip as a substitute for lawful money had appeared. A great part of the gold coin and bullion held against outstanding paper currency had been drawn from the Federal Reserve banks and Assay Office for hoarding, depleting the Federal Reserve system's gold resources. It became immediately and increasingly difficult to conduct many kinds of ordinary trade. The situation was complicated by the transfer of power between Administrations and between Congresses. Great as was the general dismay, the moment favored the adoption of a strong and authoritative tone by the incoming President.

ADMINISTRATION OF FRANKLIN D. ROOSEVELT. President Roosevelt in his inaugural address spoke with great earnestness. He declared that "this was preeminently the time to speak the truth frankly and boldly"; that "we need not shrink from facing the conditions in our country"; that "the only thing we have to fear is fear itself." He charged the plight of the nation to "the rulers of the exchange of mankind's goods" who had "failed through their own stubbornness and incompetence, had admitted their failure and abdicated." He attacked "the practices of unscrupulous money changers in the temple of civilization," characterized as false the idea of "material wealth as the standard of success" and spoke of "conduct in banking and in business which has too often given to a sacred trust the likeness of callous and selfish wrong-doing." He declared that "the nation calls for action, and action now"; that "the primary task is to put people to work," "treating the task as we would treat the emergency of a war"; that "the cost of Federal, State, and local governments must be drastically reduced." He proposed the calling of Congress into immediate special session, supervision of all banking and credits, provision for

an "ample but sound currency." He asked that the people submit "lives and property to discipline because it makes possible a leadership which aims at a larger good," and gave warning that "an unprecedented demand and need for undelayed action may call for temporary departure from the normal balance of public procedure," announcing that he would ask Congress for "broad executive power to wage war against the emergency."

Proclamation of March 5. President Roosevelt proceeded forthwith to take the awaited Federal action with regard to the collapse of banking and the attendant difficulties as to currency. On the night of March 5 (a Sunday) he issued a proclamation invoking emergency powers under a war-time act of 1917 and declared a "bank holiday" (or closure) to continue through March 9, during which banking institutions must not pay out money, nor in any way facilitate export or transfer of gold or silver coin or bullion or of currency; banks were to be allowed to function, however, to such extent as the Secretary of the Treasury might permit through regulations, and he might permit or require the issuance of clearing-house certificates and the receipt of new deposits in special accounts, subject to withdrawal on demand. The effects of the proclamation were, to render the bank closing uniform and universal, with inclusion of the Federal Reserve banks and Territorial banks; to enable banks to meet inter-bank debts with clearing-house certificates; to stop outward shipments of gold. The Postal Savings Banks alone continued to do business. The proclamation was extended on March 9, to remain in effect until further notice. The law of 1917, invoked in the original proclamation, had meanwhile been re-enacted by Congress, which had been convened.

Call for Special Session. The President issued on March 5 another proclamation, which called Congress to meet in special session on March 9, on the exceptionally short notice of four days. Actually the call had been expected for some time and the members who held over from the Seventy-Second Congress had generally remained in the capital, while new members had come on.

Membership of the Roosevelt Cabinet. The Cabinet, as confirmed by special Senate session on the afternoon of March 4, was composed of Cordell Hull, as Secretary of State; William H. Woodin, Secretary of the Treasury; George H. Dern, Secretary of War; Homer S. Cummings, Attorney General; James A. Farley, Postmaster General; Claude A. Swanson, Secretary of the Navy; Harold C. Ickes, Secretary of the Interior; Henry A. Wallace, Secretary of Agriculture; Daniel C. Roper, Secretary of Commerce; and Miss Frances Perkins, Secretary of Labor. Miss Perkins was the first woman to take a position in the Cabinet. Hull and Swanson had been drawn from the Senate, where they would otherwise have held important places during the balances of their terms in seats from Tennessee and Virginia respectively. Walsh of Montana, who had died suddenly shortly before the inauguration, was to have become Attorney General, and Cummings, former chairman of the Democratic National Committee, hailing from Connecticut, was picked in Walsh's stead at the last moment. Farley had managed the Roosevelt campaign. Woodin, a New Yorker and corporation head with experience in Federal Reserve affairs, had the confidence of financial groups.

Executive Solution of Banking Crisis. The taking of measures to enable banking to resume was necessarily, from the instant need of the situation, almost wholly a matter of executive action. The duty of shaping the details to this end fell upon Secretary Woodin. The situation was four-fold, in that the functioning of credit and the resumption of payments of the larger sort depended on the reopening of the banks; that these had before closing paid out so much of their available currency as to render it exceedingly difficult for them to resume with safety; that a large part of the monetary stock of gold in the financial institutions had been taken out by private parties and put in hiding; and that the supply of essential food commodities, such as meats and vegetables, threatened to run short unless banking facilities were promptly extended. Special provisions for the carrying on of these food transactions were made after a few days. The Secretary of the Treasury issued on March 6 and 7 regulations permitting banks to make change and honor small withdrawals for personal necessity and the like, and allowing the issuance of "clearing-house scrip" so-called, i.e. paper originated and secured in the same manner as clearing-house certificates, but payable to depositors as well as to banks' other creditors. It seemed for a moment that the country would witness great issues of this substitute for statutory currency, and a huge amount of the scrip was actually printed for the New York Clearing House, in particular. But the scrip plan was abandoned within a few days, in favor of new statutory currency to be based on banking assets, as provided by legislation hurried through Congress on March 9, to help banks to reopen (see under *Seventy-Third Congress*, below). Secretary Woodin directed the framing of the necessary statute.

With regard to the flow of gold, steps were taken to influence those who had obtained monetary gold to put it back in the banks. One of these steps was the invocation of the old statute against hoarding, in the President's proclamation of the 5th. This was followed by an order of the Federal Reserve Board on March 8, reportedly at the President's direction, that Federal Reserve and member banks report the names of all withdrawers of gold subsequent to February 1. The combined effect of these moves and of the embargo on gold exports, aided by agitation against holders of gold in popular quarters, was to produce within a few days a return rush of the metal to the Federal Reserve banks. It was estimated that by the 14th as much as \$300,000,000 of gold had been returned; an amount sufficient to back some \$750,000,000 of Federal Reserve notes. Great sums in paper currency were also re-deposited in banks.

Reopening of Banks. Under the act of March 9 it became the duty of the President and, in effect, of the Secretary of the Treasury, to fix the restrictions under which member banks in the Federal Reserve system might reopen for business, and the duty of the Controller of the Currency to put unsound National banks under a newly created type of officers called conservators. There thus devolved on the Treasury a heavy duty of issuing regulations to set the conditions of reopening and (as to National banks) to determine which banks met these conditions. As to State banks in the Federal Reserve system, the details of reopening were left to State banking depart-

ments in great part. The thousands of banks, chiefly small, outside the Federal Reserve system were left to be reopened by the respective State governments under which they were chartered. Licensed banks reopened in the cities having Federal Reserve banks on March 13 and elsewhere shortly thereafter. Thus the period of general and compulsory suspension of banking under Federal authority lasted about 10 days. By March 23, although reopenings were neither immediate in all cases nor universal, about 4 out of 5 of the member banks of the Federal Reserve system were doing unrestricted business.

Continuing Monetary and Gold Problems. While banking had thus been put on its feet again this had been effected at cost of further troubles. The desire to prevent a new exhaustion of the banks' currency led to the enactment of provisions for currency inflation at the President's discretion (see *Seventy-Third Congress*, below) and to the suspension of gold payments. In consequence the dollar depreciated in foreign exchange, while the whole subject of reducing the gold value of the dollar and of thereby raising prices to the desired levels became a matter of agitation among the inflationists. The course was definitely set away from the old gold standard, of which the restoration became as time passed increasingly difficult and unlikely. The immediate effect of the gold embargo and of measures to compel the return of gold from private possession was a movement away from the possession of paper dollars. This took the form of a violent and sustained rise in the prices of shares and active commodities. The rise in these prices in its turn further accentuated the demand for inflation as the effectual means for driving prices up to the points at which they had ruled in prosperous times before the panic of 1929.

Compulsory Return of Gold. Title I, Section 3 of the Emergency Banking Act of March 9 authorized the Secretary of the Treasury, when he deemed it necessary for the protection of the currency system, to order possessors to give up gold coin, bullion, and certificates, against other United States money. No formal order was issued until April 5, when the President, in virtue of the act of Oct. 6, 1917, required all persons holding gold, with minor exceptions, or gold certificates to deliver their holdings to the Federal Reserve system, by May 1, under penalty of \$10,000 fine, 10 years' imprisonment, or both. The ultimate date was extended at successive times during the year. No suits were brought until September, and the number of listed possessors was gradually whittled down. Ex-Senator Thomas of Colorado held out \$120 in gold and, on May 3, publicly challenged the government to prosecute him, but the challenge was not accepted.

Treatment of Gold Obligations. The Treasury did not make payments in gold money upon the public debt subsequently to March 4. In effect, therefore, the government failed to perform an obligation to which it had subscribed on all its outstanding bond issues. Domestic debtors upon obligations carrying a gold clause followed suit, as did the greater part of foreign debtors. Despite the cessation of gold payments according to bond stipulation, the Treasury placed on March 15, and subsequently, new issues bearing the gold clause. No contest was made to compel gold payments on Federal obligations. On June 5 a measure of Congress abolishing all gold clauses in debt contracts became a law, and thereafter

Treasury obligations were issued without bearing such a clause. Domestic gold mines were unable to get the world price for their gold, however, and were obliged for some months to turn their product in to the Federal agencies at the old monetary price of \$20.67 an ounce. In July and August they were permitted by successive Treasury regulations to export ores, concentrates, and amalgams; and by executive order of August 29 the President authorized the Treasury to take domestic new-mined gold on consignment for sale abroad and pay the equivalent in domestic currency, as determined by prevailing rates of exchange. Finally, by executive order of October 25, the Reconstruction Finance Corporation was authorized to buy such gold at a price fixed from time to time; and the Corporation, acting through the Federal Reserve Bank of New York, began on November 2 to buy gold in foreign markets as well, thus purposely depressing the dollar in terms of other currencies.

Sectional demand for the monetization of silver was organized in the course of the autumn, with a view to swaying Congress in January, 1934. The President made a welcome concession on December 21 to this demand by ordering the purchase, yearly, of 24,241,410 ounces of silver newly mined in domestic mines; the old statutory price of \$1.29 an ounce was to be paid, but only ostensibly, for with every ounce for which the government paid, another ounce was to be delivered free, as seigniorage for the coining of standard silver dollars to pay for the bullion. Even so, the payment, in effect, of 64½ cents an ounce for a year's output of domestic silver was a far higher market than the producers could otherwise find.

Policies of the President. President Roosevelt was able by reason of the strength of his popular support and of the gravity of the crisis at the outset of his administration to dominate and greatly to hasten the work of Congress. He rendered his grip the stronger by delaying to make great numbers of the routine Federal appointments, thus holding back the grant of the patronage on which members of Congress relied to keep their influence in their constituencies. While he addressed the general public on a number of occasions by radio, he avoided committing himself to particular groups on the details of possible future policies as to which he sought to keep liberty of action. He brought together, on the other hand, a group of intimate councilors, mainly gathered from university faculties, who were little known to the public and had had no political careers. This group, known to the press as the "Brain Trust," had among its members Raymond C. Moley, who served for a time as Assistant Secretary of State, and Dr. Rexford G. Tugwell. The trend of this group was generally recognized as favorable to the establishment of a controlled economic régime, as opposed to free play for economic influences. Dr. Moley took a strenuous part in the Economic Conference at London (June-July) by going to London as the President's personal representative at the time when Mr. Roosevelt rejected proposals, to which Secretary of State Hull was favorable, for the international stabilization of the dollar. After the adjournment of the conference, he left Washington, in August, to direct a new weekly periodical.

The President virtually initiated in Congress a great part of the legislation of the special session. He recommended the following measures,



Acme

WHEN THE PRESIDENT SIGNED THE RECOVERY ACT

June 16, 1933

Standing behind the President are (left to right), Senators Robinson and Wagner, Congressmen Doughton, Ragon, Hill, and McIntire



Acme

THE PRESIDENT SIGNING THE BEER BILL

Mar. 22, 1933

each in one of a series of messages, delivered at the date specified: emergency banking relief, March 9; Federal economies, March 10; legalization of light beer, March 13; relief of unemployment, March 21; agricultural relief, March 27; regulation of sales of security issues, March 29; relief for mortgages on homes, April 3; development in the Tennessee River valley, April 10; relief of the railroads, May 4; general industrial recovery, May 17. Bills drawn with the aid of the Administration were in each case introduced simultaneously with the messages recommending them. In the earlier instances the President was usually able to obtain for them prompt passage, but celerity to follow his lead diminished later in the session, as the fright of March gave way to a sense of returning security, and some of the later measures were much debated, amended and delayed. All, however, were passed, and only two measures of prime import were sent the President for his signature, outside of those that he had promoted.

In the purely Executive field, the President made early and vigorous use of the Economy Act, reducing about 1,500,000 pensions and other benefits to veterans by a total of some \$400,000,000 a year; merging the Farm Board, Farm Loan Board, and other farm-aiding agencies into the newly formed Farm Credit Administration, for which Henry Morgenthau, Jr., was named governor; reducing Federal employees' pay by an executive order of March 28, to effect saving to the total of some \$125,000,000 a year through a 15-per-cent cut; and eliminating or consolidating many bureaus in the Departments, thus retiring employees in great number. During the summer, reviews of individual cases affected by the reduced benefits to veterans were instituted, under regional boards, the tendency being to restore a part of the total that had been cut from these allowances.

The policy with regard to exterior economic relations was less consistently developed. In advance of the London Economic Conference, which met in June, the Administration agreed to a so-called tariff truce whereby governments were to refrain from raising their tariffs during the Conference. This agreement, made early in May, conformed with an anticipation that the President would seek close economic cooperation at the Conference. At the outset of the Conference itself, other governments' delegates immediately made the demand, which had been foreseen, that the United States take steps to check the decline and violent fluctuations of the dollar in foreign exchange; although Mr. Roosevelt, after a conference with Premier Herriot of France at Washington on April 26, had issued with the latter a joint statement on April 26 containing the phrase, "At no moment has understanding been more necessary between France and the United States for . . . the restoration of stable monetary conditions," Mr. Roosevelt in a public statement addressed to London on July 3 attacked nations seeking dollar stabilization and vetoed any immediate stabilization of the dollar, thus bringing to a stop the efforts of the Conference, which was adjourned.

From the latter part of June well into the autumn the most conspicuous activity of the Administration was the drawing of codes to govern industrial and commercial groups, under provisions of the National Industrial Recovery Act. (NIRA). The President left this work to the

special organization created for the purpose by the act, but intervened occasionally, as in the case of the soft-coal industry, to press industrial interests to meet the Federal demands. After Labor Day there developed dissatisfaction in some quarters with the working of the act; first, on the ground that in adding to the costs of industrial production and marketing it nullified advantages for which agriculture had hoped from the Farm Relief Act; second, because of difficulty encountered in persuading consumers to buy extensively enough to make producers working under the industrial codes cover their higher costs. These difficulties intensified the agitation for immediate inflation of the currency. During September the President adopted the policy of promoting more rapid Federal expenditure and lending in divers directions outside of the regular budget and of pressing the commercial banks to lend more liberally, with a view to putting more money into active use without resort to great new monetary issues.

President Roosevelt employed, in his series of informal talks to the nation over the radio, a powerful means of cultivating popular support. The first of these talks, delivered on March 12, reviewed the banking situation, stated the purposes of the general closure and of the steps for reopening, promised the greatest possible salvage of deposits, explained the need for delay in reopening in some cases, defended the new money to be issued as "not fiat currency" and as "issued only on sound security," attacked hoarding as an "exceedingly unfashionable pastime," and solicited universal popular confidence in the banking policy and support for it. The radio talk of May 7 dealt with legislation up to that time and particularly with departure from the gold standard. "Behind government bonds," said the President, "there is only a promise to pay; behind government currency we have in addition . . . a reserve of gold"; if all holders of debts or currency sought payment in gold at once "24 people out of 25 would be politely told there was no more gold left. . . . We have decided to treat all the 25 people in the same way." The President declared it his objective to "raise commodity prices to such an extent that those who had borrowed money will on the average be able to repay in the same kind of dollar that they borrowed." The talk of July 24 represented the National Industrial Recovery Act as intended to produce "lasting prosperity; . . . we cannot attain that in a nation half boom and half broke." To overcome "the two great obstacles to a normal prosperity . . . low farm prices and the creeping paralysis of unemployment" the President proposed "democratic self-discipline in industry . . . a general increase in wages and shortening of hours," through the National Industrial Recovery Act, providing thus for the industrial workers.

Opposition to President's Course. In the special session of Congress opposition to the policies of President Roosevelt was remarkably slight, being limited to a few spokesmen of the regular Republican minority and to a few declarations of conflicting opinion on particular matters, such as that of Senator Glass. In the autumn, however, opposition developed in several quarters. Senator Thomas of Oklahoma brought together in conference in October advocates of silver inflation, from the silver-mining States, and of greenback inflation, from agricultural States in

which debts and lack of income were most oppressive; the move launched an effort to organize an influential group to compel Federal resort to monetary inflation, a step that the President had steadily avoided. The failure of prices for commodities to continue the swift rise that culminated in the slump of late July in the chief markets, the agricultural resentment at the greater advance conceived to have been made under the National Industrial Recovery Act by the non-agricultural industries, and the failure of business activity in general to make a sweeping, rapid increase after Labor Day coincided to open the way to agitation for more radical measures than the Administration had employed.

President Roosevelt in an address by radio on October 22 said: "I have been amazed by the extraordinary degree of coöperation given to the government by the cotton farmers in the South, the wheat farmers in the West, the tobacco farmers of the Southeast, and I am confident the corn-hog farmers of the Middle West will come through in the same magnificent fashion." Nevertheless Governor Langer of North Dakota proclaimed an embargo (October 16) on the removal of wheat from the State, the Carolinas joined in an embargo on the sale of tobacco in September, and the Governors of Iowa, Wisconsin, Minnesota, North Dakota, and South Dakota went to Mr. Roosevelt in a body on November 3 with a demand that he fix minimum prices for agricultural products and pay off the entire Fourth Liberty Loan with a new currency issue, as Senator Norris had previously urged.

Upon Mr. Roosevelt's rejecting these demands the National Farm Holiday Association called a general farm strike which led, particularly in Iowa, to the destruction of railroad bridges and the seizure of meat animals in transit. Secretary of Agriculture Wallace sought to overcome the farmers' hostility by a vigorous speech at Des Moines on November 11 in defense of the Administration's agricultural policy. The Administration proposed to lend farmers 50 cents a bushel on their holdings of corn and outlined a scheme whereby the processors of wheat were to be induced to unite to pay such a price for it as, with the processing tax, should bring the farmer's return to \$1.01 a bushel. The Administration had already made heavy purchases of wheat and other farm commodities to be used in the dispensation of Federal aid to the destitute. It further sought to maintain the packers' price for swine by the threat to place a heavier processing tax on swine if the packers' price were lowered.

Opposition to the Administration developed in other quarters. The National Recovery Administration sought without success to make Henry Ford subscribe to the Industrial Code for manufacturers of automobiles. He refused, and in consequence the Ford Motor Company was excluded from bidding for a large Federal order for automobiles in October. Ford later agreed to make the reports on employment in his factories, without signing the Code. His Company's status as a bidder in public contracts was still in dispute in December.

The Chamber of Commerce of the State of New York passed resolutions on November 3 in favor of immediate return to a fixed basis of gold for the currency. This demand, which found much conservative support, amounted to asking the abandonment of the Administration's policy of depressing the value of the dollar in foreign ex-

change. This policy had been intensified, by resort to the Federal purchase, at prices above foreign gold parity, of gold from domestic mines, on October 26, and by the commencement of the purchase of gold abroad, through the Federal Reserve system, on October 30, whereby the currency was depreciated farther and rapidly within 10 days to about five-eighths of its old gold value, with accompanying but not corresponding rises in active prices, except for bonds, Federal and other, which declined substantially. At this point President Roosevelt parted with Secretary of the Treasury Woodin, granting him, explicitly for reasons of health, an indefinite leave of absence. As Woodin was reputed a conservative in finance, and as his Under-Secretary of the Treasury, Dean G. Acheson, simultaneously resigned, while Henry Morgenthau, Jr., a close adherent of the Roosevelt policies, was made Acting Secretary, the markets inferred a likelihood of radical monetary measures; the dollar suffered violent unsettlement in foreign exchange, which was checked by tightening the enforcement of restrictions on foreign-exchange dealings, November 17. Woodin resigned definitely on December 13, on the ground of ill-health.

Professor Oliver M. W. Sprague, who had left a similar post with the British government to become financial adviser to the United States Treasury, resigned at the same time that the above changes were made in November; his withdrawal was divulged in his open letter to the President, made public on November 22, in which he condemned the policy of gold purchase as likely to impair the Federal credit, and as insufficient in itself to restore business activity. Ex-Governor Alfred E. Smith of New York, in a letter to the Chamber of Commerce of the State of New York, released on the 24th, declared his belief in the need to return to the gold standard and to cease monetary experimentation. Bernard M. Baruch, in an article in *The Saturday Evening Post*, likewise warned of risks in the Administration's policy. The United States Chamber of Commerce demanded prompt return to gold, and the Federal Reserve Advisory Board issued a warning on the same subject. Thus was formed a body of opinion outside the Administration, the first to offer concerted conservative opposition to its courses.

REPEAL OF 18TH AMENDMENT. A proclamation issued on December 5 by William Phillips, Acting Secretary of State, terminated the Eighteenth Amendment to the Federal Constitution, the basis of the system of Federal prohibition of alcoholic beverages, by certifying the superseding amendment to have been adopted by conventions in 36 States. The repealer, which had been submitted to the States by Congress exactly a year before, by joint resolution of Dec. 5, 1932, thus became the Twenty-first Amendment. See **PROHIBITION; REFERENDUM.**

THE TREASURY. William H. Woodin of New York, who became Secretary of the Treasury on March 4, performed immediately and with great success the task of improvising a plan for reopening the banks of the country. He eliminated the proposal to create a system of banking scrip analogous to clearing-house certificates and designed to supplement the shortage of currency caused by the banking panic. In its place he framed the provision, promptly enacted in the Banking Act of March 9, authorizing the issue of Federal Reserve Bank notes secured by banks'

holdings of notes, drafts, bills of exchange, and bankers' acceptances at 90 per cent of face. Only moderate use of this form of asset currency was required, as money flowed back promptly into deposits after March 12.

Surrender of Gold. The Treasury issued licenses up to the early part of May, for the exportation of gold, but only in particular and restricted cases. The Secretary of the Treasury issued repeated regulations and warnings that hoarded gold be surrendered to the Federal Reserve Banks. However, the listed hoarders, whose names had been obtained by compelling persons who drew gold from the Federal Reserve Banks prior to March 6 to give their names, were not molested with actual prosecutions until the end of September. The issue was finally forced, not by the government, but by Frederick B. Campbell, a New York lawyer; he sued for an order against the Chase National Bank, as custodian of a sum in gold belonging to him, to compel the bank to deliver the gold. This occasioned his prosecution by the government as a hoarder, and other prosecutions were reported to have been started soon after. (See *Judiciary* for events in this litigation).

Deficit. The fiscal year closed on June 30 showing a reported deficit of \$1,775,000,000, approximately, on the year's operations. This was ostensibly about \$1,000,000,000 less than the deficit for the fiscal year 1932. The difference was in part due to the administrative economies effected in late 1932 and early 1933; in part also to new taxes imposed in 1932 and early in 1933. The Federal tax on beer and wine, imposed in connection with the legalization of alcoholic drinks of the potency of 3.2 per cent, was reported to have brought in \$9,139,687 for May, the first full month of its collection. However, while ordinary expenditure for fiscal 1933 was reported to have totaled some \$3,330,000,000, or less by fully \$1,000,000,000 than that for the year before, the public debt had risen in the course of the 12 months by \$3,044,000,000 to \$22,530,000,000 at the end of June, 1933. The excess of the rise in debt over the Treasury's deficit was due to disbursements of the Treasury not reckoned as expenditure. These were essentially for loans and the purchase of securities in aid of semi-governmental agencies through which the Federal money was dispensed for economic rescue work in one direction or another; largely, they were for the purchase of the securities of the Emergency Relief Corporation. The outpouring of Federal funds for the numerous drives toward relieving need and rousing economic activity was much intensified toward the end of the calendar year. In consequence the expenditures for the six months ended on December 31 created a deficit of \$1,152,972,595, for that period, which included a host of extraordinary disbursements; owing to these, the public debt at the end of December, 1933, was \$23,813,790,000, or about \$1,283,000,000 above that on June 30.

Bond Issues. The Treasury made large issues of public debt notes at intervals of a few weeks. These were well taken, up to October. Even an issue of \$800,000,000 of short-term certificates offered for subscription prior to March 15, and while the banks of the country were still closed, was heavily oversubscribed. It was possible in the refunding of June 15 to put out \$1,000,000,000 in 5-year notes bearing only 2½ per cent, with part of which some of the excessively high

total of short-term debt was retired. In October the Treasury proceeded to a move long contemplated, by calling \$1,000,000,000 of the Fourth Liberty Bond issue for retirement at the April interest date, offering in their place the choice of cash or new bonds, callable in 10 years, maturing in 12 and bearing 4¼ per cent for the initial year and 3¼ thereafter. A part of the latter issue, \$500,000,000 offered for cash subscription, was quickly taken, and over \$800,000,000 of the called bonds were presented for exchange within three weeks. Then, however, sentiment was disturbed by the Administration's action in forcing the dollar down in foreign exchange by the purchase of foreign gold. It thus happened that early in November the new bonds were driven below the level at which exchanging the called bonds for them offered an incentive, and the exchange of bonds was halted, leaving about \$1,000,000,000 of the Fourth Liberties to be redeemed within a few months by other means.

Reconstruction Finance Corporation. The Corporation remained closely affiliated with the Treasury, drawing on the latter, against its own securities, for the assistance that it dispensed. Apart from other disbursements, the outstanding loans of the Corporation, as of December 31, stood at \$1,718,596,267, as compared with \$1,298,267,741 for January 28. In addition the Corporation had dispensed money outright for the United States in the purchase of preferred stock and notes of National and other banks needing new capital and in the allotment of money for aid to the destitute, State by State, gold purchases, etc., and had granted over \$1,000,000,000 in loans not yet disbursed. The Corporation, which had set out to be a body initiating its own credit activities in large measure, within bounds set by law, tended during the year to become more and more the paymaster for a considerable number of governmental or governmentally affiliated bodies in which was vested the prosecution of divers measures of Federal origin designed to promote a "managed" economic recovery.

NEW ADMINISTRATIVE MECHANISMS. The chief of these new mechanisms were: the National Recovery Administration, having at its head Hugh S. Johnson, and charged with the work of putting the industries of the country (agriculture and railroads excepted) under Federal discipline through subjection to a system of Federal codes, group by group, and of Federal licenses; the Agricultural Adjustment Administration, headed by George N. Peek, conducting the work of restricting acreage or production of the principal agricultural commodities; the Emergency Relief Administration, headed by Harry L. Hopkins, dispensing Federal money among the States in contribution to their efforts to support the destitute and, later, undertaking the direct dispensation of supplies therefor, and the full direction of relief where a State had failed to provide adequately for its own poor; the Public Works Administration, directed by Secretary of the Interior Ickes, allotting Federal money, part in loans, part in grants, to a total of \$3,300,000,000, to be spent for the construction of public works, Federal and other, intended to provide employment to the idle; the Civilian Conservation Corps, directed by Robert Fechner, maintaining a great body of needy young men under a system of 6-month enlistments, at work in the National forests and similar places of occupation; the Tennessee Valley Power Authority

(A. E. Morgan, chairman of the Board), directing the further development of the Tennessee Valley as well as the operation of the Federal hydroelectric plant at Muscle Shoals. These chief bodies were aided or supplemented by a number of others such as the Farm Credit Administration, Federal Oil Administration, Surplus Relief Corporation, and Industrial Recovery Adjustment Board. The Federal financing of farm mortgage loans was left in the hands of the existing system of Federal land banks, the government guaranteeing interest on bonds to be issued by the banks to provide the necessary funds, but not creating any special means by which the bonds could be floated if not acceptable to private investors. The rehabilitation of home mortgages under the Home Owners' Loan Act of 1933 was promoted by the creation of the Home Owners' Loan Corporation, empowered to sell \$200,000,000 of its capital stock to the Federal Treasury and to issue \$2,000,000,000 of bonds bearing Federal guarantee of interest; but no provision was made for the Federal agencies to take these bonds if private markets failed. The railroads were left without further specific agency for financial aid, but were placed under the special supervision of a Federal Coordinator of Transportation, Joseph B. Eastman, whose power over companies in debt to the Reconstruction Finance Corporation or seeking to borrow from government agencies was in practice more than supervisory.

Control of Industries. The National Recovery Administration began to operate late in July. It conducted an intense drive to bring the manufactures, mines, carriers, utilities, and merchants of the country, group by group according to lines of business, under Federal regulation as subscribers to collective codes approved by the Administration. Popular appeal was generated at the outset by calling upon firms to display the Blue Eagle, an emblem awarded for conformity with preliminary Federal requirements, as to increasing employment, by organizing parades in the cities, and by circulating for popular signature pledges to patronize firms showing the Blue Eagle. The right to show the emblem was given at the outset to firms expressing intention to conform in a general way with the Federal requirements as to limiting employees' working time and paying higher wages for the unit of time of actual work. No actual invocation was made officially that the public avoid patronizing firms that did not comply. The negotiation of actual codes by industries was carried on in August and thereafter. It was found necessary to apply widely different standards as to pay and hours in different industries. The chief difficulty in major industries, however, arose over the issue of recognition for labor unions and over a great number of strikes occasioned by the desire of organized labor to improve its position at the outset of Federal regulation of industry as far as possible. Efforts were made to frame an official interpretation of the collective-bargaining clause of the Industrial Recovery Act that both labor organizations and groups of employers would accept; but President Roosevelt was reported to have directed on September 15 that no interpretation be made at that time. Previously the steel industry had agreed to a code without specific provisions as to the company union, and the automobile industry to a code without definitive formulation of policy as to the open shop.

An effort was made by Administrator Johnson

in September to impel Henry Ford to subscribe to the latter code. The Ford Motor Company announced on September 5 a plan for increasing wages and prepared late in October to submit a report on wages and hours of labor, which the Administrator had required of firms in the industry. The Ford concern, however, did not sign the code, and was excluded as a bidder for a Federal purchase of automobiles; but Comptroller General McCarl ruled to the contrary, November 11, that the Ford bid must be permitted.

Regulation of Petroleum. The task of regulating production and prices in the petroleum industry was vested in a separate authority, the Oil Administrator; Secretary of the Interior Ickes was appointed to the post. He allotted quotas of allowable production *per diem* to the several States, month by month. On October 16, by further extension of his authority he set a minimum price of \$1.11 a barrel for sales of petroleum, with differentials based on grade and region, subject to hearings later held.

Agricultural Adjustment. The agricultural act of May 12 led to the creation of an Agricultural Adjustment Administration, headed by George N. Peek. This body was active in reducing the acreage planted to cotton and preparing processing taxes upon cotton, wheat, and swine, from which to make payments to the farm producer with a view to bringing the farm price up to the desired level. No effort was made to reduce the year's planted acreage of wheat or Indian corn, and indeed an exceptionally bad season kept the corn crop from attaining unusual volume and cut the quantity of the wheat crop to the lowest for many years. A reduction of one-fourth in the acreage planted to cotton, on the contrary, was undertaken at the end of June, when the plant was already in growth. Lands planted to cotton were leased from the individual farmer for the year on condition that the cotton plants upon them be destroyed. A tax of 4 cents a pound was imposed on manufacturers processing cotton, in order to provide the money to be paid the growers for the lease of land. A similar processing tax on wheat, at 30 cents a bushel, went into effect on July 9. Preparations were made in August to reduce the wheat acreage by 15 per cent for 1934. Peek, reportedly in conflict with Secretary of Agriculture Wallace over policies, was transferred to a post in the Department of State on December 11, to promote agricultural exports and was replaced by Chester Davis.

A heavy slump in the market prices of the chief farm commodities late in July wiped out much of the gain that they had made after February. There developed acute dissatisfaction with the Federal measures for farm relief. It became necessary for the Administration to devise further measures. Quantities of swine were bought and slaughtered, particularly sows and young, with a view to reducing the future supply. The government undertook to make loans on corn, wheat, and cotton at practically the full farm price.

Public Works. The Administration's programme for wholesale promotion of public works and other projects of construction was authorized in Title Two of the National Industrial Recovery Act. Secretary of the Interior Ickes was made the head of the Public Works Administration, a body formed to do the work of allotting the \$3,300,000,000 provided by the law for dispensation on projects, in loans and, up to 30 per

cent of the amount supplied, where the President should so decide, in outright grants. The new body became active late in June. Before the end of October it had allocated more than \$2,000,000,000. The disposal of the money was chiefly as follows: Federal aid to highway projects, \$400,000; Civilian Conservation Corps, \$301,037,315; naval construction, \$238,000,000; Tennessee Valley Authority, \$50,000,000; Boulder Dam (the appellation "Hoover Dam" had been dropped), \$38,000,000; Federal public buildings, \$39,094,360; Coast Guard, \$24,833,535; flood control in the Mississippi Basin, \$96,928,108; Army housing, \$57,797,770; river and harbor work, \$98,699,700; coast defenses, \$20,250,000; also, for the Triborough Bridge at New York City, \$44,200,000; Midtown vehicular tunnel under the North River, between New York City and New Jersey, \$37,500,000; forest highways, \$15,000,000; forest roads and trails, \$10,000,000; control of erosion of soil, \$5,000,000; hydroelectric station at Grand Coulee in the Columbia River basin, \$63,000,000; the Caspar-Alcova project in Wyoming, \$22,700,000; Public Health Service, \$39,094,360; naval stations on shore, \$23,602,652; construction of low-cost housing in a number of cities by divers enterprises, \$37,239,958; hospitals and other works of the Navy Department, \$30,118,024; construction for the Department of Commerce, \$8,870,934. Of these chief allotments, capital outlays for the use of the Federal government itself constituted some \$1,070,000,000; capital projects for public use, such as the government would normally have financed out of its own budget, \$136,000,000 or so more; and the works of private enterprises, States, or local governmental bodies, about \$620,000,000, road aid included. In a sense, therefore, the programme mainly amplified normal lines of Federal outlay and lifted them out of the budget. This was conspicuously the case with regard to naval construction and housing for the Army. At the end of the year it appeared that loans to other than Federal borrowers had increased to something like half of the total allotted.

Comparatively little of the money had been expended by the end of the calendar year. The same trouble developed that had delayed the Hoover Administration's plans for public works: the preparation and scrutiny of plans had to be effected before the physical work could start. Much of the effort of Administrator Ickes was expended on urging speed in bringing non-Federal projects forward. Notification was given on September 5 that non-Federal recipients of allotments must start work in 30 days or be regarded as having given ground for the withdrawal of their allocations of Federal money.

In order to hasten the dispensation of money by the Public Works Administration, a subsidiary Civil Works Administration was started in the autumn. The conception of public works was stretched to cover a great variety of "made" employment: artists were set to painting and actors were engaged to give free performances of plays. Reports put the number of persons on the Civil Works payrolls in December as high as 4,000,000. See WELFARE WORK.

FOREIGN AFFAIRS. The most conspicuous event in foreign relations was the message that President Roosevelt sent the International Economic Conference at London on July 3, disapproving the efforts under way toward monetary stability in the international sense, which it had been

thought that the United States would support. The message had the effect of preventing the main purposes of the Conference, which took an indefinite recess after futile efforts to proceed; also, the effect of heightening the instability of the market in foreign exchange, and thus impeding commitments in international trade. On May 12, as a preliminary to the Economic Conference, the United States joined other chief participants in an agreement for a tariff truce from which parties might withdraw only after July 31 and after one month's notice. Several of the parties later withdrew. An international wheat agreement was signed at London on August 25, in which the United States and the other chief wheat-growing nations participated; the United States was bound thereby to limit exports of wheat for the two ensuing crop years in accordance with a general plan. See ECONOMIC CONFERENCE, WORLD.

A delegation headed by Norman H. Davis was sent in May to the Disarmament Conference at Geneva and set forth proposals that included consultation with other powers in the event of a threat to peace and, in the event of concurrence with a judgment that a State had broken the peace, abstention of the United States from opposition to any collective effort against the violator. The conference was later frustrated by the withdrawal of Germany. See DISARMAMENT.

Negotiation with Union of Soviet Socialist Republics. After preliminaries in October, Maxim Litvinoff came to the United States to negotiate for the recognition of the Soviet government by the United States. He was received at the White House on November 7. Recognition was accorded the Soviet government on November 16, without a debt settlement. See UNION OF SOVIET SOCIALIST REPUBLICS.

War Debts. Great Britain made a "token" payment of \$10,000,000 on the installment of inter-governmental debt due the Treasury on June 15; Italy paid \$1,000,000; the sums were but small parts of the full installments. They were paid in silver at 50 cents an ounce, in accordance with permissive legislation passed by Congress. France did not pay, but proposed on May 12 to seek legislative authority to pay an installment of 15 per cent, provided that the United States would agree to a moratorium for the period of the Economic Conference. The proposal was not accepted, and a note critical of French failure to pay either in June or in the previous December was dispatched and later published (June 17). Great Britain sent a delegation to Washington in October to negotiate for a new settlement of her debt. The negotiation failed, but a proposal of Great Britain to make another token payment, this time for \$7,500,000, on December 15 was accepted. See REPARATIONS AND WAR DEBTS.

Latin-American Affairs. By an executive agreement with Haiti, signed at Port au Prince on August 7, the United States undertook to turn over the command of the Garde d'Haiti by Oct. 1, 1934, to Haitian officers and to limit, from Jan. 1, 1934, American control over the Haitian finances; the Marine Brigade, and the American Scientific Mission were to be withdrawn in October, 1934.

At Montevideo, Uruguay, in December, Secretary of State Hull declared to the Pan-American Conference that it was not the intention of the United States to intervene in any of the New-World nations; the United States signed a treaty

CONGRESS

to provide equal rights of nationality for women. See PAN AMERICAN CONFERENCE.

The series of revolutionary disorders in Cuba that started with the overthrow of President Machado at the beginning of August brought to Washington protests from Great Britain and Spain on account of violence to their nationals and the latter's property. Sumner Welles, who had been appointed Ambassador to Cuba on April 21, had attempted mediation between the Cuban parties immediately before Machado's downfall. He sought thereafter to moderate the excesses of civil war. United States warships were sent to Cuba in September, but no armed landing for purposes of intervention was made. After the fall of Machado's immediate successor, Cespedes, Welles became unwelcome to the administration set up by Grau and was withdrawn from Cuba late in November. See CUBA.

WAR DEPARTMENT. There was assigned to the War Department on April 10 the task of receiving the certified recruits to the newly created Civilian Conservation Corps, preparing, organizing, and equipping them, and taking complete and permanent control of them except for the supervision of their technical work in the forests. Regular Army officers, supplemented by some Reserve, Navy, and Marine officers, administered 1450 camps of the Civilian Conservation Corps. It was reported that 300,000 men had been entered in this corps, mobilized, and brought to the sites of projects for conservation work by July 1.

The Federal authorizations for the maintenance of the military establishment during the fiscal year 1933-34 were severely reduced by budgetary cuts made in March. It was then estimated that it would be necessary to retire from 3000 to 4000 Regular officers, discharge from 12,000 to 15,000 Regular enlisted men, eliminate National Guard drill training, drop most of the army's civil technicians, and limit procurement of supplies to food and clothing. The needs of the Civilian Conservation Corps, however, provided duty for thousands of officers and enlisted men who would otherwise have had to go. Citizens' Military Training Camps were held on a limited scale in August.

NAVY. The patrol maintained by the Navy on the Yangtse River in China was actively employed during the year in protecting merchant vessels navigating the river, from attack by parties dominating some parts of the river in the disturbed period of Chinese affairs. All remaining Naval forces were withdrawn from Nicaragua on January 2. The Naval force in Haiti, numbering 948 on June 30, had no disturbances in that country to occupy it during the year. A considerable Naval force was rushed to Cuban waters upon the overthrow (September 5) of President de Cespedes, but did not make a military landing on the island. The Naval airship *Akron* was destroyed, while in flight, on April 4, in a thunderstorm off the New Jersey coast, with a loss of 73 lives, only two of her company being saved.

Under the terms of the National Industrial-Recovery Act the President authorized, without specific appropriation, the construction and equipment of 32 Naval vessels as part of the programme of public works. Secretary of the Navy Swanson, in his annual report dated August 1, urged building up the Navy to full treaty strength.

SEVENTY-SECOND CONGRESS, SECOND SESSION. Resumed on January 3, the session continued until the expiry of the Congress on March 4. Among the matters considered during this period were measures for agricultural relief, for a reform of banking, for the independence of the Philippine Islands, for the repeal of the Eighteenth Amendment to the Constitution, for relief of divers sorts of bankrupts, for executive reorganization, for relief to States, and for tariff modifications.

Glass Banking Bill The banking bill of Glass of Virginia came up for debate in the Senate on January 5. It was opposed by a small group of Senators who sought to champion the local banker against the bill's provisions for wider latitude in branch banking. Long of Louisiana and Thomas of Oklahoma conducted a filibuster that delayed the bill until the 21st. They won a compromise, that branch banking under Federal statute be permitted only in States having laws permitting such banking. The bill passed the Senate on the 25th. It then went to the House, carrying provisions to keep Federal Reserve credit out of speculative markets, divorce security-dealing affiliates from banks under Federal control within five years, permit branch banking by such banks so far as States permitted it, create a liquidating corporation to close the affairs of insolvent banks, authorize the Federal Reserve Board to remove officers and directors of banks unsoundly conducted, within the Federal Reserve system, and license companies holding stocks of banks, limiting such companies' voting power. President Hoover requested of the House's committee on finance on February 20 that it report the bill, but it never reached the floor of the House. After March 4 the supervening crisis made more extensive measures needful.

Agricultural Measures Several minor bills to aid agriculture were passed. Among them were a measure to postpone payment of installments due on loans made by Federal land banks and one extending temporary relief to water users on irrigation projects.

The Smith Bill, a measure to require the Government to acquire possession of all surplus cotton held by Federally controlled agencies, or with credit supplied by the Government, and to resell such cotton to planters who would reduce their cotton acreage by 30 per cent, was passed by both houses near the end of the session, but it was killed by the out-going President's pocket veto. The chief attempt at farm legislation, the Emergency Agricultural Bill of Chairman Jones of the House's committee on agriculture, was passed by the House on January 12, having been reported on the 3rd. It failed to pass the Senate, in the face of disapproval from the Executive. This bill offered a detailed plan for "restoring the parity between agriculture and the other industries" by the device of issuing adjustment certificates to the producers of principal cash crops (wheat, cotton, tobacco, and hogs), on condition of 20 per cent reduction of acreage (or of hog tonnage) below the normal; these certificates were to be redeemed within a year, by the Treasury, for cash in amount proportionate to the ratio of the deficiency of the individual farmer's crop to the deficiency of the whole country's crop, as to value; the latter was to be measured in terms of the cost of farmers' purchases, the parity of crop values and farm costs being determined on the basis of prices for the period 1909-13 (with certain exceptions as to hogs).

Resolution to Repeal XVIIIth Amendment. The Senate's committee on judiciary reported on January 9 a resolution embodying what was generally called "modified repeal" of the Eighteenth Amendment of the Constitution; the purport was, to "amend," not to "repeal" that amendment; to prohibit transportation of intoxicating liquors into any State in violation of the State's laws; to empower Congress to regulate or prohibit sales of intoxicating liquors to be drunk on the premises where sold. The general Federal prohibition of the Eighteenth Amendment, contained in its Section I, was to be repealed. This resolution did not suit the advocates of outright repeal. Eventually the Senate favored the Blaine resolution, which (I) repealed the Eighteenth Amendment; (II) prohibited, like the earlier resolution, the transportation or importation of liquor into any prohibition State, (III) required that ratification, to render the new amendment effective, be "by convention in the several States, as provided in the Constitution, within seven years"; power for Congress to regulate or prohibit sales to drinkers on the vendor's premises was not explicitly given. The Senate adopted this resolution by vote of 63 to 23 on February 16. The House adopted it promptly and without alteration on the 20th, by 289 to 121, and the resolution went to the Secretary of State for submission to the States. Passage through the House was facilitated by a caucus of Democratic members on the 17th, in which most of them pledged themselves to

vote for it. Actually, 179 Democrats voted for the amendment, 82 against; of the Republicans, 109 for it, 89 against. The minority Democrats had refused to be bound by caucus.

Philippine Independence. The bill to provide independence for the Philippine Islands, passed by both houses and sent to the President at the close of the year 1932 for his approval, was vetoed by him on January 13. Mr. Hoover stated his objections to the bill at length in his veto measure. Chiefly they were that the islands could not weather the strain of losing their tariff advantages on shipments to the United States in the 11 transitional years provided and that they could not hold an early vote on the option of independence in full awareness of the consequences for them. The House summarily overrode the veto two hours after receiving it on the 13th. On the 17th the Senate followed suit. The vote in each case was ample to overthrow the veto: in the House, 274 to 94; in the Senate, 68 to 26. Of the Senate majority, 20 were Republicans.

Relief of Bankrupts and Debtors. The trend toward the solution of debtors' embarrassments by way of the bankruptcy courts, later checked by the banking crisis of March 4, but strong in the latter part of 1932, was responsible for the enactment of a law to facilitate relief for those who would otherwise have to go through the exhausting procedure of the old statutory bankruptcy or of Federal equity receivership. The principle of this act was that embarrassed debtors of certain classes might, by applying voluntarily to the courts, obtain means of more readily conceded composition with creditors. This was to be effected by reducing the proportion of creditors that should be deemed necessary for rendering composition effective. Certain safeguards were provided against quick or radical action of a few creditors who might seek to hasten the debtor to his ruin.

The original measure, a combination of bills introduced by Representatives McKeown and LaGuardia, provided facilities toward composition and toward extension of time to mortgaged farmers, to debtor individuals in general, to railroad companies, and to other debtor corporations. President Hoover, in a special message of January 11, urged the immediate need for some such measure. The committee on judiciary reported its measure to the House on January 24. There was some strife over details affecting such matters as the status of commercial credits, of leases to insolvents, and of taxes owed by them. Patman of Texas declared that the bill would do insolvent farmers no good as they could not pay for lawyers so as to avail themselves of its aid. The House suspended the rules and passed the bill without rollcall on January 30. The Senate committee on judiciary already had Hastings' measure of largely the same tenor. The Solicitor General urged that this committee modify portions of the House bill, which was thought to incur Constitutional objections. Hastings wrote a new bill, which he presented on February 9. The committee stripped it of its provisions for the relief of railroad companies and other corporations and reported it on the 13th. The President asked prompt action on the 20th. The Senate reinserted provision for railroads but not for other corporations and passed the bill on the 27th. The House adopted the Senate's bill on March 1; President Hoover signed it on the 3rd. The enacted measure provided, for a natural person, the right to apply for and, with court approval, to obtain extension on "all claims of whatever character" against him, to apply for composition likewise, and to have application confirmed when a definite plan of composition or extension having the approval of a majority as to number and amount of the affected creditors should have the court's approval. For farmers, there were special provisions, along similar lines: notably, that referees of a particular type, to be known as conciliation commissioners, might be appointed by a court in any county where at least 15 farmers intending to seek debt relief should so petition, and that these officers might conduct the proceedings for composition or extension, to be accepted by the debtor and by the majority, as to number and total claims, of debtors, and to be confirmed by the judge if fair in his opinion. Similarly for railroad corporations, the judge having jurisdiction might entertain a petition from the debtor railroad, appoint a trustee from a standing panel to control the debtor's estate temporarily, and might direct proceedings on the part of debtor and creditors looking toward composition and extension; the resulting agreement, required to be approved by the Interstate Commerce Commission and by two-thirds in amount of each class of the affected creditors as classified by priority in accordance with preexisting practice; stockholders were to vote assent also, by two-thirds, in cases where the judge had not held the corporation insolvent; the judge retained the power to give final confirmation to the resulting reorganization or adjustment.

Executive Reorganization. Under the Economy Act of June 30, 1932, the President had been authorized to consolidate Federal bureaus by Executive order subject to review by Congress. He accordingly issued such orders for reorganizing administrative service with a view to

retrenchment and improved efficiency. They were submitted to Congress on Dec. 9, 1932. Put to a vote in the House on January 19, the 11 orders, affecting 58 branches of the Federal service, were disapproved by a vote of 199 Democrats and 3 Republicans, as against 176 Republicans in their favor. This sharply partisan division put on the Democrats the responsibility of dealing with executive reorganization thereafter, for the relief of the straitened budget. The House accordingly voted, in the form of an amendment to the Treasury-Post Office Appropriation Bill, power to the President (necessarily Mr. Hoover's successor) to consolidate, transfer or eliminate any executive agencies save the major departments by executive orders not reviewable by Congress except within 60 days. The Senate accepted this measure, which became a part of the appropriation act.

Appropriation Bills. Disputes over economies and allied matters delayed most of the appropriation measures until the last 10 days of the session. Then independent-offices bill, carrying over \$1,000,000,000, of which \$960,000,000 was for the costs of the Veterans' Administration, was sent to President Hoover, who vetoed it, having recommended a curtailment of some \$127,000,000 in payments to veterans on disabilities not traceable to service in war. A naval appropriation bill carrying \$308,669,562 in direct appropriations was passed and was signed on March 3. There was enacted an appropriation bill of \$100,275,000 for the Department of Agriculture, it did not carry the great road-aid grant of the previous year's bill. In voting the legislative appropriation bill the House rejected a provision for the reduction of its members' salaries to \$5000. The first deficiency bill, tagged with an amendment that every tax refund of as much as \$20,000 go to a joint committee of Congress for approval, was sent to President Hoover, who vetoed it as proposing an unwarrantable use of the legislative power. Thereafter the bill was passed without the amendment as to tax refunds. An effort was made to reduce appropriation for ocean mail and air mail subsidies but was defeated.

Other Enactments. Among other measures enacted were authorization to distribute Government-owned cotton to the American Red Cross and other organizations for the relief of distress, an act repealing some 2000 defunct statutes, an authorization to the Supreme Court to prescribe rules and practices in order to expedite criminal cases on which appeals had been taken after verdict, creation of the Morristown National Historical Park at the site of the encampment of Washington's army in Morristown, New Jersey. The cent-a-gallon Federal tax on gasoline and the permission to the Federal Reserve system to use the Government's securities as collateral for Federal Reserve notes, both about to expire, were continued in force for another year.

Bills Not Passed. The LaFollette-Costigan bill, an effort of a group in the Senate to change the basis of Federal measures of relief for the needy from loans to that of outright grants to State governments, failed to pass the Senate. The measure of Wagner of New York, to authorize the Reconstruction Finance Corporation to lend an additional \$300,000,000 to States, and to remove the existing requirement that the Corporation's loans to States for public works be for self-liquidating projects, passed the Senate but not the House. The Hawley bill to permit the Tariff Commission to put up rates against countries with depreciated currencies was adversely reported in the House, and the Democratic group held firm against other like tariff-lifting proposals. Projects to remonetize silver were introduced in divers forms in both houses but not adopted. The President asked but did not obtain power to declare embargoes on exports of arms as a method of dealing with aggressive foreign belligerents.

Investigation of Security Dealings. An investigation of the New York Stock Exchange had been begun by the Senate's committee on banking and currency in the first session. It was resumed, after long interruption, in January. Ferdinand Pecora was named as its counsel and the field of inquiry was made to include certain large utility companies and financial institutions. Samuel Insull Jr. testified that stock of the Insull Utility Investment Company, allotted to the elder Samuel Insull at prices not above \$15 a share, was first sold on the Chicago stock exchange at \$30 a share in January, 1929, and within a few months at nearly five times that figure. Operations of the National City Bank (of New York) and of its affiliate, the National Security Company, related to security issues and allied matters, were subjected to particularly searching inquiry late in February, although at the time the situation of banks throughout the country was highly sensitive to unfavorable developments, and banks in State after State were actually ceasing business. Charles E. Mitchell, chairman of the boards of both the bank and the affiliate company testified as to methods used in sales of 1,950,000 shares of the bank's stock and of 1,300,000 shares of Anaconda stock some years previously, at prices far above those later obtainable. Loans made by the bank to officers,

without interest, out of a special fund of \$2,400,000, and for the most part not yet repaid, were disclosed. The National City Company's underwriting of \$90,000,000 of bonds of the Peruvian Government in 1927 and 1928, through which bonds American investors had later faced great loss, was represented in evidence put before the committee as having been against previous advice from the company's branch in Lima. Charles E. Mitchell testified to having escaped payment of income tax to the Government by sale in 1929 to his wife of 18,000 shares of stock of the bank, whereby he established a loss of nearly \$2,800,000. Mr. Mitchell resigned the chairmanships of the bank and its affiliate on February 26, five days after testifying.

Louderback Impeachment. The House voted on February 24 the impeachment of Judge Harold Louderback of the District Court for the Northern District of California on charges connected with receivership appointments.

SEVENTY-THIRD CONGRESS, FIRST SESSION. Called on March 5th to convene on the 9th, the new Congress assembled almost in full force. The partisan composition of the Senate was: Democrats, 58; Republicans, 36; Farmer-Labor, 1. That of the House of Representatives was: Democrats, 312; Republicans, 117; Farmer-Labor, 5. The death of Walsh of Montana had left one Democratic seat vacant in the Senate. That in the House was due to former Speaker Garner's having become Vice-President; his constituency in Texas had elected him to the House again, to "take no chance" of his not being at the capital. Douglas of Arizona created a second vacancy by resigning to become Director of the Budget. Pittman of Nevada was elected President *pro tem* of the Senate and Rainey of Illinois became Speaker of the House, by the full Democratic vote. A Democratic "steering committee" including 15 regional appointees was formed, to keep the majority in line with regard to major matters.

There was actually very little difficulty in maintaining majority harmony in the House, as the urgency of the situation, the rapid initiative of the President, and his exceptionally great influence at this stage rendered his behests paramount in most matters. Almost all the major legislation of the session was that recommended by President Roosevelt and introduced in the form of "Administration" bills.

Emergency Banking Act. The first legislation of the session was to pass the Administration measure to provide for the reopening of the closed banks of the country. This act confirmed to the President the powers over credit, currency and gold that he had invoked under the act of 1917; empowered the Secretary of the Treasury to require that all gold and gold certificates be delivered up, against equal face value in paper dollars; authorized the President to set restrictions to the banking activities of members of the Federal Reserve, during such period of emergency as the President might by proclamation prescribe; provided a substitute for receiverships for unsound national banks, by authorizing the Comptroller of the Currency to put such banks in charge of officers to be known as conservators, who should exercise the rights and powers of receivers, and who might permit depositors to withdraw in part, on a *pro-rata* basis; banks under conservators might be permitted by the Comptroller to take new deposits, segregated from the old, and subject to unrestricted withdrawal; reorganizations of insolvent national banks were authorized, subject to approval by the Comptroller, and were made binding on the parties affected, on the basis of consents reduced to 75 per cent by amount as to the affected depositors and to two-thirds by amount as to the affected stockholders; an injection of new resources was made possible by permitting national banks to issue non-assessable 6-per-cent cumulative preferred stock, and by permitting the Reconstruction Finance Corporation to subscribe to preferred stock not only of a National bank but of a State bank or trust company; a new source of bank-asset currency was created by authorizing Federal Reserve banks to issue Federal Reserve Bank notes based, either on security of Government obligations to 100 per cent of the currency notes to these obligations, or on notes, drafts, bills of exchange and acceptances at 90 per cent of the currency notes to such

assets; the Federal Reserve Banks might make advances to member banks in such notes against the latter's satisfactory security, until Mar. 3, 1935. The whole measure was rushed through Congress without change, sent to the President and signed by him (at 8.30 P.M.) within nine hours after Congress had assembled on March 9.

Economy Act. Obedient to a message of the President, dated March 10, calling for cuts in Federal salaries and veterans' benefits, as necessary to maintain the Federal credit, Congress passed the Economy Act. Introduced in the House and sent to the Senate, this measure was passed by the Senate with no radical alteration, was repassed by the House as amended, and was signed March 21. The act reduced the pensions of the generality of veterans of wars prior to 1917 by 10 per cent; limited payments to cases of service-connected disabilities, permanent disabilities not so connected, widows and children of men dead from service-connected injuries, widows and children of other men who served prior to the World War, and Spanish War veterans of 62 years, entitled to pension under previously existing law. Maximum and minimum rates of compensation were provided for disabilities, in wars subsequent to the Civil War, and the President was authorized, within these limits, to set pension rates to be paid, his determination not to be conditional on the approval of Congress. Like power was given him to prescribe the pensionable degree of disability. Salaries of members of Congress were reduced to \$8500 a year, from \$10,000. The President was authorized to reduce Federal salaries in general by as much as 15 per cent, in accordance with the determinable reduction in the cost of living subsequently to 1928. While pension and veterans' benefit reductions were to be permanent, salary reductions were to apply only until June 30, 1934. One of the chief effects of the act was to separate from the rolls some 328,000 men who could not show service connection for disabilities. The act was strongly opposed by veterans' organizations, who forced its modification at a later stage of the session (see INDEPENDENT OFFICES BILL, below).

Civilian Conservation Corps. Embodying the President's recommendation that there be formed a Civilian Conservation Corps of young unemployed men, to work at reforestation and other public work for their sustenance and small cash remuneration, the reforestation act was passed, and was signed March 31. It authorized the President or the head of any department or agency to contract projects or carry on public works of reforestation, prevention of floods or of erosion of the soil, plant control, repair of trails and fire lanes in National parks and other public domain, authorized for this purpose the use of unobligated remainders of moneys appropriated for public works, and provided, further, \$300,000,000 out of the unexpended balance of the appropriation of July 21, 1932, for the relief of distress. It empowered the President to employ men for the stipulated purposes and to fix the amount of their cash allowances, the word "wages" having been stricken from the original bill as offensive to labor interests in its application to payments deemed inadequate to the proper meaning of the term. The act was to have force for two years, from date of signing.

Farm Relief and Monetary Inflation. The agricultural adjustment act, signed by the President on May 12, had three main features: it provided for the refinancing of farm mortgages, undertook to correct the ruinous cheapness of farm products by application of certain modes of Federal intervention, and—quite apart from the immediate matter of agriculture, but in response to a strenuous demand for "cheaper money," from farmers and others—put in the President's hands the power to increase the quantity and decrease the gold value of the currency. Three "Administration" measures, each as a separate bill, were presented at different times: that as to farm mortgages, with a Presidential recommendation, on April 3; that as to elevating farm prices, likewise with a recommendatory message, on March 16; and that as to currency, without Presidential recommendation but reportedly as an Administration bill, April 20. This last was understood in some quarters as the President's endeavor, by concession to the inflationists, to head off more aggressive legislation in the same direction.

The bill to elevate farm prices was passed by the House and sent to the Senate, which added to it an amendment to guarantee to the farmer the cost of the production of his goods. While the bill was still in the Senate, the second measure, that for refinancing farm mortgages, was introduced, and was incorporated with the bill already pending. Thomas of Oklahoma and Frazier of North Dakota at this stage opened a light for the inclusion of monetary inflation—Frazier offering a bill to create an issue of currency for paying off farm mortgages. A week passed, in which other inflation bills were introduced in Congress. The introduction of the "Administration" inflation bill followed on April 20. Thomas presented it as an amendment to the combined bill. The conservative Republicans offered their first real opposition in the course of the session, Reed of Pennsyl-

vania offering an amendment to strike out much of the inflation amendment. Glass of Virginia, Democrat, broke with his party and made an earnest and memorable speech against inflation. Tydings of Maryland, another Democrat, took a like course. The bill was passed, with the Thomas amendment, on April 28, by vote of 64 to 20, not counting four paired. Of the Democrats, 48 voted for the measure and 4 against; of the Republicans, 15 for and 16 against.

The House amended the Senate's bill, chiefly by dropping the provision that prices to farmers be made to cover their cost of production. Republican conservatives vainly sought to delay voting on the inflation provisions and recorded their condemnation of this part of the bill, under the leadership of Snell of New York. Under a special closure rule, adopted by 261 to 113, the bill was brought to a vote. It passed, as amended, by 307 to 86 on May 3, 30 Republicans voting for it. In conference the Senate's cost-of-production amendment was dropped. The bill then went to final passage in both houses. The President signed it on May 12, without expressing his intentions as to its inflationary features.

The act thus adopted provided, as to farm prices, that the Secretary of Agriculture have power to force higher prices for certain farm commodities by the alternatives of limiting and allocating the production of each and of withdrawing land from cultivation by leasing it from the farmer and imposing a tax on the processing of the affected commodity so as to raise the means to pay the cost of the leases; as to farm mortgages, that through the Federal land banks bonds bearing $4\frac{1}{2}$ per cent interest and a Federal guarantee as to interest payments but not as to principal might be issued in exchange for farm mortgages, within two years and to an aggregate of \$2,000,000,000, the Federal land banks giving the farmers more liberal terms of payment on their mortgages, both as to interest and as to principal, with regard to monetary inflation and credit inflation, that the President might direct the Secretary of the Treasury to agree with the Federal Reserve Banks to buy in the open market bonds of the Federal Government and of its corporations, up to an added total of \$3,000,000,000 in holdings, that the Secretary of the Treasury might resume issue of the greenbacks of the act of 1862 for the meeting of maturing Federal obligations, up to a total of \$3,000,000,000, to be retired at the rate of 4 per cent a year, that the President have authority to set a new and lower weight for the gold dollar as low as one-half of the existing statutory weight, and that silver tendered by indebted foreign governments, to an aggregate of \$100,000,000 be accepted by the Treasury at 50 cents an ounce, silver certificates to an equal total being issued against it.

Federal Aid to States. The project of Senator Wagner of New York, unsuccessfully presented in previous sessions, to appropriate Federal money for the direct relief of needy individuals, through the agency of the States, was at last carried to enactment, in the Wagner-Lewis act. This act, signed May 12, created the office of Federal Relief Administrator (salary, \$10,000) the function of which was to direct Federal relief grants to States, according to stipulations largely within the Administrator's decision. The sum of \$500,000,000 was to be provided for his distribution; it was to be made available through the Reconstruction Finance Corporation, which was to act as the paying agent for the Administrator. Half of the appropriation was to be allotted among States at the rate of not more than one-third of the respective amounts expended for relief in the States and at the rate of not more than 15 per cent for any one State; the other half was to apply in States where local, State and ordinary Federal expenditure for relief was insufficient.

Tennessee Valley Authority Act. Largely along the lines of earlier measures offered by Senator Norris for the Federal operation of Muscle Shoals, but broader in scope, was the Norris act creating a Tennessee Valley Authority, invested with power not only to maintain and operate the Federal power plant at Muscle Shoals but also to "improve navigation in the Tennessee River" and control the destructive flood waters in the Tennessee River and Mississippi River basins. The Tennessee Valley Authority was to consist of a board of three directors, who should designate other officials and employees. Directors were to serve terms of 15 years (save initial appointees, two of whom were to serve respectively 5 and 10 years), at salaries of \$9000 and, for the chairman, another \$1000. The Authority was to take the form of a Federal corporation, with a principal office at Muscle Shoals, Alabama. It was to manufacture fixed nitrogen, make and sell fertilizers, alter or build plants, provide the War and Navy departments with nitrates for explosives at cost, distribute surplus electric energy from Muscle Shoals among the localities within transmission distance at prices based on a specified system of cost estimates, and have authority, if the President should direct, to issue bonds in order to pay for that part of any future construction which might be attributed to the production of hydro-electric power. The President was directed to recommend such future legis-

lation as might seem proper to control of floods, better navigation, higher electric generation, reforestation, use of marginal lands, and improved agricultural conditions in the Tennessee drainage basin.

The House passed a measure differing from the Senate's; it provided a plan for leasing the Muscle Shoals plant to private operators. But the Senate rejected the amendment and the House conferees gave it up. The act was signed on May 18.

Regulation of the Sale of Securities. The outgrowth of revelations of conspicuous cases of flotation of questionable securities, including certain issues of foreign governments' obligations, was a message sent by the President to Congress on March 29, recommending an enactment for the supervision of interstate traffic in securities. The resulting statute, as enacted and, on May 27, signed by the President, set up elaborate and detailed regulation of sales of securities, as applying to issuers, guarantors, and underwriters, to be administered by the Federal Trade Commission. President Roosevelt in a message of March 29 recommended statutory provision to the end that "no essentially important element attending the issue [of new securities] shall be concealed from the buying public," and proposed as the principle for such legislation the doctrine, "Let the seller also beware." A bill had been drawn, prior to his message, by experts of the Department of Commerce and of the Attorney General's office, in consultation with leaders in Congress. It was offered on the day the message was delivered. After only moderate alteration the measure passed both houses without roll-call, the House of Representatives on May 5 and the Senate on the 8th. Conference reconciled the houses' respective version of the measure by adopting the Representatives' provision allowing directors who had signed financial statements bearing on security issues to escape criminal and civil responsibility if they could prove that they had exercised due diligence, and by dropping a provision forbidding the use of the mails for the sale of securities in States where the sales in question were forbidden by State laws. The resulting act was sent to the President and was signed on May 27.

This statute, the Securities Act of 1933, regulated the issue and original marketing of stocks and bonds. The Federal Trade Commission was made the regulating agency. Persons were forbidden to use transportation in interstate commerce and the mails in the marketing of issues unless they submitted to the prescribed system of regulation. Exceptions were made as to issues of any domestic public debt, commercial notes and kindred short-term paper, building-loan and like mutual associations, certain railroad issues, receivers' certificates, insurance policies, securities not marketed beyond their own State, and securities issued in exchange for others, without payment of remuneration or compensation. Otherwise, those involved in the issue and marketing of securities, in order to use the mails and transportation in interstate commerce were required to register the issue with the Commission and to file with the Commission statements covering a great variety of material information. A schedule of statements required as to domestic issues covered such matters as officers' and directors' large stock-holdings, vendors in purchases to be made with proceeds of an issue, specific purposes of an issue with amounts of the proceeds to be devoted to each, the price of public offering of an issue, the commissions, discounts and other deductions therefrom, the net proceeds, connection of officers or directors with purchased properties, sums paid within two years to promoters, balance sheets and statements of profits and loss in forms to be standardized by the Commission, and underlying agreements affecting the issue. Another schedule, relating to foreign governments' bond issues, required statements of existing funded and floating debt, acknowledgment of any default within 20 years save as to an intergovernmental debt, and receipts and expenditures of the issuing government in form to be prescribed by the Commission, as well as of price of public offering and amount of underwriting and other costs. Signers of the statements and other documents required were made civilly liable for misstatements and criminally liable to penalties of \$5000 fine and five years' imprisonment, but might in general avoid liability by proving due diligence exercised to avoid misstatement. The act further created a Corporation of Foreign Security Holders having at its head a board of six directors to be appointed by the Commission, and to be authorized to represent the interest of assenting holders of foreign defaulted securities. All information submitted with regard to security issues and in the hands of the Commission was to be made available to the public, save contracts necessarily kept confidential for the welfare of a company affected.

Relief for Mortgaged Home-Owners. The President in a message of April 13 asked for legislation "to protect small home-owners from foreclosure" and to relieve them of the burden of excessive payments on mortgages. An "Administration measure" to that end was introduced. The House passed the bill on April 28, increasing the maximum value for homes within the scope of the pro-

posed benefits to \$15,000, from \$10,000. The Senate passed the measure on June 5, raising the limit of value for a home to \$25,000 and increasing the ratio of permissible cash loans, as distinct from refinancing, to 50 per cent of value, from 30. Both houses finally passed a compromise settled by conference, setting the limit of value for homes within the scope of the measure at \$20,000 and permitting cash loans on homes up to 50 per cent of value. The act was signed on June 13.

This measure, the Home Loan Act of 1933, repealed in great part the Federal Home Loan Bank Act of the previous Congress (providing for direct loans to homeowners) which had not given satisfaction. It retained the Federal Home Loan Bank Board of the earlier act, created a Home-Owners' Loan Corporation, which was to be "an instrumentality of the United States," and placed this corporation under the direction of the Board, which was authorized to call upon the Treasury to subscribe to the Corporation's stock up to a total of \$200,000,000 and was to issue the Corporation's bonds, up to \$2,000,000,000, to run not more than 18 years, bearing interest at 4 per cent guaranteed (interest only) by the Government. The Corporation was authorized for three years after the enactment to acquire home mortgages in exchange for its bonds, at a rate not to exceed either \$14,000 or 80 per cent of the value in the case of any mortgaged home. Interest charged the debtor on a mortgage acquired was not to exceed 5 per cent; the principal of his mortgage was to be reduced to the face value of such amount as the ceding holder of the mortgage, in case of concession by agreement, had received. The debtor was to pay installments toward the gradual extinction of his principal debt within 15 years. Loans in cash might be made to mortgaged owners, within the limit allowed as to their aggregate debt, for divers purposes such as meeting taxes, assessments, maintenance, and repairs; and might for similar purposes be made to unmortgaged owners, up to 50 per cent of the value of property. Bonds or cash might be furnished as a loan in order that a former owner might be helped to redeem a foreclosed home. Loans in cash might be made up to 40 per cent of value to pay a mortgagee who would not accept bonds. The act further permitted the creation of local mutual thrift and home-financing organizations to be known as Federal savings and loan associations, to be chartered by the Board and affiliated with Federal Home Loan Banks of respective districts, the Treasury might subscribe to such associations' preferred shares.

National Industrial Recovery Act. The President sent to Congress on May 17 a message recommending legislation to "provide machinery necessary for a great co-operative movement throughout all industry in order to obtain reemployment, to shorten the work week, to pay decent wages for the shorter week, and to prevent unfair competition and disastrous overproduction." The message also recommended a programme of direct employment backed by Federal credit and the imposition of taxes to support this proposed method of reemployment.

An "Administration bill," the groundwork of what became the National Industrial Recovery Act, was introduced in Congress on the same day, going to the House, as a revenue measure. More than a month had been spent in drafting it, largely under the leadership of Secretary of Labor Perkins, but it adopted earlier ideas of Senator Wagner of New York as to promoting a heavy schedule of public works, and many leaders in Congress and elsewhere had been consulted on other features. The original bill carried no specific provision for raising the revenue that its purposes required. The House occupied itself mainly with devising revenue features to bring in some \$700,000,000 a year in taxes for the purposes of the bill. It defeated a proposal to impose a general sales tax on manufacturers designed to raise \$220,000,000 a year, but voted heavy increases in rates of the "normal" income tax and extended their application to dividends received. The House passed its bill May 26 by vote of 324 to 76; the minority included 50 Republicans. The Senate's committee on finance, receiving the bill, removed from it the provisions to increase rates on the income tax but inserted a uniform tax of 5 per cent on dividends, to be paid at the source, and added provisions increasing the specially accorded powers of the President, particularly with regard to regulating the petroleum industry. The Senate passed the bill on the 9th; on the 13th both houses adopted a conference report giving effect to the Senate's version of the bill, in the main. The President signed the act on the 16th.

The act provided, first for industrial recovery through measures of Federal control over the operation of industries, second, for the prosecution and financing of public works as means of creating employment; third, for taxes made particularly needful by the appropriation for public works.

Title I, dealing with industrial recovery, was to have effect only for two years after enactment. It declared an emergency and the purpose of Congress to deal therewith by promoting organization of industry, cooperation and united action of labor and management under Federal sanctions. It authorized the President to establish such

agencies as he might find necessary thereto. He was to have authority to approve codes submitted by industries or groups of industries to govern the activities of those engaged in them, provided they did not permit monopolistic practices. He was empowered to prescribe a code for any industry failing to offer one and coming under complaint of abuses. He obtained authority, whenever an influx of foreign goods imperiled an industry under code, to call upon the Tariff Commission to investigate with a view to raising the tariff on such foreign goods. Violations of approved codes were made misdemeanors, punishable by fine of \$500 for each day of violation. The further power was given the President, if necessary to make a code effective, to require all persons engaged in any industry to operate under license, which might be suspended or revoked, and without which no person might continue to operate, under penalty of \$500 fine for each day of violation. Section 7, a, required every code to guarantee "that employees shall have the right to organize and bargain collectively through representatives of their own choosing. That no employee and no one seeking employment shall be required as a condition of employment to join any company union or to refrain from joining, organizing or assisting a labor organization of his own choosing; that employers shall comply with the maximum hours of labor, minimum rates of pay, and other conditions of employment" prescribed by the President. As to the petroleum industry, special powers were given the President to bring proceedings before the Interstate Commerce Commission against monopolistic pipe lines and to prevent interstate transportation of petroleum in excess of limits ordered in States of origin.

Title II authorized the creation of a Federal Emergency Administration of Public Works, headed by a single Administrator. This body was to prepare a programme of public works including highways, parkways, public buildings and instrumentalities, works for conservation and development of natural resources, any projects carried on under public authority or with public aid, low-cost housing projects under public regulation, hospitals partly financed from public funds, dry docks, naval vessels, air craft, and army housing. The President was empowered to construct, aid or finance any project included in this programme, to make grants therefor to States, municipalities or other public agencies not in excess of 30 per cent of cost of labor and materials, to aid in financing railroads' maintenance and equipment subject to approval by the Interstate Commerce Commission. Grants to State highway departments for works to eliminate grade crossings were authorized to an amount "not less than \$400,000,000." The Treasury was authorized to borrow sums required under the act.

The taxes imposed by the act were on dividends, 5 per cent, to be collected from the payer corporation, on corporations, \$1 a year for every \$1000 of capital, on corporate net income, 5 per cent on excess over 12½ per cent a year on capital. Appropriations of \$3,300,000,000 was authorized for the purposes of the act.

The tax on dividends and the extra ½ cent a gallon on gasoline imposed in 1932 were to cease at the first of the calendar year after the repeal of the Eighteenth Amendment; that on capital stock, on the July 1 after repeal.

Glass-Steagall Banking Act. This measure, not to be confused with the emergency measure of March 9 (see Glass Banking Act, above), was intended to effect permanent changes in the banking system of the country. It did not spring out of recommendations in a Presidential special message, like other chief acts of the session, although it corresponded in a general way with the intent of the President's allusions to banking in his inaugural address. In large part it was founded on the banking bill that Glass of Virginia had offered in the previous Congress (see 72nd Congress, above). Novel features were added to it, particularly a system for the compulsory insurance of bank deposits at the member banks' expense. A subcommittee of the Senate's committee on banking, under the chairmanship of Glass, prepared the Senate bill in April, including the insurance of deposits, though this feature was reported not to be favored by Glass. The Senate passed the measure on May 25. The House had meanwhile (May 23) passed the largely similar Steagall bank-reform bill, by 262 votes to 19. A conference report reconciling the bills was passed by both houses and the act was signed by the President on June 16.

With regard to insurance of bank deposits, the act made a radical departure in Federal banking legislation. It created for this purpose a Federal Deposit Insurance Corporation, in which every member of the Federal Reserve system must take stock; the Treasury also must subscribe, to the extent of \$150,000,000. The Corporation was authorized to issue notes, debentures and bonds to the amount of thrice its capital. Banks not in the Federal Reserve system might, if approved as to solvency, subscribe to the Corporation's stock and become beneficiaries of the insurance system. Stock subscribed by banks was to be in the amount of 0.5 per cent of each subscriber's deposit liabilities. It must be paid for in

half by July 1, 1934, and the Corporation might thereafter call for the remainder of payments, up to the full price. In addition to obtaining initial assets from stock issue the Corporation, whenever its excess of liabilities attained 0.25 per cent of the total of deposits in all insured banks, might assess the latter in that proportion of the deposits of each one.

The Corporation was to make good, within limits, the deposits in insured banks that failed: each deposit up to \$10,000 in amount, *in toto*; thence up to \$50,000, in the proportion of 75 per cent; on any further amount of a deposit, in the proportion of 50 per cent. This was to be effected by the Corporation's becoming receiver of a closed bank, purchasing the assets, setting up a new National bank in the old one's place, making available to the new bank the sum required to meet the predecessor's liabilities to depositors, to the extent covered by insurance, and liquidating or carrying the assets that it had acquired. The scheme tended to place a great part of the cost of insurance on solid principal banking institutions in which large deposits prevailed, and thus to render these large institutions and their deposit supporters to a great extent of benefits required chiefly by smaller institutions—benefits which, moreover, were not assured in full to large depositors. The plan was to go into effect on July 1, 1934, unless the President should set an earlier date. As an interim measure, the Corporation was to create on Jan. 1, 1934, a temporary insurance fund, to which banks were to subscribe in a manner similar to that provided for the permanent plan. The Corporation was to make good from this fund the losses on deposits, up to \$2500 only, in each case, in insured banks closed during the interim period. Apart from its function in insurance, the Corporation was to have power to purchase assets of closed banks. It was to be directed by a board of two Presidential appointees, at salaries of \$10,000 and the Comptroller of the Currency, serving *ex officio*.

There was created also a Federal Open Market Committee, to consist of 12 members, one representing each Federal Reserve bank. This body was to meet at intervals and advise upon the policy of the Reserve banks with regard to dealings in the open market for securities. It remained permissible for a Reserve bank not to participate in open-market operations under regulations of the Federal Reserve Board, but not otherwise to conduct such operations, if a non-participant, and a bank abstaining from following the Board's directions so to operate was required to file notice of its decision with the Open Market Committee. The Federal Reserve Board was empowered to suspend any Member bank's use of the Federal Reserve System if the Member bank were found to be making undue use of bank credit for carrying speculations in securities, real estate or commodities, or any other purpose inconsistent with sound credit. The Board was authorized to supervise relations between any Federal Reserve bank and any foreign bank or banker, and to set the percentage of resources that might be employed in loans on security collateral in any banking district.

With regard to the practices of the Member banks, the payment of interest on demand deposits was prohibited and that on time deposits was rendered subject to Reserve Board regulation. Member banks were forbidden to act as agents of non-bankers in making security loans. Banks might not make loans to their own executive officers.

As to banking organization, holding-companies were to be allowed to vote their holdings of a bank's stock only by special permit from the Reserve Board and were themselves made subject to examination. Member banks were required to sever within one year their connections with affiliates underwriting or dealing in securities. Companies and firms thus engaged were forbidden to accept deposits subject to check or to withdrawal on presentation of a pass book. Consolidations of National banks were more closely regulated, and the minimum of capital required for newly organized National banks was raised. Branch banking was allowed to National banks within the limits to which State laws allowed it.

Alcoholic Drinks. The President in a special message of March 13 recommended modifying the Volstead act so as to permit "beer and other beverages of such alcoholic content as is permissible under the Constitution" and thus to provide "proper and much-needed revenue." The Cullen act, introduced in the House on the 14th, made lawful the traffic in beer and other fermented malt drinks of alcoholic content not above 3.2 per cent by weight or 4 per cent by volume. There was imposed on these an excise tax of \$5 a barrel; an annual tax of \$1000 on each brewery, was provided; an old requirement that every wholesaler must pay \$50 a year and every retailer \$20 a year for a permit was retained. The Webb-Kenyon law to prevent shipments of beer into prohibition States was to be reenacted. The whole measure was to take effect in 15 days after its enactment. The bill was quickly put through both houses despite a substantial opposing vote and was signed by the President on March 22.

An effort was made to legalize wines of higher alcoholic content than the 3.2 per cent set for beer. It failed of passage. Late in the session the sale of 3.2-per cent beer to Indians in the former Indian Territory was permitted, provided that the State of Oklahoma should approve. The Copeland-Celler medicinal-liquor bill, signed March 31, did away with close restrictions upon the prescription of alcoholic liquors by physicians.

Regulation of Railroads. The President asked in a special message of May 4 for legislation to improve the position of the railroads. An "Administration bill" previously drawn was introduced in both houses. With the Administration's project for creating a new Federal official to supervise and harmonize the railroad companies' operations with a view to eliminating avoidable costs, the bill included measures previously introduced by Representative Rayburn altering the relations of railroads with the Interstate Commerce Commission. The measure incurred opposition from railroad labor interests that feared it might bring about a reduction in the number of men employed in the railroad industry. In the Senate was proposed an amendment to protect labor by requiring a six-hour day for railroad workers, but the amendment was not passed. The Senate did pass an amendment to prevent dismissal of employees at the instance of the Government for the sake of retrenchment, and sent its measure to the House on May 27. The House retained the provision as to dismissals, added an amendment to permit consolidation of telegraph companies and passed the bill June 5. Conference eliminated the latter provision, and the bill was sent to the President, who signed it on June 16.

As enacted, the railroad bill created a Federal Coordinator of Transportation, whose chief function was to be the initiation of policies through which the railroads might effect savings through cooperation. This official, to be appointed by the President, was to divide the railroad lines into three groups, Eastern, Western, and Southern. For each group, he was to create a regional coordinating committee of five members chosen by the companies. Through these committees was to be exercised power "to encourage and promote or to require" measures to avoid unnecessary duplication of services, effect joint use of terminals, control accessorial services, and avoid other preventable expenses. Financial reorganizations of carriers were to be promoted with a view to reducing fixed charges. The committees might recommend compulsion where a carrier would not voluntarily act on its recommendation as to economies, and then the Coordinator was to have power to issue an enforceable order. A company was not to reduce the number of its employees by curtailment of service below the total at time of enactment, except for 5 per cent in vacancies occurring through death, resignation or retirement, which need not be refilled. Companies were required to make good to employees the losses that these should sustain through transfers to other places of work, incidental to curtailments. Regional boards of adjustment were to determine such losses. Companies were required to pay, for expense of administering the law, \$1.50 a year for every mile of line operated. The Interstate Commerce Commission was forbidden to approve any loan from the Reconstruction Finance Corporation to a company declared by the Coordinator to need reorganization. The Interstate Commerce Commission was authorized to consider the need of carriers for revenue sufficient to provide proper service, in setting traffic rates. The Interstate Commerce Act was amended so as to give the Interstate Commerce Commission jurisdiction over railroad holding companies and so as to repeal its provision for the recapture by the Government of railroads' "excess earnings." The repeal was made retroactive. The Coordinator was required to study means for the permanent improvement of conditions in transportation, to be submitted later to the President and to Congress through the Interstate Commerce Commission.

Gold Obligations Voted. Although gold as a medium of payment had been outlawed, in fact, by the President's proclamation of March 5 and his executive order of April 20, existing written obligations to pay debts in gold dollars or in money of value equivalent to the old gold dollars still theoretically subsisted. The Treasury, in particular, continued to issue obligations containing the statutory "gold clause," while failing to make payments in accordance with this clause as expressed in obligations already outstanding. The generality of other public and private bonded debt was obligated by stipulation of the bond to pay in gold or equivalent value, but was unable to perform this obligation. A joint resolution to meet these difficulties was introduced in Congress on May 26, Secretary of the Treasury Woodin declaring in a prepared statement that it had the Administration's support.

This resolution required that every provision in respect of any obligation, stipulating payment in gold or any particular kind of coin or currency or in amount in money of the United States measured thereby, should be discharged upon payment, dollar for dollar, in any coin or currency that was legal tender at the time. The

future making of provisions for payment in gold or in currency of equivalent value was forbidden. The Federal debt was specifically included in these requirements. No exception was made as to other public debt, nor as to payments to be made to creditors outside the country. Though the resolution had the actual effect of increasing the disparity between the statutory gold value of the dollar and the actual value as measured in foreign exchange, it was entitled "a joint resolution to assure uniform value to the coins and currencies of the United States"; it declared provisions as to gold payment to be "inconsistent with the declared policy of Congress to maintain at all times the equal power of every dollar . . . in the payment of debts" and to be against public policy.

The measure was passed by the House on May 29, without amendment, by vote of 283 to 57, and by the Senate on June 3, the Senate's vote being 48 in favor, 20 against and 8 more on either side not voting but paired. In the House, 28 Republicans joined the Democratic majority favoring the measure; in the Senate 4 Republicans voted for it and 2 other Republicans supported it in the pairing; while of the Democratic Senators 2 voted against it and 3 more (Glass, Walsh, and Tydings) opposed it in the pairing.

The conservative Republican opposition in both houses, though feeble in numbers, offered energetic verbal opposition; the Republican minority in the House's committee on banking and currency submitted a report by Luce of Massachusetts, calling the measure the "Reputation bill of 1933," citing circumstances as to the solemnity of the pledge of the United States to repay its debts in the manner undertaken in the bond, and dismissing judicial theories in defense of "reputation" as having "recently perverted the plain meaning of language." Reed of Pennsylvania, heading the Republican opposition in the Senate used quite as vigorous terms of denunciation. The Republican vote in either house, however, was divided along the lines separating conservatives and progressives. The President signed the resolution on June 5.

Revenue Measures. In addition to imposing taxes in the *National Industrial Recovery Act* (see above) Congress prolonged for a year the application of existing "emergency" taxes of one cent a gallon on gasoline and of 3 per cent on the receipts from the sale of electric energy, of the latter, however, the incidence was shifted from the consumer to the electric utility company. Municipally owned electric enterprises were exempted from this tax. The rate of first class postage was reduced, for letters destined to recipients in the same post-office area within which they were mailed, to two cents an ounce, from three cents. The President was authorized later to reduce the rate for other first-class mail provided the volume of mail should increase enough to permit of this without causing further rise in postal deficit.

Appropriation Bills. The chief appropriation measure of the session was the fourth deficiency bill, by reason of its size. It carried appropriations of some \$3,610,000,000. The main item, \$3,300,000,000 was for the program of public works under the Recovery act; \$150,000,000 was for the Treasury's purchase of stock in the Federal Deposit Insurance Corporation, as required in the Banking-reform act. Further amounts were partly for minor loans to be made by the Reconstruction Finance Corporation, notably to restore damage done by earthquake in southern California.

Independent-Offices Act. The appropriation measure carrying grants for the independent offices involved the subject of the Veterans Administration and of the allowances for benefits to veterans, as reduced by the President earlier in the course of the session. A revolt against these reductions had grown. They were made the occasion for obstructing the progress of this bill in the closing days of the session. A compromise was finally reached, by which the names of some 154,000 veterans were to be retained on the rolls, pending further examination of their cases. The measure was passed on June 16.

Other Acts. Among other enactments of the session was the Feser-Wagner bill (signed June 6) creating the United States Employment Service. This body, with an appropriation of \$1,500,000 for the following fiscal year and \$4,000,000 a year thereafter until June 30, 1938, was to absorb the existing Federal employment organization, cooperate with State employment agencies and allot three-fourths of its yearly allowances among States matching these grants. A crop-loan act permitting loans secured by first liens on certain crops harvested in 1934 was sent to the President. The practice of granting unplaced graduates of the Naval Academy one year's sea pay was abolished by statute, and by another statute the Academy was authorized to confer on graduating students the degree of Bachelor of Science. There was enacted a measure to render it punishable for Federal employees or former employees to publish without authority secret-code documents of the United States Government; this measure had been occasioned by alleged disclosures in a book written by a former employee.

Non-Legislative Activities. The Senate tried Federal

Judge Harold Louderback of the Northern District of California on impeachment charges submitted by the House, relating chiefly to favoritism in the appointment of receivers; he was acquitted on all counts, though on one count a majority, short of the two-thirds needed to conviction, voted against him.

The Senate's Committee on Banking carried its investigation of practices in security-dealing and banking into the realm of the large private banking firms. J. P. Morgan and other members of the firm of J. P. Morgan and Company were examined in May and early June; it was elicited that the firm had made loans to many individuals of national prominence; that it had allotted to others, at prices materially below quotations current at the time, shares of the Alleghany Corporation, and of Standard Brands, some privileged thus to purchase being William H. Woodin (later Secretary of the Treasury), Owen J. Roberts (later Associate Justice of the Supreme Court), and Ex-President Calvin Coolidge. It was elicited, further, that the Morgan firm, when admitting S. Parker Gilbert as a member on January 2, 1931, had revalued securities in its possession, thus establishing a loss of \$21,000,000, whereafter no member of the firm paid a Federal income tax for either 1931 or 1932. Although the offsetting of income by capital loss thus incurred was conformable with the Federal law, the testimony occasioned popular outcry against those who had not paid.

The Senate authorized an investigation of ocean-mail contracts, which proceeded during the summer and obtained much information as to the relations of some of the shipping interests with the Shipping Board, in connection with purchases of ships and the granting of contracts to carry mail thereon. An interim sub-committee headed by Copeland of New York was directed to investigate the subject of racketeering.

The House authorized its committee on judiciary to investigate the practices of the Federal District courts as to bankruptcies and receiverships. It also directed its committee on civil service to investigate the Civil Service Commission.

Close of the Session. The session adjourned on June 16. It was remarkable for having passed 12 measures of great importance to the programme initiated by the President, for having left no major measure recommended by him unpassed, and for having exceeded all precedent for a peace-time session by appropriating (as summarized by Representative Snell) \$4,373,252,647.

JUDICIARY

LITIGATION AS TO NEW FEDERAL POLICIES. The first decision as to the validity of Federal proceedings to compel the surrender of privately owned gold to the government was rendered on November 16 by Federal District Judge Woolsey at New York. He sustained in part an indictment brought against Frederick Barber Campbell based on Campbell's alleged failure to surrender a quantity of gold bars. The court sustained the provisions against hoarders of gold in the banking act of March 9, 1933, holding that when emergency demanded, Congress might "control gold in such manner and to such extent as it deems advisable," and denying Campbell's contention of deprivation of property without due process of law; the decision held that by offering paper currency for surrendered gold the Government made the "just compensation for its value determined as of the time and place of taking" as required by the Fifth Amendment. The decision rejected a count of the indictment based on alleged non-compliance with the President's executive order of August 28, holding that the act of March 9 conferred power to require the surrender of gold on the Secretary of the Treasury and not on the President; criticizing the order, further, as having required holders of gold to file a return revealing holdings and thus enabling the Treasury to requisition them without having given the holders the opportunity for a court test.

An indictment was found against a filing station in Brooklyn, in November, under the National Industrial Recovery act, for failure to comply with requirements as to employees, embodied in a code for the control of the members

of this industry. At Tampa, Federal District Judge Akerman held in December that the National Recovery Administration had no power to regulate commerce conducted entirely within the bounds of one State.

SUPREME COURT. By an act of February 25 the Supreme Court was authorized to prescribe rules and practices designed to expedite the appeal of criminal cases in the Federal courts. Among the decisions of the court were: that of March 13, holding the tax of the State of Florida on chain stores to be discriminatory; of March 20, that States and their instrumentalities might not import goods free of duty (in the case of the University of Illinois); April 10, that Federal employees producing patentable articles need not assign patents to the United States (Dubilier Corporation case); in May, denying the Los Angeles Gas and Electric Company's contest against a valuation of its property, set by the California railroad commission, which made reductions on account of recent declines in values; May 22, ordering that the State of Illinois provide funds for the Chicago sanitary district to complete plants for the disposal of sewage.

UNITED STATES MILITARY ACADEMY. A government institution at West Point, N. Y., for the theoretical and practical training of cadets for the military service of the United States, opened in 1802. On Sept. 1, 1933, the total number of cadets was 1282. There were 175 members of the faculty. The academy is a component part of the Regular Army of the United States and is maintained solely by appropriations from the War Department, which in 1933 amounted to \$2,344,584 for salaries and maintenance of public works. The library contained over 180,000 volumes. Superintendent, Maj. Gen. Wm. D. Connor, U. S. A.

UNITED STATES NAVAL ACADEMY. A school for the education and training of midshipmen in Annapolis, Md., founded in 1845. The total number of midshipmen at the beginning of the academic year 1933-34 was 1682. The faculty numbered 250. The library contained 77,386 volumes. Midshipmen, after graduation, are commissioned as ensigns in the U. S. Navy. Superintendent, Rear Admiral Thomas C. Hart, U. S. N.

UNITED STATES OF EUROPE. The concept of a European political union, advanced by Foreign Minister Aristide Briand of France in his famous memorandum of May 1, 1930, had been pigeonholed and almost forgotten by the nations of Europe by 1933. In place of the trend toward mutual coöperation envisaged by M. Briand there was almost everywhere a growth of nationalism, as demonstrated by the failure of the World Economic Conference (see **ECONOMIC CONFERENCE, WORLD**) and the triumph of fascism in Germany and Austria. While European unity seemed farther away than ever, the movement toward regional coöperation made definite progress under the spur of economic necessity. The areas in which the prospects of international economic and political coördination seemed brightest were (1) the Balkans, including Turkey; (2) the Danubian area, comprising the states formerly incorporated in Austria-Hungary; and (3) the newly established Baltic states—Lithuania, Latvia, Estonia.

THE BALKAN CONFERENCE. The fourth unofficial Balkan Conference, attended by representatives of Greece, Turkey, Bulgaria, Rumania, and Yugoslavia was held in Salonika, Greece, from Nov. 5 to 11, 1933. The conference drafted and

adopted a plan for economic coöperation based on a system of preferential tariffs and appointed a commission to elaborate a plan for a limited Balkan customs union. It also declared for an extension of the system of non-aggression pacts which was being built up among the Balkan and other European states. The 1933 conference was noteworthy because the governments of the various nationalities represented evidenced a growing interest in its work. The Greek Chamber of Deputies sent out a circular letter to the other Balkan governments urging them to support the work of the conference and the application of its proposals. Meanwhile the Turko-Greek treaty signed Sept. 14, 1933, and the diplomatic negotiations of the Balkan states during 1933 were all directed toward greater economic coöperation and political unity. See **TURKEY, GREECE, BULGARIA, RUMANIA, and YUGOSLAVIA under History.**

DANUBIAN UNION. The economic vicissitudes of the Danubian states and the threat to the peace of Europe arising therefrom had produced numerous proposals for greater economic collaboration, particularly the Tardieu plan of 1932. The Tardieu proposals and numerous others advanced at the Stresa Conference (see 1932 YEAR BOOK) failed of adoption because of the rivalries of the various powers in central Europe. Toward the end of 1933 Premier Mussolini made new proposals for a Danubian agreement, based upon principles worked out at Stresa, which won the support of France and seemed likely to be adopted. His project called for: (1) Bilateral accords among the Danubian nations; (2) preferential treatment for the agricultural products of Rumania, Yugoslavia, and Hungary and for the industrial products of Austria; (3) the waiving by non-Danubian countries of their most-favored-nation rights if they had favorable balances of payments with the Danubian countries, and (4) concessions by the Danubian states of part of their internal markets to other nations in return for reciprocal tariff concessions.

BALTIC UNION. For the movement toward a customs union and other schemes of collaboration discussed at the Fourth Economic Conference of the Baltic States in Riga, Latvia, Sept. 8-9, 1933, see **LATVIA under History.**

UNIVERSAL CHRISTIAN COUNCIL.

See **INTERNATIONALISM**

UNIVERSALISTS. A denomination which holds as part of its doctrine the universal fatherhood of God and the final harmony of all souls with God. Established in the United States in 1770 by the Rev. John Murray of Good Luck, N. J., it exists chiefly in the United States, Canada, Japan, and Korea.

The Universalist General Convention, organized in 1870, held its biennial meeting in Worcester, Mass., Oct. 19, 1933. At this meeting the denomination voted to join with the Unitarians in the formation of the Free Church of America. (See **UNITARIAN CHURCH.**) In 1933 there were 28 State conventions and two State conferences. The number of churches was 589; ministers in fellowship, including lay licenses, 517; and church members, 50,012. The denomination publishes the *Christian Leader*, a weekly. Victor A. Friend of Melrose, Mass., was president of the general convention in 1933. Headquarters are at 16 Beacon Street, Boston, Mass.

UNIVERSAL LANGUAGES. See **PHILOLOGY, MODERN.**

UNIVERSITIES AND COLLEGES. ATTENDANCE. Those in charge of universities and colleges have been greatly concerned with the number of students who enrolled during 1933. Dr. Raymond Walters has compiled registration statistics for 546 approved institutions as of Nov. 1, 1933, and published the results in *School and Society* for December 16.

It appears that the institutions registered within 5 per cent as many full time students this year as they had in Nov. 1, 1932. The decrease in grand total enrollment is 9 per cent. Dr. Walters traces a large part of this decrease in total enrollment to the marked decrease in summer session attendance at the large institutions.

The five institutions having the largest enrollments of full time students are California, 18,337; Columbia, 13,322; New York University, 12,982; Minnesota, 11,292; and Illinois, 9996. The five institutions having the largest enrollments of resident students are New York University, 25,113; Columbia, 24,357; College of the City of New York, 22,986; California, 21,019; and Minnesota, 14,970.

The report presents an analysis of curricular enrollments in the larger institutions. There were small increases in enrollment in three professional fields: law, medicine, and divinity. The curricular enrollments in fine arts was increased by 274 students, or 15.6 per cent. Enrollments in liberal arts showed small decreases.

The largest decreases were in the fields of graduate study, education, and engineering. The decrease in the schools of education and teachers' colleges in universities was 11.9 per cent. There was even a greater decrease in the number of students in the 37 separate teachers' colleges not associated with universities.

The decrease in engineering students was 9.9 per cent. Departments or schools of architecture, journalism, and music showed decreases of 15.8 per cent, 10.1 per cent, and 8.8 per cent, respectively.

The enrollment in the summer schools for 1933 was about 23 per cent below that for 1932. Enrollments in extension courses have also decreased.

CHANGES IN ORGANIZATION. There is a tendency to try new methods of instruction and organization of subjects. Many of these plans have come to bear the name of the institutions which foster them.

After the opening of college in September, President George B. Cutten of Colgate University announced a gift of \$120,000 from the Carnegie Corporation for the purpose of putting in full operation the "Colgate plan" which was introduced in 1928. The grant will be in four annual installments of \$30,000 each.

As reported in *School and Society*, Dr. Cutten announced that fifteen new men would be added to the faculty and that the scope of the plan would be broadened. He is quoted as follows:

For seven or eight years we have been developing the Colgate plan, which, while somewhat radical, embraces the best features of modern experimentation.

The survey courses did not originate with us, but we have carried them to their logical conclusion. Where many universities have surveys in one subject, for example, Chicago in social sciences, Dartmouth in evolution, and Columbia in contemporary civilization, we have divided our curriculum into six schools.

We have a survey course in each one except that of languages. These schools are physical sciences, biological sciences, social sciences, philosophy and religion, fine arts, and languages. Each student in college takes these survey courses.

There are three advantages of these courses: First,

cultural, in giving the student a general survey of the whole field of knowledge; second, vocational, preparing a student to choose his field of concentration; third, the psychological effect of having a radical change in college that re-arouses the enthusiasm of the student.

The preceptorial plan, devised to develop the student intellectually as a whole, is working out satisfactorily, for the records show that students working with preceptors have higher grades than others.

Since the Colgate plan was introduced, we have been confident that we were operating along the right lines and teaching students to think, rather than merely to memorize. This recognition by the Carnegie Corporation adds credence to our belief.

The "Chicago plan" has been in operation for two years. The authorities at the University seem to regard the results as satisfactory. The depression has had the effect of limiting the expansion of the plan to the extent that was contemplated. The results of the examinations in the four comprehensive examinations at the end of the first year showed a proportion of failures ranging from 8 per cent to 12 per cent. Some of those who passed the examinations completed the work in less than a year. Some who have passed the examinations have not pursued the work in college. For the distinguishing features of the plan see CHICAGO, UNIVERSITY OF, in 1930 YEAR BOOK.

The faculty of the University of Kansas City have announced the adoption of a plan which is designed to give the student the opportunity to secure an education on his own initiative. No one course is required but students will be helped to plan their education.

While there are no restrictions on the courses taken, there are restrictions on the groups of courses followed by the student. All the courses offered by the College are divided into four groups as follows: (1) The humanities, including such departments as classical languages, philosophy and art; (2) the social sciences, including economics and business, sociology, history, political science, and other related courses; (3) the biological sciences; and (4) mathematics and the physical sciences.

The student is required to take 50 of his 120 hours of college work in one division, and at least 30 of those hours in one specific department. He is required to take at least 10 hours in each of the other three main divisions. The remaining 40 hours may be taken wherever he chooses.

At the end, the student will receive a degree only when he has proved by a comprehensive examination that he has mastered the courses of his choice.

Stanford University has removed its restrictions on the number of women students. Until this change, the women who might be received was limited to 500. There are between three and four qualified applicants to each one that could be received.

The University of Pennsylvania has established a College of Liberal Arts for women. The general plan of the college is described in *School and Society* as follows:

The new college offers a complete curriculum in the Liberal Arts and pre-professional curricula for two or more years for those preparing to enter medical, dental, or law schools. Women who are planning to engage in teaching and allied activities will enrol in the college for their freshman and sophomore years and, if their academic and personal qualifications warrant, will be admitted at the beginning of the third year to the School of Education, in which they will receive their professional training during the remainder of their course. Such students will receive the degree of bachelor of science in education at the end of their fourth year, but they will not be eligible for professional certification until the completion of a post-graduate year, admission to which will also be on a selective basis. Under this

plan the teacher-training programme will cover five years instead of four.

The student who is interested in the fine arts, music, journalism, or the broader phases of economics and business, but who wishes to pursue a general college course rather than enter a technical or professional school, will find it possible to take a certain amount of work in these fields.

Union College put into effect this year a plan which is the result of a survey of educational practices of colleges in the United States as well as the experiences of Union College during the past 138 years. The plan is described in *School and Society* as follows:

The college proposes hereafter to admit and to place boys in a curriculum on the basis of proficiency as exhibited in secondary school. For this purpose subjects of study in the college will be grouped into four divisions: engineering (civil and electrical), language and literature (English, French, German, Greek, and Latin); mathematics and science (biology, chemistry, geology, mathematics, physics, and psychology); and social studies (economics, history, political science, philosophy and religion). Each division will be presided over by one of the professors of the college and associated with him in the work of the division will be a group of professors in charge of particular fields of study.

For admission into a curriculum in one of these divisions, 15 units of secondary school work will be required. Three of these units will be in English, the remaining 12 may be made up from subjects that the applicant has pursued in school. The college will no longer demand that secondary schools train their students in some special way to qualify them for entrance. English will be required because it is believed to be of paramount importance that a student speak and write well in his native language.

The curriculum will henceforth be adapted to each boy admitted. The division in which a boy will begin his college work will be determined by his school record. An applicant who has done well in school language may be admitted to the language and literature division, even if he has not done well in mathematics. What is more, he will not be required to take mathematics in college, although he must choose some other science, either biology or chemistry. In the same way, an applicant, proficient in mathematics or science, may begin his college work in the engineering or science division even if he has not studied a language in high school.

Once in a division, the freshman will be directed toward pursuing a "topical major" instead of the present "subject-major." Specialization will be left to the university. The aim will be to fit men for intelligent citizenship, business, the professional schools of law, medicine, dentistry, secondary school teaching, industrial work, or study in the graduate school.

The fifth point of the plan is the responsibility now placed upon the professor to aid seniors in coordinating their pregraduation with their future careers. It is planned that instead of the usual mechanical placement bureau, professors place seniors after graduation.

Many colleges and universities have offered special courses to the unemployed. Such offerings vary with the needs of the students concerned. Rutgers University admits unemployed male residents of New Jersey to the regular courses in its Men's College. There is no tuition charge but the candidates have been required to provide themselves with necessary books and supplies and to be subject to the same rules that govern other students.

Unemployed Wisconsin citizens who can profit from further educational training may take university correspondence and extension courses at the expense of the State. In March, Haverford College announced that "it would accept any qualified student for regular classes during the remainder of the year without charge if the applicants was over twenty-five years of age, unemployed and unable to pay tuition charges."

Temple University gave free tuition to full-time day students who were graduating and who were unable to find employment and might otherwise be idle.

In New York State, emergency college courses were established for high school graduates who

were unable because of financial conditions to enter college. Centres were established at White Plains and Garden City, in cooperation with the College of the City of New York; at the State Teachers Colleges in Albany and Buffalo; and at Syracuse and Rochester, in cooperation with the New York State College of Forestry at Syracuse University.

The University of North Carolina conducted an institute for college graduates. The purpose of the institute was to provide worthwhile intellectual and cultural development for those who because of enforced leisure or for other reasons desired to return to college and improve their educational qualifications.

GIFTS AND BENEFACTIONS. The year has not been noteworthy either for the size or for the number of gifts to colleges and universities. The following gifts and bequests have been announced: Brown University received \$100,000 by the will of the late C. Prescott Knight. Connecticut College received a gift of \$150,000 from Mrs. Edward S. Harkness for the construction of a dormitory. Harvard University received \$805,000 by the will of the late James Loeb. New York University received \$402,213 from the estate of the late Emma Baker Kennedy. By the will of the late John B. Anderson Princeton University will receive the principal sum of \$900,000 after the death of survivors who are to receive the income during their lifetime.

The University of Chicago will receive \$479,000 by the will of the late Gertrude Dun Hicks. Washington College at Chestertown, Maryland is to receive an estate estimated at \$150,000 by the will of the late Charles F. Harley. The estate is left in trust to Mrs. Harley during her lifetime. Washington University at St. Louis received a gift of \$700,000 from two anonymous donors.

EDUCATIONAL BOARDS AND FOUNDATIONS. *The American Council of Learned Societies.* In March, the committee on fellowships and grants of the American Council of Learned Societies announced the award of 16 fellowships and 41 grants in aid of research. The fellowships are for \$1800 each, to which allowances for travel and other expenses may be added. The grants are in two classes: those that do not exceed \$500 and those that do not exceed \$1000.

Nine received the larger grants, ranging in value from \$600 to \$1000, and thirty-two received the smaller grants, ranging from \$100 to \$500. Applicants for grants must possess the doctorate or its equivalent and present specific needs.

Commission for Relief in Belgium Educational Foundation. Awards of Advanced Fellowships to Americans for study in Belgium for the year 1933-34 were given seven Americans.

The Commonwealth Fund. The report of this Fund for the year ending Sept. 20, 1932, shows an expenditure of \$1,573,838.09. Of this amount, \$808,457.03 was spent for public health and better medical and hospital service in rural areas, and for medical research. Child guidance, the training of psychiatrists and psychiatric social workers and mental hygiene in the United States and Great Britain cost \$334,252.17. Fellowships for British students in American universities cost \$250,500. Legal research and miscellaneous grants amounted to \$180,228.69.

General Education Board. The report showed an appropriation of \$10,816,149 for the support of education for the year ending June 30, 1932. The book value of the investments was \$74,733,270.

The income for the year was \$3,650,683, a decrease of about 14 per cent from the previous year.

The John Simon Guggenheim Memorial Foundation. The purpose of this foundation is to assist scholars and artists to carry on original research and creative work.

For the year 1933-34 a total of 38 fellowships were awarded. Of these, 29 were granted to scholars and artists from the United States, and nine to scholars from Latin America who came to the United States to carry on their work. Those appointed from the United States went to other parts of the world.

The Julius Roscwald Fund. During the year the Fund reported on its activities for the two year period ending June 30, 1933. The Fund was established in 1913; consequently the report gives a report for the entire twenty years of its existence.

For the year ending June 30, 1933 the Fund appropriated the following:

Negro Welfare	
Southern school programme	\$ 34,527
Higher education	82,761
Fellowships to 184 individuals	33,074
Health	40,362
Other activities in Negro welfare	23,545
Studies and demonstrations in Medical Economics	76,780
General Education and Medical Sciences	45,769
Social studies	75,183
Library service	105,105
Administration	57,000
Total	\$524,106

The Report states that the Fund of necessity curtailed its expenditures and avoided new commitments during the past two years.

For the educational activities of the Carnegie Foundation for the Advancement of Teaching and the Rockefeller Foundation, see separate articles on each.

FOREIGN LECTURERS IN AMERICAN EDUCATIONAL INSTITUTIONS. The Institute of International Education announced that eleven European scholars would lecture in American institutions during the academic year. During the past five years the Institute has made arrangements for the visiting of 86 foreign lecturers in American institutions.

Educational groups in the United States have viewed with alarm the condition of distinguished scholars in Germany who have been dismissed from their positions because of political conditions. In various ways, those who are interested in education have sought to assist these unfortunate men. Some of those who were dismissed have been employed as visiting professors by different universities, and efforts have been made to provide the means for them to continue their researches and studies.

The most noteworthy attempt at assistance was made by the New School for Social Research in New York City. Through gifts and subscriptions this institution raised \$60,000 and by means of this fund it employed 14 of the dismissed German professors who are now giving courses in the New School for Social Research. This section of the school has been characterized as "the University in Exile."

UNWIN, WILLIAM CAWTHORNE. A British engineer, died in London, Mar. 17, 1933. Born at Coggeshall, Essex, Dec. 12, 1838, he attended the City of London School and from 1868 to 1872 was

an instructor at the Royal School of Naval Architecture and Marine Engineering. His next appointment was that of professor of hydraulic engineering at the Royal Indian Engineering College at Coopers Hill. In 1884 he became professor of engineering at the Central Technical College of the Guilds of London. Six years later he was named secretary of the International Commission on the Utilization of Niagara and as one of the consulting engineers aided in the solution of problems connected with the development of power at Niagara Falls.

After his resignation from the Central Technical College in 1904 Dr. Unwin served as president of the Institute of Civil Engineers (1911) and of the Institute of Mechanical Engineers (1915-16). He was a member of the Senate of London University from 1900 to 1905 and again from 1911 to 1928. In 1921 he was chosen the first recipient of the Kelvin Medal, awarded by the Institute of Civil Engineers.

UPPER SAVOY AND GEX. See SWITZERLAND under *History*.

UPPER VOLTA. See FRENCH WEST AFRICA.

URAL AREA. See SIBERIA.

URBAN, ur'ban, JOSEPH. An American architect and scenic designer, died in New York City, July 10, 1933. He was born in Vienna, Austria, May 26, 1872, and attended the Academy of Fine Arts and the Polytechnicum there. Starting as an interior decorator about 1895, he was commissioned two years later by the Khedive of Egypt to decorate and furnish the Abdin Palace in Cairo. During the next 10 years he was employed in a similar capacity by the Austrian and Hungarian nobility, the most perfect examples of his work being the three castles which he erected and decorated for Count Carl Esterhazy. He designed also the Rathskellar in the Vienna City Hall, erected the Czar Bridge spanning the Neva River in St. Petersburg (later Leningrad), and laid out several large parks.

Urban's entrance into the field of scenic designing was accidental. At an art exhibition in Vienna there were shown some of his illustrations for the Grimm Brothers' and Hans Christian Andersen's fairy tales. These aroused the enthusiasm of several theatrical producers and resulted in his employment from 1904 to 1912 as scenic designer for some of the leading European opera houses and theatres. He was also for several years chief artistic adviser to the Imperial Opera House in Vienna. In 1912 he was secured by Henry Russell to design scenery for the Boston Opera Company in connection with its production of *Pelléus and Mélisande*, *Hansel and Gretel*, and *Tristan and Isolde*. Subsequently he settled in New York City, and in 1917 became a naturalized American citizen.

For the Metropolitan Opera Company Urban created settings, characterized by originality, beauty, and imaginative power that verged on the impressionistic. Outstanding among the plays for which he designed the scenery were James K. Hackett's productions of *Macbeth* and *The Merry Wives of Windsor*, and Percy MacKaye's masque *Caliban*. He was also for a time general production manager for the International Film Studio of New York City, carrying over into this medium his feeling for significant backgrounds and surroundings and substituting imagination and simplicity for the prevailing mode of realism. Later, he added to his interior and stage art work the

notable buildings in New York City the Ziegfeld Theatre and the New School for Social Research. His last important commission was choosing the color scheme of the buildings erected at the Century of Progress Exposition in Chicago.

UROLOGY. See MEDICINE AND SURGERY.

URUGUAY. The smallest republic of South America. Capital, Montevideo.

AREA AND POPULATION. With an area of 72,153 square miles, Uruguay had a population on Jan. 1, 1932, estimated at 1,941,398. Of this total about one-third resided in the City of Montevideo, which had a population of 655,972 on July 31, 1932. The population of the other principal cities was: Salto, 30,000; Paysandu, 26,000; Mercedes, 23,000. The population is mainly of Spanish origin, with a large admixture of Italians, Brazilians and Argentinians.

PRODUCTION. Stock raising is the predominant industry of Uruguay, furnishing over 80 per cent of the value of all exports and supporting the bulk of the population. About 60 per cent of the total area is devoted to stock raising, 20 per cent to mixed stock and farm crops, and about 7 per cent primarily to crop-raising farms. The agricultural crops, with the exception of linseed, are mainly for local consumption; they account for only about 10 per cent of all exports. The restriction of foreign markets for meat products and the decline of 50 per cent or more in prices during the world depression reacted disastrously upon the country's economic structure. The value of livestock exports declined 71 per cent from \$77,377,000 in 1929 to \$22,581,000 in 1932. Of the value of the 1932 livestock exports, wool contributed \$8,787,000; meat and meat extracts, \$8,817,000; hides, \$3,543,000; and other products, \$2,683,000. Further restriction of the principal export market (Great Britain) was reported in 1933, as a result of the Ottawa Agreements. Livestock in the country in 1931 included 7,372,000 cattle, 15,406,000 sheep, and about 309,000 swine. Production, in bushels, of the chief crops in 1931-32 was: Wheat, 11,246,000; corn, 5,759,000; oats, 3,107,000; barley, 148,000; linseed, 4,837,000; potatoes, 884,00; beans, 122,000.

COMMERCE. Imports during 1932 amounted to 53,214,072 pesos (customs values) and exports to 58,266,044 pesos (real values). Corresponding figures for 1931 were 81,981,729 pesos and 78,242,055 pesos, respectively. If the real value of imports is calculated on the basis of a 24 per cent increase over customs valuations, as recommended by an official Uruguayan commission, the real value of imports in 1932 was 65,985,449 pesos, making an adverse trade balance of 7,719,405 pesos, and the real value of imports in 1931 was 101,657,344 pesos, leaving an adverse trade balance of 23,415,289 pesos. (The par value of the peso is \$1.0342 U. S. currency.) The value of all foreign trade in 1932 was approximately one-third that of 1928. Calculated in U. S. dollars at average annual rates of exchange, imports in 1932 amounted to \$31,306,000 (\$63,178,000 in 1931) and exports to \$28,215,000 (\$43,313,000 in 1931).

The United States, which was the chief source of Uruguayan imports in 1931, fell to fourth place in 1932, being surpassed by Great Britain, Argentina, and Germany. It retained seventh place among the countries to which Uruguay exported, both in 1931 and 1932. Imports, in customs values, from the United States were 5,349,636 pesos in 1932 (15,733,906 pesos in 1931),

while exports to the United States, in real values, were 2,417,833 pesos in 1932 and 3,503,501 pesos in 1931. United States statistics showed exports to Uruguay (1933) of \$3,614,194 (\$3,217,417 in 1932); imports from Uruguay, \$3,772,861 (\$2,103,595 in 1932).

FINANCE. Prior to the world economic depression the budget showed a surplus for six consecutive years (fiscal years 1923-24 to 1928-29). Thereafter an annual deficit was reported, as shown in the accompanying table compiled by the Institute of International Finance. The figures exclude a number of special accounts.

URUGUAY: REVENUES AND EXPENDITURES [In Uruguayan pesos]

Fiscal years, ended June 30	Revenues	Expenditures	Surplus or deficit (—)
1928-29 . . .	59,955,418	56,366,523	3,588,895
1929-30	58,916,880	59,702,624	— 785,744
1930-31 . . .	55,735,890	63,166,926	— 7,431,036
1931-32 . . .	57,910,885	62,456,902	— 4,546,017
1933 * . .	59,233,699	58,888,075	345,624

* Beginning Jan. 1, 1933, the fiscal year was changed to coincide with the calendar year. ^b Estimates.

The public debt as of June 30, 1933, totaled 282,167,000 pesos, as compared with 257,054,000 pesos on Dec. 31, 1932. Less than 100,000,000 pesos was held abroad. For suspension of interest payments on the foreign debt in 1933, see under *History*.

COMMUNICATIONS. Uruguay's four main railway systems are British owned. There are in addition 205 miles of state lines, making a total mileage open for traffic of about 1729 miles. There were (1932) 2760 miles of national highways, including some 800 miles of macadam and concrete, and about 5900 miles of departmental roads. Montevideo is linked with the other countries and capitals of North and South America by air mail and passenger lines. A total of 11,130 vessels of 12,971,411 tons entered the ports of Uruguay in 1931.

GOVERNMENT. The Constitution of 1919 divided executive power between the President, elected for four years by popular vote, and a national administrative council of nine members, elected for six years. Legislative power was vested in a parliament of two houses—the Chamber of Representatives of 123 members, elected by male suffrage, and the Senate of 19 members, chosen by an electoral college which was elected by popular vote. Women were authorized to vote and hold office in national and municipal government by a law passed by the General Assembly and approved by the National Council Dec. 16, 1932. President in 1933, Dr. Gabriel Terra, who assumed office Mar. 1, 1931. For changes in the government in 1933, see *History*.

HISTORY

THE TERRA DICTATORSHIP. The conflict between President Terra and the National Council reached a climax early in 1933. Holding that the division of executive authority between President and Council rendered the government ineffective in dealing with the exigencies of the economic depression, Dr. Terra urged constitutional reforms designed to abolish the Council. On February 10 the Socialist Deputies in the National Assembly voted to impeach the President. A threatened civil war was temporarily averted when on February 15 Luis Alberto de Herrera, leader of Dr. Terra's Nationalist opponents, rejected proposals for armed reprisals against the Terra adherents.

Tension continued until March 30, when the

President suddenly took preventive measures against a counter revolt by placing troops in occupation of strategic points in the capital, including the waterworks, power houses, penitentiaries, etc. The Administrative Council and Congress were dissolved the following day, after they had voted to disapprove these measures. Dr. Terra assumed dictatorial powers, called a Constituent Assembly to revise the Constitution, and appointed an advisory junta of eight members to aid him in administering the country pending a return to constitutionalism. A rigorous press censorship was established, federal "interventors" were appointed to replace the elected provincial governors, and the members of the Administrative Council were imprisoned or forced to flee the country. Among them was Dr. Baltasar Brum, a world-renowned jurist and former President, who committed suicide rather than submit to arrest.

The Electoral Court, which supervises elections, was dissolved when it declared to be illegal President Terra's call for the election on June 25 of a Constituent Assembly. Pending the election the junta appointed a deliberative assembly of 99 members, who met on May 3 to consider the President's legislative proposals. About the same time the President issued a series of decrees designed to reduce expenditures, relieve unemployment, and generally improve the economic situation. Among these was the decree of May 16 which provided for the compulsory cultivation of real estate and the compulsory planting of trees according to a schedule varying with the four different zones into which the country was divided. It further provided that persons owning more than 7400 acres must build a dwelling within each 7400-acre sector and must maintain individuals with families in such dwellings. A 20 per cent reduction in the land tax for 10 years was offered for compliance with the decree within 30 months. Various other government bodies and enterprises were reorganized. According to reports from Uruguay, the Terra administration was endorsed by a majority of the voters at the June 25 election.

While President Terra continued his dictatorship to the end of the year, he called elections for a constituent assembly to meet early in 1934 for the purpose of drafting a new constitution. By the law of August 19 his government extended its unemployment relief programme by voting funds for additional immediate public works. A committee of 11 members was appointed to study a permanent solution of the unemployment problem.

FOREIGN DEBT MORATORIUM. The problem of finding sufficient foreign exchange to meet the country's requirements reached a critical stage in 1933. The unfavorable trade balance in 1931 and 1932 and the almost complete stoppage of the influx of foreign capital resulted in an alarming decrease in foreign exchange and gold holdings of the central bank. The exchange value of the peso fell from par of \$1.0340 to \$0.5536 in 1931 and \$0.4706 in 1932, and then rose with relation to the U. S. dollar when the latter country abandoned the gold standard in 1933. On July 3, 1933, the government announced the suspension of all interest payments on the foreign debt in foreign currency; the equivalent in pesos, at par of exchange, was to be deposited in Montevideo and transferred abroad from time to time to coupon holders consenting to accept these funds, at the rate of exchange prevailing at the time of transfer. Meanwhile the city of Montevideo continued

its defaults, commenced June 1, 1932, upon two dollar loans and one sterling loan, in spite of the protests of the bankers.

A decree of Dec. 13, 1933, provided that during 1934 interest on external bonds should be paid in the currency called for, up to 3½ per cent per annum. Another decree of Dec. 15, 1933, provided that holders in Uruguay of Uruguayan bonds issued in the United States must report their holdings to the office of Public Credit by Dec. 30, 1933, after which date coupons of unreported bonds would not be paid in Uruguay. The purpose of this decree was to prevent sale of such bonds in Uruguay, where they were bringing higher prices than abroad, and to diminish operations in boot-leg exchange.

At the end of 1933 the Autonomous Amortization Bureau announced that the issue of autonomous amortization bonds authorized July 15, 1932, for the purpose of funding block peso accounts in Uruguay, had been over subscribed. The bonds were authorized in the amount of 15,000,000 Uruguayan gold pesos (32,670,000 paper pesos) and were payable in American dollars, English pounds, French francs, or Uruguayan gold pesos, over a period of five years. They were issued against payment of the equivalent amount in Uruguayan currency at the current official rate. See PAN AMERICAN CONFERENCE; ARGENTINA, BOLIVIA, and BRAZIL under *History*.

UTAH. POPULATION. The population of the State on Apr. 1, 1930, according to the Fifteenth Census, was 507,847, as against 448,396 in 1920, Salt Lake City, the capital, had (1930) 140,267 inhabitants.

AGRICULTURE. The following table shows the acreage, production, and value of the principal crops for 1933 and 1932:

Crop	Year	Acreage	Prod Bu.	Value
Hay (tame) .	1933	643,000	1,249,000 ^a	\$7,494,000
	1932	650,000	1,268,000 ^a	7,101,000
Sugar beets ..	1933	73,000	878,000 ^a	.....
	1932	56,000	846,000 ^a	4,032,000
Wheat ...	1933	254,000	4,079,000	2,512,000
	1932	260,000	5,332,000	1,933,000
Potatoes	1933	14,000	2,100,000	1,029,000
	1932	15,000	2,250,000	450,000

^a Tons.

MINERAL PRODUCTION. The value of the product of the five metals gold, silver, copper, lead, and zinc fell by more than one-half, to \$14,398,593. (1932), from \$28,970,974 (1931). The decrease, except for gold, occurred through declines in price as well as in quantity. In the case of gold (still at the statutory price of \$20.67 an ounce in 1932), there occurred a sharp decline in the quantity of the mines' production; the output consequently attained the value of only \$2,795,997 (1932), as against \$4,108,323 (1931). This decline as to gold was against the general current of higher production elsewhere caused by increased incentive due to lower costs and a stable market. The decline in the case of Utah was attributed to the curtailment of copper mining, which normally furnished, as a by-product of copper ore, much of the output of gold; the gold output of mines of the Tintic district was reported to have decreased.

The mines' production of silver fell to 6,962,097 fine ounces (1932), from 8,290,966 (1931); of copper, to 64,964,111 pounds (1932), from 151,236,505 (1931); of lead, to 125,552,966 pounds (1932), from 158,423,453 (1931); of zinc, to 59,331,888 pounds (1932), from 74,581,072 (1931).

The estimated production of gold, silver, copper, lead, and zinc, for 1933, attained the value of \$15,842,196. To this total, 108,841 ounces of gold (reckoned at \$20.67 an ounce, though some of it brought much more) supplied \$2,249,943; 5,658,000 ounces of silver; \$1,952,010; 73,046,000 pounds of copper, \$4,674,944; 114,762,000 pounds of lead, \$4,246,194; 63,235,000 pounds of zinc, \$2,719,105.

There were mined 2,850,000 tons of coal (1932), as against 3,350,044 (1931).

FINANCE. State expenditures in the year ended June 30, 1932, as reported by the U. S. Department of Commerce, were: for maintaining and operating governmental departments \$9,579,297 (of which \$3,318,463 was for local education); for interest on debt, \$489,975; for permanent improvements, \$3,730,285; total, \$13,799,557 (of which \$5,324,772 was for highways, \$2,115,393 being for maintenance and \$3,209,379 for construction). Revenues were \$14,322,853. Of these, property and special taxes furnished 35.9 per cent; departmental earnings and compensation to the State for officers' services, 8.5; sale of licenses, 28.1 (in which was included a gasoline sale tax that produced \$2,552,954). Funded debt outstanding on June 30, 1932, totaled \$10,525,000, of which \$7,000,000 was for highways. Net of sinking-fund assets, the debt was \$4,774,427. On an assessed valuation of \$618,461,005 the State levied in the year ad-valorem taxes of \$5,125,839.

EDUCATION. Efforts were made, because of the prevalence of unemployment, to promote the continuance of education among high-school graduates in the unemployed class. These efforts included enrollment at nominal tuition in the University of Utah and other educational institutions of the State, for high-school graduates whose parents were unemployed, and also the creation, in the high schools of Salt Lake City, of postgraduate departments open to unemployed graduates of these schools.

The school population, as of Oct. 31, 1933, was reckoned as 149,068. There were enrolled in the public schools of the State, in the academic year 1932-33, 142,280 pupils. Of these, 87,493 were in common schools or elementary grades; while those enrolled in the high schools and junior high schools attained the proportionately very high total of 54,787. The year's expenditures for public-school education totaled \$9,433,445. Salaries of teachers (principals included) averaged, by the year, \$1129.21.

LEGISLATION. A regular session of the Legislature convened on January 9. To provide for the State's action on the proposed repeal of the Federal Eighteenth Amendment, it created a State convention of 14 delegates, to be elected at large by popular vote, either at a date in 1933 to be set by the Governor or, otherwise, at the general election in November, 1934. The Twentieth Amendment to the Federal Constitution received the State's ratification by the Legislature's own vote. A law permitting the manufacture of beer not exceeding 3.05 per cent in alcoholic content was enacted, but the prohibitions against alcoholic drinks, fixed in the State constitution, were not repealed.

A tax of $\frac{3}{4}$ per cent of all retail sales was imposed, with intention to raise \$500,000 a year for State relief to the needy unemployed. The crime of kidnaping for ransom was rendered punishable by death, as alternative to imprisonment for life. A freak law was passed, requiring

that the State and all its subdivisions should pay employees in gold coin; this measure, enacted on March 12, was reported to have been designed, not to be enforced, but to draw attention to the inadequacy of gold as a monetary base, an argument strongly maintained in this silver-producing State. Subdivisions were authorized to issue "revenue-refunding" bonds to meet the cost of self-paying public works.

A special session of the Legislature convened on July 10, principally to provide more revenue for State purposes, including the support of high schools.

POLITICAL AND OTHER EVENTS. Payments by banks were suspended on March 2 by resort to the device of declaring a legal holiday period of four days, to which the Federal closure of banks supervened. At the election of November 7 the voters selected 14 delegates, favorable to the repeal of the Federal Eighteenth Amendment, who were to meet in State convention on December 5 to vote the State's adoption of repeal through the superseding amendment proposed by Congress. The popular vote was cast for the repealist delegates in the approximate proportion of 5 to 3. At the same election the repeal of the State constitution's provisions to prohibit alcoholic intoxicants was ratified.

Rioters stopped the public sales of property for taxes at the City and County Building in Salt Lake City on February 23. A provision of the year's session of the Legislature, that subdivisions of the State might cover the cost of building remunerative public works by issuing bonds repayable only from the revenue of such works was held unconstitutional by the State supreme court, but the ruling was later admitted to review. The discovery of a prehistoric cliff-dwellers' structure of several hundred rooms in a hidden canyon of the San Juan River district in southern Utah was reported in July. See **ARCHAEOLOGY**.

In Salt Lake City the popular vote rejected on November 7 a proposed ordinance to authorize the issuance of \$18,000,000 in bonds for a municipal electric plant.

OFFICERS. The chief officers of the State, serving in 1933, were: Governor, Henry H. Blood; Secretary of State, Milton H. Welling; Auditor, Julius C. Andersen; Treasurer, Charles A. Stain and (later) Enos Hoge; Attorney General, Joseph Chez; Superintendent of Public Instruction, Charles A. Skidmore.

Judiciary. Supreme Court: Chief Justice, David W. Moffat; Associate Justices, Elias Hansen, William H. Folland, Ephraim Hansen, Daniel N. Straup.

UTAH, UNIVERSITY OF. A State institution of higher education in Salt Lake City, founded in 1850. The total enrollment for the autumn quarter of 1933 was 3041, and for the regular school year of 1932-33, 3547; for the summer of 1933, 584, number of students in extension courses, 2292. The faculty numbered 186. The income for 1932-33 was \$795,531. The library contains 113,916 volumes and 31,129 pamphlets. A new library building to cost \$550,000 was under construction. President, George Thomas, Ph.D.

UZBEK S.S.R. See **SOVIET CENTRAL ASIA**.

VAIHINGER, vi'hing-ër, HANS. A German philosophical critic, died in Halle, Dec. 19, 1933. He was born at Nehren near Tübingen, Sept. 25, 1852, and was educated at the Universities of Tübingen, Leipzig, and Berlin. After serving as

docent at the University of Strassburg from 1877 to 1883, he was called to the University of Halle where he held the chair of philosophy and pedagogy until his retirement in 1906. One of the foremost critics of Kant, he founded the Kant Society, edited *Kantstudien* after 1896, and wrote *Kommentar zu Kants Kritik der reinen Vernunft* (2 vols., 1881-92); *Kant—ein Metaphysiker?* (1889); *Die transcendente Deduktion der Kategorien* (1902); and *Pessimismus und Optimismus vom Kantischen Standpunkt aus* (1924). His other works included: *Goethe als Ideal universeller Bildung* (1875); *Hartmann, Dühring und Lange* (1876); *Nietzsche als Philosoph* (1902); and *Die Philosophie in der Staatsprüfung* (1906).

The "as if" philosophy, which Vaihinger formulated during 1875-78 and gave to the world in 1911 under the title of *Die Philosophie des Als Ob—System der theoretischen, praktischen, und religiösen Fiktionen der Menschheit auf Grund eines idealistischen Positivismus*, was destined to become one of the leading war and post-war philosophies of Germany. Based on the conviction that all human concepts are relative, it maintained that all knowledge in the realm of science, philosophy, religion, etc., is fictitious. Man acts, however, as if these concepts existed, that is, "as if" there were a God, "as if" time and space were actual, and "as if" there were a tangible force in nature such as electricity, because only with their aid can he arrive at definite knowledge or even make his existence tolerable. The system was further developed by Vaihinger in *Wie die Philosophie des Als Ob Entstand* (1921) and *Der Mythos und das Als Ob* (1927).

VANCOUVER TUNNEL. See FOUNDATIONS.

VANDERBILT UNIVERSITY. A nonsectarian institution of higher learning for men and women in Nashville, Tenn. The enrollment for the autumn term of 1933 was 1276. The faculty numbered 369. The annual income was \$1,541,000. Volumes in the library numbered 143,000. Chancellor, James Hampton Kirkland, LL.D., D.C.L., Ph.D.

VAN DYKE, HENRY. An American clergyman, author, and scholar, died at Princeton, N. J., Apr. 10, 1933. Born at Germantown, Pa., Nov. 10, 1852, he was graduated from the Brooklyn Polytechnic Institute in 1869, the College of New Jersey (later Princeton University) in 1873, and the Princeton Theological Seminary in 1877. After further study at the University of Berlin he was ordained in 1879 to the ministry of the Presbyterian Church, but assumed as his first charge the United Congregational Church of Newport, R. I. In 1882 he was called to the Brick Presbyterian Church in New York City, where over a period of almost 20 years he acquired a reputation as one of the leading "liberal" clergymen of the United States.

Dr. van Dyke retired in 1900 to become professor of English literature at Princeton University, but after the death of his successor in 1902 returned to the pulpit of the Brick Church for a brief period. He was also elected in that year moderator of the General Assembly of the Presbyterian Church in the United States of America. The simplified confession of faith which he had drawn up was adopted by this assembly, and during the next three years (1903-06) he was engaged in compiling for it a *Book of Common Worship*. Although he occupied the pulpit of the Brick Church once again for only a few months in 1911, he was a frequent guest preacher there. Among students of the various educational institutions of

the United States he was one of the best loved preachers of his generation. On his own campus he was an inspiring teacher, especially to those interested in a literary career.

In 1913 Dr. van Dyke was appointed by President Wilson Minister to the Netherlands and Luxembourg, but after the outbreak of the World War he often found it difficult to maintain a proper neutral attitude. The report which he submitted to the Secretary of State on alleged German atrocities in Belgium caused a sensation on its release after the entry of the United States into that conflict. After his resignation and return to the United States in 1917 he accepted an appointment as chaplain in the United States Naval Reserve, with the rank of lieutenant-commander, and from the pulpit and in the press vehemently attacked "the Potsdam gang" which had thrown the world into such a maelstrom. The French government made him in 1918 a commander of the Legion of Honor. He was also a member of the American Academy of Arts and Letters and during 1910-11 had served as president of the National Institute of Arts and Letters.

Dr. van Dyke resigned his chair at Princeton in 1923 so as to devote his entire time to literature. His most effective medium was the essay, but he also wrote considerable verse and short stories. Those of his works devoted to nature became especially popular for their refreshing viewpoint: *Little Rivers* (1895); *The Blue Flower* (1902); *The Open Door* (1903); *Days Off* (1907); *Golden Stars* (1919); and *Camp Fires and Guide Posts* (1921). Of a religious or semi-religious nature were: *The Reality of Religion* (1884); *The Story of the Psalms* (1887); *Sermons to Young Men* (1893); *The Christ-Child in Art* (1894); *The Other Wise Man* (1896); *The Gospel for an Age of Doubt* (1896); *The Gospel for a World of Sin* (1899); *The Poetry of the Psalms* (1900); and *Even Unto Bethlehem* (1928). In *Fisherman's Luck* (1899) and *Travel Diary of an Angler* (1929) he recounted his passion for fishing. Among his miscellaneous works were: *The Poetry of Tennyson* (1889); *The Builders and Other Poems* (1897); *Ships and Havens* (1897); *The Taming of Felix* (1900); *Music and Other Poems* (1904); *Out-of-Doors in the Holy Land* (1908).

VAN DYKE, PAUL. An American historian, brother of Henry van Dyke (q.v.), died at Washington, Conn., Aug. 30, 1933. He was born in Brooklyn, N. Y., Mar. 25, 1859 and was graduated from the College of New Jersey (later Princeton University) in 1881 and from Princeton Theological Seminary in 1884. Ordained to the Presbyterian ministry, he served as pastor of the North Church at Geneva, N. Y., during 1887-89 and then became an instructor in church history at the Princeton Theological Seminary. From 1892 to 1898 he once again held a pastorate, that of the Edwards Congregational Church at Northampton, Mass. Called to Princeton University as professor of modern European history, he held that chair until shortly before his death.

During 1921-23 and again during 1928-29 Dr. van Dyke was director of the American University Union in Paris. He had previously served during the War as secretary of the Union and lecturer with the Y. M. C. A. The French government made him an officer of the Legion of Honor. He was also a member of the National Institute of Arts and Letters. In his researches Dr. van Dyke was particularly interested in the Renaissance period, publishing *The Age of the Renaissance* (1897);

Renaissance Portraits (1905); *Catherine de Medici* (2 vols., 1923); and *Ignatius Loyola* (1926). He wrote also *The Story of France* (1928) and *George Washington, the Son of His Country* (1931).

VASSAR COLLEGE. A nonsectarian institution for the higher education of women in Poughkeepsie, N. Y., founded in 1861. The enrollment for the autumn of 1933 was 1224. The faculty in 1932-33 had 167 members. The endowment amounted to \$7,727,988; the income from funds was approximately \$399,333. The Helen Kenyon Hall of Physical Education was under construction. President, Henry Noble MacCracken, Ph.D., LL.D., L.H.D.

VATICAN CITY. A sovereign state, officially known as the State of Vatican City, established within the city of Rome as the seat of the Papacy on June 10, 1929, in accordance with the Italo-Vatican (Lateran) treaty of Feb. 11, 1929. Ruler in 1933, Pope Pius XI (Achille Ratti).

Vatican City comprises 108.7 acres, including St. Peter's Square, and has its own coinage, import duties, railway station, postal, telegraph, radio-telegraph, and radio facilities. The census of Dec. 31, 1932, showed 1025 inhabitants, including 853 Italians and 121 Swiss. Under the Constitution of June 7, 1929, the Pope exercises full legal, judicial, and executive powers. The territory is policed by a papal gendarmerie of 120 persons. The civil government was delegated by the Pope on Jan. 13, 1933, to a commission of four, presided over by his nephew, Count Franco Ratti. Executive authority was exercised on behalf of the Pope by a governor appointed by him. Governor in 1933, Marquis C. Serafini. A bomb exploded at the central gate of St. Peter's Basilica on June 25, 1933, when the church and piazza were crowded with Holy Year Pilgrims. Four persons were injured. It was the third bomb attempt in less than two years. The authorities accordingly issued regulations requiring all visitors to St. Peter's and to the Vatican Museum to check their valises, packages, and handbags before entering. See ROMAN CATHOLIC CHURCH; ITALY, SPAIN, MEXICO, CZECHOSLOVAKIA, and GERMANY under *History*.

VENEZUELA, vèn'è-zwè'la; *Amcr. Sp. pron.*, vā'nā-swā'lā. A republic on the north coast of South America. Capital, Carácas.

AREA AND POPULATION. Venezuela has an area of about 393,976 square miles and a population estimated in 1932 at 3,261,734 (3,026,878 at 1926 census). The estimated population of Carácas in 1932 was 141,349 (135,253 in 1926), and that of the other chief cities at the 1926 census was: Maracaibo, 74,767 (105,000 in 1931); Valencia, 36,804; Barquisimeto, 23,109; Cumaná, 18,737; Bolívar, 16,702; San Cristóbal, 15,295.

PRODUCTION. Agriculture is the main industry and coffee, sugar, and cacao are the chief crops. Tobacco, cotton, corn, beans, and wheat are grown, largely for domestic consumption. Mining, livestock raising, pearl fishing, and manufacturing are secondary industries. The forests produce balata, tonka beans, divi-divi, hardwoods, and medicinal plants. Livestock in 1929 included 2,750,000 cattle, 550,000 swine, 125,000 sheep, and 500,000 horses, mules, and burros. Production of the chief minerals in 1932 was: Petroleum, 116,565,000 barrels (118,770,000 in 1931 and 118,420,000, estimated, in 1933); gold, 2,847,084 grams; asphalt, 6732 metric tons; coal, 5745 metric tons. Exports of coffee in 1932 were 108,504,000 pounds;

cacao beans, 35,110,000 pounds; sugar, 1,904,000 pounds; pearls, 14,053 troy ounces; divi-divi, 3,080,000 pounds.

COMMERCE. Including bullion and specie, general imports in 1932 totaled 153,458,000 bolívares (\$23,157,000), compared with 210,758,000 bolívares (\$35,913,000) in 1931. Exports amounted to 628,260,000 bolívares (\$94,804,000), as against 651,618,000 bolívares (\$111,036,000) in 1931. The chief exports, by value, in 1932 were: Crude petroleum, \$72,601,000; green coffee, \$8,798,000; gasoline, \$3,223,000; fuel oil, \$2,952,000; cacao beans, \$1,832,000; gold, \$1,582,000; gas oil, \$1,444,000; pearls, \$664,000. Cotton fabrics, iron and steel, drugs, and automobiles were the leading import items. In 1932, the United States supplied 45.6 per cent of the total imports (47.8 in 1931); United Kingdom, 14.4 (12.0); Germany, 12.4 (11.7). Of the 1932 exports, the United States took 21.3 per cent (21.8 in 1931); Germany, 2.1 (3.0); and the United Kingdom, 0.9 (2.1). Merchandise imports from the United States (1933) were valued at \$13,114,810 (\$10,229,138 in 1932); exports to the United States, \$13,450,636 (\$20,293,648 in 1932).

FINANCE. Actual governmental revenues in the calendar year 1932 were 175,366,000 bolívares and expenditures 168,091,000 bolívares. This compared with actual receipts of 188,933,000 bolívares and expenditures of 172,399,000 bolívares in 1931. For the fiscal year beginning July 1, 1933, revenues were estimated at 150,000,000 bolívares and expenditures at 141,596,120 bolívares. The external debt was retired in 1930. The internal debt was decreased from 26,488,000 bolívares on Dec. 31, 1930 to 22,700,000 bolívares on Dec. 31, 1932. In addition to reducing the public debt, the government had a treasury balance of nearly 61,000,000 bolívares (about \$12,200,000) on July 30, 1933. The unit of currency is the bolívar (par value, \$0.1929), which exchanged at an average of \$0.1509 in 1932.

COMMUNICATIONS. Railway lines in 1932 extended 746 miles, of which 68 miles were government owned; all lines carried 1,867,000 passengers and 373,646 metric tons of freight in the year. Highways suitable for motor traffic extended 4064 miles. Air mail and passenger lines were operated in Venezuela by Pan American Airways and Cie Generale Aeropostale; the government operated postal lines also. During 1932 the Cie Generale Aeropostale, a French company, carried 1989 passengers, 18,610 pounds of mail, and 34,382 pounds of express over the Maracay-Maracaibo and Maracay-Tumeremo routes. Radiotelephone service between Bogotá, Colombia, and Carácas was inaugurated late in 1933. In conformity with a Presidential decree of Jan. 9, 1933, construction was begun on a free port at Turiamo and on a highway connecting the port with the Maracay-Valencia highway at or near Guacara. Turiamo lies 20 miles east of Puerto Cabello and 20 miles northwest of Maracay.

HISTORY. President Gomez celebrated the 25th anniversary of his dictatorship on Dec. 23, 1933, with the country as firmly under his control as in the days of his prime. An army of spies and secret police enabled him to nip every attempt at revolution in the bud and a strict censorship of all domestic and foreign newspapers, periodicals, and books prevented the spread of revolutionary ideas. The anniversary was the occasion of numerous tributes to the aged president (then 76 years old). It was pointed out that Venezuela was

practically the only South American country which had escaped serious revolutionary disturbances, which had a balanced budget, and which had not defaulted on its obligations. However the General's health was reported to be failing and since he had eliminated the ballot box during his régime it was predicted that his successor would win the office by the accustomed method of revolution. Consult Robert Neville, "Gomez: Dictator of Venezuela," *Current History*, July, 1933.

VERMONT. POPULATION. The population of the State on Apr. 1, 1930, according to the Fifteenth Census, was 359,611, as against 352,428 in 1920. Burlington, the most populous city, had (1930) 24,789 inhabitants; Montpelier, the capital, 7837.

AGRICULTURE. The following table shows the acreage, production, and value of the principal crops for 1933 and 1932:

Crop	Year	Acreage	Prod. Bu.	Value
Hay (tame)	1933	916,000	962,000*	\$12,987,000
	1932	916,000	1,104,000*	10,819,000
Corn	1933	63,000	2,520,000	1,638,000
	1932	64,000	2,624,000	1,312,000
Potatoes	1933	15,000	1,950,000	1,755,000
	1932	16,000	2,320,000	1,114,000
Apples	1933	.....	1,027,000	770,000
	1932	....	1,090,000	763,000

* Tons.

FINANCE. State expenditures in the year ended June 30, 1932, as reported by the U. S. Department of Commerce, were: for maintaining and operating governmental departments \$6,249,163 (of which \$623,021 was for local education); for interest on debt, \$434,188; for permanent improvements, \$3,576,321; total, \$10,259,672 (of which \$5,476,860 was for highways, \$2,184,607 being for maintenance and \$3,292,523 for construction). Revenues were \$10,883,879. Of these, property and special taxes furnished 33.6 per cent; departmental earnings and compensation to the State for officers' services, 4.7; sale of licenses, 44.8 (in which was included a gasoline sale tax that produced \$2,072,555). Funded debt outstanding on June 30, 1932, totaled \$8,710,032, of which no part was offset by sinking-fund assets. On an assessed valuation of \$347,008,045 the State levied in the year ad-valorem taxes of \$1,266,935.

EDUCATION. It was reported at the end of 1933 that the budgets of nearly all the public-school systems in the State had been reduced, but that no schools had been obliged to close. The standards for admittance to normal schools were raised, and a third year of course was added in two of the normal schools. For the academic year 1932-33 the number of persons of school age in the State was reckoned as 79,098. There were enrolled in the public schools 66,770 pupils. Of these, 53,392 were in common schools or elementary grades; in high schools, 13,378. The year's expenditures for public-school education totaled \$4,542,070. Salaries of teachers averaged \$1537.69 by the year for high schools, \$1008.08 for graded schools, and \$20.10 by the week for rural schools.

LEGISLATION. A regular session of the Legislature convened on January 4. It created a State convention of 14 delegates, to be elected at large by popular vote on September 5, to act for the State on the proposed repeal of the Eighteenth Amendment of the Federal Constitution. Permission was enacted, to sell beer of the alcoholic strength of 3.2 per cent in towns and cities voting, at their local option, to allow the traffic;

regulation of sales was to be by local officials, but the State prohibited sales of beer over a bar or in a saloon; licenses were required, costing \$200 for a bottler, \$100 for a wholesaler, \$50 for a hotel of more than 50 sleeping rooms, \$10 for a retailer; a tax of \$1 a barrel was also imposed.

To prevent bankruptcy for banks under State charter caught in the general banking panic, powers were given the State banking commissioner to make regulations restricting payment on all kinds of deposits. A system was provided for the supply of new banking capital where the margin of solvency was insufficient. An advisory State banking commission of five members was created. Power was given debtors on mortgage to apply for delay of foreclosure through courts of chancery.

A tax was imposed on the sales of chain stores, on a sliding scale running from 1/8 per cent on gross retail sales between \$50,000 and \$100,000 a year up to 4 per cent on sales exceeding \$2,000,000. A sharply increased appropriation of \$675,000 was made for State tests to condemn cattle having tuberculosis. The appropriations for the ensuing two-year period were cut by some 25 per cent of the total for the previous like period, to \$14,074,396. Reductions were effected partly by a cut of about one-half in highway appropriations and partly by cuts in all State salaries in excess of \$800 a year.

POLITICAL AND OTHER EVENTS. In the course of the bank panic Governor Wilson closed the banks in the State by the declaration of legal holidays beginning with March 4. The State banks reopened, under prescribed restrictions, on March 15 in most cases. Voting on September 5 the people of the State chose 14 delegates at large, favorable to the repeal of the Federal Eighteenth Amendment, who met in State convention on September 18 and voted the State's adoption of repeal through the superseding amendment proposed by Congress. The popular vote indicated a preference for repeal in the approximate proportion of 2 to 1. A special master for the Federal Supreme Court, after hearing arguments in the boundary dispute between Vermont and New Hampshire recommended on March 30 that the boundary run along the low-water mark on Vermont's side of the Connecticut River. Outbreaks of violence in connection with a strike of granite workers in the area of Barre caused Governor Wilson to call out certain of the National Guard to keep order there in May.

OFFICERS. The chief officers of the State, serving in 1933, were: Governor, Stanley C. Wilson; Lieutenant-Governor, Charles M. Smith; Secretary of State, Rawson C. Myrick; Treasurer, Thomas H. Cave; Auditor, Benjamin Gates; Attorney General, Lawrence C. Jones; Commissioner of Education, Francis Bailey.

Judiciary. Supreme Court: Chief Justice, George M. Powers; Associate Justices, Leighton P. Slack, Sherman R. Moulton, Frank D. Thompson, Warner A. Graham.

VERMONT, UNIVERSITY OF. An endowed institution of higher education in Burlington, Vt., receiving some State aid. The 1933 autumn enrollment was 1262; the summer school enrollment, 616. The faculty numbered 191. The endowment amounted to \$1,679,825, while the income for the year was \$826,312. The library contained 135,391 volumes. President, Guy W. Bailey, LL.D.

VETERINARY MEDICINE. In the field of comparative medicine the year 1933 was marked by the continued progress in the eradication and control work with the more important diseases of livestock. The year saw no new invasion of the country by any plague from abroad.

LIVESTOCK TUBERCULOSIS ERADICATION. The co-operative campaign to eradicate tuberculosis from the livestock of the country resulted in the release of the States of Nevada, New Hampshire, Utah, Kentucky, and West Virginia. Thirteen States and the District of Columbia are now practically free from tuberculosis in their herds. In the work of the year 13,073,894 cattle were given the tuberculin test with 2.0 per cent reacting and removed. At the close of the fiscal year ended June 30 there were 3,926,645 herds with 35,736,707 animals under supervision. The interest taken in the work was indicated by the waiting list of more than 2,087,328 head of cattle. Opponents in Iowa of tuberculosis eradication attempted to abolish all legislation having anything to do with carrying on this activity. Public sentiment was aroused and the attempt was defeated in the legislature, the work proceeding in a satisfactory manner. In control and eradication work with the avian type of tuberculosis 29,161 farms were visited and 4,253,000 fowls inspected. The disease was detected on 9419 farms on which a considerable number of swine were found affected with this type of the disease. In the educational work owners of the infected flocks were informed that the swine became infected through water and feed contaminated with the droppings of tuberculous fowls. In the survey of farm poultry flocks during the year, made in connection with the testing of cattle, which had been underway for several years, 168,286 flocks containing approximately 15,741,500 fowls in 21 States were inspected. Of these flocks 5999 were found to be infected with tuberculosis as indicated by cases of the disease present.

PARATUBERCULOSIS OR JOHNE'S DISEASE. In tests made of cattle with either johnin or avian tuberculin for paratuberculosis the disease was found to occur in a slight degree in twelve States.

TICK FEVER AND CATTLE TICK ERADICATION. The continuation of the campaign against the cattle-fever tick that has been underway since 1906 led to the freeing during the year of the eight counties that had remained under quarantine for the cattle tick in Arkansas. This resulted in the complete release of that State, of seven counties and parts of two in Florida and of eleven counties in Texas. In the course of the work of the year 25,328,261 inspections or dippings of cattle and 2,368,581 of horses and mules were conducted requiring the use of more than 10,000 dipping vats. With the release of 20,290 square miles of territory the area remaining under Federal quarantine in continental United States was reduced to 12 per cent of its original size, and included only 101 of the 985 counties quarantined at the commencement of the work. With funds provided by a tick-eradication law recently enacted in Louisiana the work was commenced in three parishes of that State after several years of inactivity. The Australian variety of the cattle-fever tick which is thought to have a somewhat wider host range was found to occur quite generally in the infested area of Florida. In the enforcement of the regulations governing interstate movement of cattle and horses from the quarantined area 144,166 cattle were inspected or dipped and inspected and cer-

tificates issued authorizing their movement from such area.

INFECTIOUS ABORTION. The control work with infectious abortion went on and considerable progress was made by a number of States. There were reported to be 1000 certified abortion free herds in the United States on July 1 with Pennsylvania leading in the work, followed by Wisconsin and Illinois. Wisconsin increased its number of abortion-free herds to 500 during the year, about 300 veterinarians in the State having qualified to take part in conducting the tests. In Illinois there were 991 voluntary co-operating herd owners with 20,000 cattle under test in the project control of the disease, 110 veterinarians having been accredited to make the preliminary tests. In experiments conducted the causative organism, *Brucella abortus*, was transmitted to pregnant cattle through the intact as well as the abraded skin.

ANAPLASMOSIS IN CATTLE. In Florida the virus of anaplasmosis of cattle was found to be transmitted by adults of the common American dog tick, *Dermacentor variabilis*, when it has engorged in the larval and nymphal stages on clinical cases of the disease. The disease was transmitted mechanically in a mild form under favorable conditions by the horse fly *Tabanus fumipennis* and the stable fly, *Stomoxys calcitrans*.

MASTITIS OF DAIRY CATTLE. The activity in investigational work with mastitis of the cow due to streptococcus infection and more commonly known as garget was continued. Public health officials and owners of dairy cattle are becoming awakened to its importance. While the economic loss caused cannot be estimated it is thought to exceed that of either tuberculosis or infectious abortion. Encouraging results were obtained in work in Michigan where by use of both the autogenous vaccines and lactovaccines a definite protection was afforded all non-infected animals of lactation age in an infected herd.

DOURINE ERADICATION. The campaign to eradicate dourine from the San Carlos Indian Reservation in Arizona resulted in its complete elimination from that area. In the only area now known to harbor dourine infection which includes parts of Oregon, Idaho, and Nevada, now under State quarantines, it exists to a slight degree only.

EQUINE ENCEPHALOMYELITIS. This disease of the horse appeared in epizootic form along the Chesapeake Bay in Maryland and also in Delaware and caused the loss of a large number of animals. Studies in Nevada where the disease appeared in epizootic form in 1931 and 1932 suggest that virus carriers may occur among otherwise healthy horses. The work in that State led to the manufacture of a serum that has marked value as a therapeutic agent. When given early in an attack the death rate is lowered, convalescence is shortened and the percentage of animals showing permanent damage is greatly reduced. Preliminary trials indicate that its value for immunizing purposes is limited. Investigations have shown that the yellow fever mosquito may transmit the infection under natural conditions and indicate that other species of mosquitoes having a wider distribution in the area where the disease is enzootic may play a part.

SCABIES ERADICATION. In May the Federal quarantines on sheep scabies were released from areas that originally covered two million square miles in the western States. Eleven States are now entirely free from sheep scabies and in most of the others in the range country there are only occa-

sional cases, principally in feedlots where sheep have come in from infected districts. It is thought that the final eradication of isolated cases should not be difficult. In the eradication work with sheep carried on in coöperation with the State livestock sanitary authorities 19,366,650 inspections were made and 2,264,555 dippings supervised. In the eradication work with cattle scabies 2,697,251 inspections were made and 435,673 dippings supervised by Federal employees. Practically all the infection in cattle is now in four States.

INFECTIOUS LARYNGOTRACHEITIS. A method of vaccination against this disease was employed on poultry farms in New Jersey and California with considerable success. It consists in intracloacal inoculation with an exudate, obtained from the tracheas of infected chickens, which has been preserved by drying or mixing with a solution of glycerine. A plan has been developed in Massachusetts for its eradication and control which consists in the destruction of acute cases and chronic carriers, the destruction of the virus in the houses and yards occupied by flocks in which carriers are suspected and the prevention of reintroduction of the virus into clean flocks.

FOWL POX. Work that has been carried on in New Hampshire for several years has shown that birds can be vaccinated by the so-called stick method with as favorable results as with the follicle method and that (1) they can be vaccinated three times as fast; (2) one-third the amount of vaccine is required; (3) the reaction is less, and (4) the number of head lesions is substantially reduced. Work in Texas has led to the conclusion that healthy and vigorous day-old chicks and poults can be safely and successfully vaccinated against fowl pox by using the fowl pox virus vaccine without causing any apparent constitutional disturbance.

PULLORUM DISEASE. The control and eradication work with this disease of poultry was actively pressed in many of the States. The results that may be obtained when control work is consistently practiced is strikingly illustrated by the outcome in Massachusetts where it has been underway since 1919. During the year 1932-33, 296,093 birds in 335 flocks were tested with but .45 per cent reacting, the lowest attained in testing history. It was found that the rapid whole-blood test using stained antigen was about equal to the tube agglutination test in diagnostic value.

AVIAN COCCIDIOSIS. In the treatment of coccidiosis the use of vinegar in which the acetic acid content ran from 4 to 5 per cent reduced the mortality among infected chickens when used at a strength of 1 part to 79 of water. The amount of hemorrhage was decreased and the mass formation in the ceca of infected chickens was prevented.

TULAREMIA IN THE SAGE HEN. Investigations conducted in Montana during a localized epizootic in sage hens resulted in the recovery of the tularemia organism, *Bacterium tularense*, from both dead and killed sage hens and from infesting bird ticks. This finding adds further evidence that gallinaceous game birds constitute a potential source of human infection. The evidence secured indicates that this tick, *Haemaphysalis cinnabara*, is a natural carrier of the infection.

VIADUCTS. See BRIDGES.

VICTORIA. A southeasterly state of the Commonwealth of Australia. Area, 87,884 square miles; population (1933 census), 1,820,360. Melbourne, the capital, had 992,048 inhabitants (1933); other important cities were Geelong, 42,-

760; Ballarat, 41,750; Bendigo, 33,720. In 1931, there were 261,673 students enrolled in the various primary schools; in the 505 secondary schools 73,342 students were in attendance.

Wheat production for 1932-33 was estimated to be 47,843,129 bushels from a total of 3,230,955 acres. The production of wine in 1931-32 amounted to 1,530,061 gallons. Livestock (1932): 17,512,394 sheep; 1,900,922 cattle; 372,907 horses; and 287,627 pigs. The production of wool (greasy) for 1932 amounted to 159,275,416 lbs. Coal, kaolin, tin, gypsum, and gold are the principal minerals produced. Gold production for 1932 totaled 47,745 oz. valued at £284,823. From 8204 manufacturing establishments employing 128,265 employees the net value of production totaled \$37,819,628 for 1931-32.

Preliminary figures for 1932-33 show revenue amounting to £24,077,526; expenditure, £24,919,027; public debt, £171,399,027. Executive power is vested in a governor, acting through a responsible ministry, and legislative power in a parliament of two houses. Lord Huntingfield was appointed governor in 1933; Premier, Sir S. S. Argyle.

VILLA-URRUTIA, vél'yá-oor-roo'tyá, WENCESLAO RAMÍREZ, MARQUÉS DE. A Spanish diplomat, statesman, and scholar, died in Madrid about Apr. 21, 1933. Born in Havana, Cuba, in 1850, he studied law at the University of Madrid and entered the Spanish diplomatic service in 1868. After serving as attaché and secretary of various legations and embassies, including those in Washington, Berlin, London, Lisbon, and Paris, he was named Minister Resident at Caracas and then at The Hague. After being recalled to Madrid to act as Under-Secretary of State for Foreign Affairs, he was appointed Minister to Turkey. At the time of negotiating the Peace Treaty at Paris between Spain and the United States (1898) he was Spain's plenipotentiary. He was also a delegate for Spain at The Hague Peace Conferences of 1899 and 1907. Afterward he served as Ambassador to Austria and in 1905, as Minister of Foreign Affairs, accompanied King Alfonso on his first official visit to England and France.

Villa-Urrutia filled with distinction the posts of Ambassador to England (1906-13), to France (1913-14), and to Italy (1916-23). He published several works on history and diplomacy.

VILNA. See POLAND and LITHUANIA under Area and Population.

VIRGINIA. POPULATION. The population of the State on Apr. 1, 1930, according to the Fifteenth Census, was 2,421,851, as against 2,309,187 in 1920; Richmond, the capital, had (1930) 182,929 inhabitants; Norfolk, 129,710.

AGRICULTURE. The table on page 833 shows the acreage, production, and value of the principal crops for 1933 and 1932.

FINANCE. State expenditures in the year ended June 30, 1932, as reported by the U. S. Department of Commerce, were: for maintaining and operating governmental departments \$31,071,256 (of which \$7,304,067 was for local education); for interest on debt, \$942,724; for permanent improvements, \$10,479,054; total, \$42,493,034 (of which \$15,889,639 was for highways, \$6,890,953 being for maintenance and \$3,998,686 for construction). Revenues were \$42,198,545. Of these, property and special taxes furnished 18.9 per cent; departmental earnings and compensation to the State for officers' services, 12.4; sale of licenses, 53.1 (in which was included a gasoline

Crop	Year	Acres	Prod. Bu.	Value
Corn	1933	1,571,000	86,918,000	\$20,674,000
	1932	1,496,000	26,928,000	11,040,000
Hay (tame)	1933	875,000	992,000	11,110,000
	1932	882,000	757,000	7,797,000
Potatoes	1933	93,000	8,649,000	10,033,000
	1932	94,000	9,882,000	5,616,000
Tobacco	1933	122,000	90,725,000	12,200,000
	1932	91,000	55,618,000	4,746,000
Apples	1933	.....	10,900,000	6,540,000
	1932	.....	7,830,000	3,915,000
Wheat	1933	550,000	7,425,000	6,534,000
	1932	579,000	6,253,000	3,602,000
Peanuts	1933	118,000	112,100,000	2,802,000
	1932	145,000	155,150,000	2,017,000
Sweet potatoes	1933	35,000	3,885,000	2,137,000
	1932	38,000	3,610,000	1,083,000
Cotton	1933	65,000	38,000	1,805,000
	1932	70,000	34,000	986,000

^a Tons. ^b Pounds. ^c Bales.

sale tax that produced \$8,067,659). Funded debt outstanding on June 30, 1932, totaled \$26,343,219, of which \$5,428,000 was for highways. Net of sinking-fund assets, the debt was \$24,024,084.

EDUCATION. In the face of difficulty in meeting expenses for local school systems, schools were kept open during the academic year 1932-33 for eight months, in all but four counties, according to the *Journal* of the National Education Association; while in the latter four, the white schools remained open for eight months and the colored schools for seven. In a few counties some teachers gave time without pay in order that the eight months might be filled out; with these exceptions all teachers' salaries were reported to have been paid on time. Provision made by the extra session of the Legislature in 1933 helped render this possible.

For the academic year ending in 1933 there was a moderate increase of enrollment in the secondary grades, and a diminution of expenditures for the public schools as a whole. There were enrolled in the public schools 586,886 pupils. Of these, 485,998 were in common schools and elementary grades; in high schools, 100,898. The year's expenditures for public-school education were: for operation, \$17,826,198; for capital outlay and debt service, \$3,664,706. Salaries of teachers averaged \$743, as against \$877 for the year before.

LEGISLATION. A special session of the Legislature was convened in August. It created a State convention, to be composed of delegates elected by popular vote on November 7, who should act for the State on the proposed repeal of the Federal Eighteenth Amendment. It also passed an act to legalize the sale of beer of an alcoholic content not stronger than 3.2 per cent.

In anticipation of the coming into effect of the Federal Hawes-Cooper act as to interstate commerce in prison-made goods the prison commission was authorized to buy machinery for the manufacture of goods at the penal institutions of the State. For conformity with the requirements of the National recovery act the anti-trust laws of the State were temporarily suspended; State penalties were enacted against violations of industrial codes under the National Recovery Administration.

POLITICAL AND OTHER EVENTS. To prevent the wrecking of banks in the State by the withdrawals of deposits in the course of the Nation-wide banking panic, a two-day mandatory holiday period was proclaimed on March 4. After the end of the subsequent period of Federal closure the banks of the State were able generally to resume,

320 being reported open on the 15th, of which number two were subject to restriction as to the percentage of withdrawals.

Governor Pollard at first declined to summon an extra session of the Legislature to submit the choice of members for a State convention on the repeal of the Federal Eighteenth Amendment to a popular vote. The extra session was forced by petition of two-thirds of both the houses. The General Assembly having met and provided for the election of delegates to hold a convention, the voters gave a majority "for repeal," the vote being approximately 96,000 to 54,000. The vote was a referendum, but the ballots "for repeal" automatically elected a slate of 30 delegates at large, pledged to repeal, who met in State convention on October 25 and voted the State's adoption of the superseding amendment proposed by Congress. At the election of October 3, likewise, the popular vote approved the proposal to set up a system of State control of the liquor trade, in case it should again become permissible under Federal law, instead of retaining the State's old liquor laws.

Former Gov. Harry F. Byrd was appointed United States Senator on March 1 to succeed Senator Swanson, who had resigned to become Secretary of the Navy. George C. Peery won the Democratic nomination for Governor at the primary election of August 1 and was duly elected Governor at the general election of November 7; Senator Byrd was likewise elected then to the seat to which he had previously succeeded by nomination.

OFFICERS. The chief officers of the State, serving in 1933, were: Governor, John Garland Pollard; Lieutenant-Governor, James H. Price; Secretary of the Commonwealth, Peter Saunders; State Treasurer, John M. Purcell; Auditor, S. McCarthy Downs; Attorney General, John R. Saunders; Superintendent of Public Instruction, Dr. Sidney B. Hall.

Judiciary. Supreme Court of Appeals: President, Preston W. Campbell; Associate Justices, Louis E. Epes, H. W. Holt, E. W. Hudgins, H. B. Gregory, George L. Browning, Joseph W. Chinn.

VIRGINIA, UNIVERSITY OF. A nonsectarian institution of higher education at Charlottesville, Va., founded in 1819. The enrollment for the autumn session of 1933 was 2256, distributed as follows: College, 1330; medicine, 231; law, 260; engineering, 144; education, 61; graduate studies, 230. For the summer session of 1933 there was an enrollment of 1163. The faculty numbered 148. The productive endowment amounted to \$10,000,000. The library contained 216,000 volumes. President, John Lloyd Newcomb.

VIRGIN ISLANDS. An insular possession of the United States, consisting of 50 small islands lying about 60 miles east of Puerto Rico in the Caribbean. The chief islands are St. Thomas (area, 28 square miles; population, 9834 in 1930); St. Croix (area, 84 square miles; population, 11,413 in 1930); and St. John (area, 20 square miles; population, 765). Total area, 132 square miles; population in 1930, 22,012. St. Thomas, the capital, had 7036 inhabitants in 1930. Negroes comprised 78 per cent of the 1930 population; mixed, 12 per cent; whites, 9 per cent. The death rate was 20.6 per thousand during the fiscal year ended June 30, 1933. The population decreased 15 per cent, largely through emigration to the United States, between 1917 and 1930. Public schools in 1932-33 had 120 teachers and 3411 pupils; private schools, 1208 pupils.

PRODUCTION, ETC. Cultivation of sugar cane and cattle growing are the chief industries. Eighty per cent of the area of St. Croix is devoted to cattle raising (total, about 3000 head in 1933) and is owned by a score of men. Sugar exports in 1932-33 were valued at \$305,794 (\$171,123 in 1931-32); bay rum (78,803 gallons), \$43,568; cattle (1957 head), \$43,335. Imports into the Virgin Islands in 1932-33 were valued at \$1,350,319 (\$1,415,915 in 1931-32) and exports were \$597,146 (\$458,694 in 1931-32). In the calendar year 1932 imports from the United States totaled \$929,980 and exports to the United States \$405,163; respective figures for 1933 were \$1,075,512 and \$516,846. During 1932-33, 472 vessels of over 100 registered tons called at the port of St. Thomas.

Federal appropriations expended in the islands during the 1932-33 fiscal year totaled \$556,773, a reduction from the \$637,971 originally appropriated. Administration of the islands was transferred from the Navy to the Interior Department effective Feb. 27, 1931, and a civil régime was established. Governor in 1933, Paul M. Pearson.

The United States Congress had before it in 1933 identical bills (H. R. 14319 and S. 5457) to provide a permanent form of civil government for the Virgin Islands. No action was taken up to the end of the year. The insular government during the year put into effect its plans for placing more people on the land. Tracts in St. Thomas and St. Croix were purchased, subdivided into parcels of from 2 to 10 acres, connected by roads, and distributed to homesteaders who were to pay for them by a small annual installment.

VITAL STATISTICS. In the death registration area of continental United States (exclusive of the State of Utah for which figures were not received) there were 1,304,109 deaths from all causes in 1932, representing a mortality rate of 10.9 per 1000 estimated population, according to the Bureau of Census. This is the lowest rate since the annual collection of mortality statistics was begun in 1900. It is estimated that 90.3 per cent of the total population of the United States was included in the registration area for the year 1932.

The total deaths from all causes in 1932, exclusive of Utah, were 1,304,109; in 1931, 1,318,109; and in 1930, 1,338,292. The table on page 835 gives the number of deaths from the larger number of causes and the death-rate per 100,000 of the estimated population for the years 1930, 1931, and 1932. The table is divided into the eighteen major classifications, and under them are included the larger groups. Space does not permit the tabulation of groups in which the death-rate was less than 5 per 100,000, except in cases of notable increase or decrease. The large decrease of over 9000 deaths from tuberculosis (all forms), and the drop in the death rate from 71.7 in 1930 to 63.0 in 1932 is most noteworthy.

The smaller number of violent and accidental deaths is due, principally to the decreased number of deaths from motor vehicles, which dropped from 29,885 in 1931, or 25.1 per 100,000 of population to 26,235 in 1932, or 21.9 per 100,000. In 1930 the deaths from this cause were 28,950, or 24.5 per 100,000. It is also interesting to note that, despite the depression, accidental deaths due to hunger and thirst totaled only 27, or less than one per 100,000 of the estimated population, throughout the whole United States; 33 in 1931, and 27 in 1930.

The outstanding groups in which large increases

were shown were cancers and other malignant tumors and diseases of the circulatory system.

Deaths due to diseases of the circulatory system increased numerically from 280,403 in 1930 to 294,596 in 1932, equivalent to death rates of 237.5 and 246.2, respectively. This large increase was due, principally, to diseases of the myocardium and of the coronary arteries, angina pectoris; chronic endocarditis, valvular diseases being the only cause in this group for which there was a considerable decrease in 1932 from 1930.

BIRTHS. The Bureau of Census reported that in the birth registration area of continental United States (exclusive of Massachusetts and Utah) during the calendar year 1932 there were 1,901,618 births, 113,061 deaths of infants under one year of age, and 75,105 stillbirths. These figures are equivalent to a birth rate of 17.3 per 1000 population, an infant mortality rate of 57.9 per 1000 live births, and a stillbirth rate of 3.8 per 100 live births. The corresponding final rates for 1931 for the same area were 18.0, 61.9, and 3.8, respectively.

The birth rate of 17.3 for the 44 States and the District of Columbia covered by the report is the lowest since the establishment of the Federal birth registration area in 1915. The infant mortality rate (57.9) was also lower than for any previous year. The stillbirth rate (3.8) was the same as for 1931 and has varied but very little since 1922, in which year the annual collection of stillbirth records was begun.

The urban part of the birth registration area of 1932, except Massachusetts and Utah, includes 864 cities, towns, and townships, with an estimated total population of 54,979,000 on July 1, 1932. In this urban area there were 896,334 births, 51,136 deaths of infants under one year of age, and 35,317 stillbirths. The rural part had an estimated population of 58,367,000, among which there were 1,065,284 births, 62,525 infant deaths, and 39,858 stillbirths. In the urban portion of the area the birth rate was 16.3 per 1000 population, the infant mortality rate 57.1 per 1000 live births, and the stillbirth rate 3.9 per 100 live births. The corresponding rates for the rural portion of the area were 18.3, 58.7, and 3.7, respectively.

The highest birth rates were for New Mexico, 28.0, North and South Carolina, each 23.7, and Alabama, 23.5. Nevada, Wyoming, and Delaware had the smallest number of births, but the States having the lowest birth rates were California and Oregon, each with 13.1, Nevada and Washington, each with 13.4, and Illinois, with a rate of 14.4. The highest infant mortality rate was for New Mexico (113.6), which was the only State with a rate higher than 100. Other States with high infant mortality rates were Arizona, Colorado, District of Columbia, South Carolina, and West Virginia. See CHILD WELFARE.

VITAMINS. See CHEMISTRY under *Other Developments*.

VONNOH, ROBERT (WILLIAM). An American portrait, figure, and landscape painter, died at Nice, France, Dec. 28, 1933. He was born in Hartford, Conn., Sept. 17, 1858, and studied at the Massachusetts Normal Art School in Boston and at the Julian Academy in Paris under Boulanger and Lefebvre. After his return to the United States in 1883 he served as principal of the East Boston Evening Drawing School (1883-85), instructor in painting at the Cowles Art School (1884-85), and principal instructor in portrait and figure painting at the School of the Boston

DEATHS AND DEATH RATES IN THE UNITED STATES REGISTRATION AREA, 1932, 1931, 1930

Cause of death	Number of deaths			Rate per 100,000 estimated population		
	1932	1931	1930	1932	1931	1930
Total deaths (all causes)	1,304,109	1,318,109	1,338,292	1090.0	1108.5	1132.6
Infectious and parasitic diseases	156,492	162,764	161,740	130.8	136.9	137.0
Typhoid fever	4,356	5,283	5,599	3.6	4.4	4.7
Measles	1,940	3,575	3,795	1.6	3.0	3.2
Whooping-cough	5,359	4,591	5,641	4.5	3.9	4.8
Diphtheria	5,409	5,723	5,806	4.5	4.8	4.9
Influenza	86,818	31,596	22,953	30.8	26.6	19.4
Dysentery	2,078	2,437	3,347	1.7	2.0	2.8
Acute poliomyelitis, acute polioencephalitis	824	2,090	1,369	0.7	1.8	1.2
Epidemic cerebrospinal meningitis	1,655	2,781	4,082	1.4	2.3	3.5
Tuberculosis (all forms)	75,398	81,280	84,595	63.0	68.4	71.7
Respiratory system	67,698	72,413	75,007	56.6	60.9	63.5
Syphilis	10,664	10,581	10,541	8.9	8.9	8.9
Malaria	2,567	2,536	3,403	2.1	2.1	2.9
Cancers and other tumors	123,181	123,557	120,537	107.1	104.0	102.1
Cancer of the digestive tract and peritoneum	60,607	58,595	57,842	50.7	49.3	48.8
Cancer of the respiratory system	4,533	4,022	3,835	3.8	3.4	3.2
Cancer of the uterus	14,871	14,433	14,074	12.4	12.1	11.9
Cancer of the breast	11,863	11,415	10,875	9.9	9.6	9.2
Cancer of the male genitourinary organs	9,546	9,151	8,616	8.0	7.7	7.3
Rheumatic diseases, nutritional diseases, diseases of the endocrine glands, and other general diseases	40,856	40,457	41,059	34.1	34.0	34.8
Diabetes mellitus	26,298	24,236	22,456	22.0	20.4	19.0
Pellagra	3,694	5,090	6,332	3.1	4.3	5.4
Diseases of thyroid and parathyroid glands	4,316	4,419	4,751	3.6	3.7	4.0
Diseases of the blood and blood-making organs	9,833	9,631	9,184	8.2	8.1	7.8
Chronic poisonings and intoxications	3,296	4,232	4,428	2.8	3.6	3.8
Alcoholism (acute or chronic)	3,045	3,926	4,148	2.5	3.3	3.5
Diseases of the nervous system and of the organs of special sense	129,297	129,586	132,435	108.1	109.0	112.2
Meningitis	2,335	2,775	3,039	2.0	2.3	2.6
Cerebral hemorrhage, cerebral embolism and thrombosis	104,636	103,140	105,013	87.5	86.7	89.0
Diseases of the circulatory system	294,596	280,422	280,403	246.2	235.8	237.5
Chronic endocarditis, valvular diseases	61,114	62,251	66,233	51.1	52.4	56.1
Diseases of the myocardium	125,134	117,551	115,491	104.6	98.9	97.8
Diseases of coronary arteries, angina pectoris	37,231	31,985	28,504	31.1	26.9	24.1
Other diseases of the heart	39,908	36,769	37,093	33.4	30.9	31.4
Arteriosclerosis (coronary arteries excepted)	20,504	21,007	21,835	17.1	17.7	18.5
Diseases of the respiratory system	105,555	110,617	112,716	88.2	93.0	95.5
Bronchitis	4,327	4,570	4,978	3.6	3.8	4.2
Bronchopneumonia (including capillary bronchitis)	39,015	39,977	40,449	32.6	33.6	34.3
Lobar pneumonia	49,376	52,950	53,589	41.3	44.5	45.4
Diseases of the digestive system	86,919	94,871	101,330	72.6	79.8	85.8
Diseases of buccal cavity and annexa and of pharynx, tonsils	5,165	5,689	5,634	4.3	4.8	4.8
Ulcer of stomach and duodenum	7,157	7,215	7,310	6.0	6.1	6.2
Diarrhea and enteritis (under two years)	14,353	16,667	23,243	12.0	15.7	19.7
Diarrhea and enteritis (two years and over)	5,230	5,997	7,877	4.4	5.0	6.7
Appendicitis	16,978	17,977	17,978	14.2	15.1	15.2
Hernia, intestinal obstruction	12,196	12,484	12,123	10.2	10.5	10.3
Cirrhosis of liver	8,663	8,822	8,567	7.2	7.4	7.3
Diseases of the genitourinary system	120,307	119,618	123,232	100.6	100.6	104.4
Chronic nephritis	91,813	90,714	92,047	76.7	76.3	78.0
Nephritis, unspecified (10 years and over)	8,360	8,559	10,061	7.0	7.2	8.5
Disease of prostate	6,704	6,500	6,429	5.6	5.5	5.4
Diseases of pregnancy, childbirth, and the puerperal state	13,241	14,188	15,101	11.1	11.9	12.8
Diseases of the skin and cellular tissue	1,892	2,147	2,114	1.6	1.8	1.8
Diseases of the bones and organs of locomotion	1,598	1,562	1,549	1.3	1.3	1.3
Congenital malformations	12,315	13,030	13,201	10.3	11.0	11.2
Diseases of early infancy	51,308	54,002	58,657	42.9	45.4	49.7
Congenital debility	3,852	4,388	4,689	3.2	3.7	4.0
Premature birth	32,963	34,274	37,221	27.6	28.8	31.5
Injury at birth	9,636	10,149	10,797	8.1	8.5	9.1
Other diseases peculiar to early infancy	4,857	5,191	5,950	4.1	4.4	5.0
Senility	10,145	10,375	11,700	8.5	8.7	9.9
Violent and accidental deaths	117,370	124,543	124,146	98.1	104.7	105.2
Suicide	20,880	20,030	18,496	17.5	16.8	15.7
Homicide	11,016	11,134	10,590	9.2	9.4	9.0
Accidental	85,474	93,379	95,060	71.4	78.5	80.5
Burns (conflagration excepted)	5,335	5,356	5,884	4.5	4.5	5.0
Drowning	6,169	6,615	6,618	5.2	5.6	5.6
By fall	17,806	17,417	17,324	14.9	14.6	14.7
By firearms (wounds of war excepted)	2,907	3,010	3,097	2.4	2.5	2.6
Ill-defined causes of death	20,908	22,407	24,760	17.5	18.8	21.0

Museum of Fine Arts (1885-87). After another four-year sojourn abroad, during which he exhibited in London, Paris, and Munich, he became principal instructor in portrait and figure painting at the Pennsylvania Academy of Fine Arts in Philadelphia.

On relinquishing the latter post in 1896 Mr. Vonnoh devoted most of his time to portraiture, displaying skillful characterization, able technique, and warm agreeable color. Good examples include: "La Mère Adèle (Metropolitan Museum of Art, New York City); "Bessie Potter Vonnoh" (Brooklyn Museum); "Portrait of the Artist"

(Pennsylvania Academy of Fine Arts, Philadelphia); "Dr. S. Weir Mitchell" (College of Physicians, Philadelphia); "John G. Milburn" (Buffalo Club, Buffalo, N. Y.); "Attorney General Griggs" (Department of Justice, Washington).

Mr. Vonnoh was elected an associate of the National Academy of Design in 1900 and an academician six years later. In 1906 his wife, Bessie Potter Vonnoh, the sculptor, was elected an associate, and for many years they were the only husband and wife so honored by the Academy.

WAGES. See STATISTICS.

WAGNER. See MUSIC.

WALES. See GREAT BRITAIN.

WALKING. See ATHLETICS, TRACK AND FIELD.

WALSH, THOMAS JAMES. An American lawyer and legislator, died enroute to Washington, D. C., Mar. 2, 1933. Born at Two Rivers, Wis., June 12, 1859, he received a public school education there. He taught school for several years at Sturgeon Bay and other towns in Wisconsin before entering the University of Wisconsin from which he obtained the LL.B. degree in 1884. His early practice was at Redfield, S. D., in association with his brother, Henry C. Walsh. Removing to Helena, Mont., in 1890, he thereafter made his home there, becoming interested, in addition to his law practice, in sheep raising. His protection of the rights of the employees of the great land and cattle companies cost him his election to Congress as Democratic Representative in 1906 and again as Senator in 1910. In 1912, however, he was successful in his campaign for the Senate, receiving the largest number of votes of any of the candidates, and through successive reelections in 1918, 1924, and 1930 was to have served until 1937.

In the Senate Mr. Walsh continued his championship of the cause of the weak and unprotected, advocating especially enactment of the child-labor amendment. He was also largely responsible for the passage in the Senate of the Anti-Injunction Act of 1932, forbidding issuance of Federal injunctions in labor troubles save on evidence produced before the court to the effect that irreparable damage to persons or property might ensue in the absence of the injunction; jury trials were to be granted to persons accused of violating such injunctions. His greatest service, however, was rendered in 1924 when, as acting chairman of a subcommittee of the Senate committee on public lands, he conducted a searching investigation of the leasing of oil fields by the Navy and Interior Departments. The scandal arose from the transfer of government oil reserves in California and Wyoming from the Navy Department to the Department of the Interior and their ensuing lease by Albert B. Fall, then Secretary of the Interior, to the Edward L. Doheny and Harry F. Sinclair oil interests. In spite of his friendship with Mr. Doheny Senator Walsh continued the investigation, revealing that Fall had been the recipient of a \$100,000 "loan" from Doheny. This exposure resulted in Fall's conviction on a charge of bribery in 1929.

Senator Walsh had been chairman of the Democratic National Conventions of 1924 and 1932 and had been rewarded for his warm support of President-elect Roosevelt by appointment as United States Attorney-General. He had been married five days previous to his death to Señora Mina Perez Chaumont de Truffin of Havana, Cuba, and was returning to Washington with his bride when death occurred.

WAR. See ARBITRATION, INTERNATIONAL; PEACE; BOLIVIA, PERU, JAPAN, CHINA, and MOROCCO under History.

WAR CLAIMS. See ARBITRATION, INTERNATIONAL.

WAR DEBTS. See REPARATIONS AND WAR DEBTS; UNITED STATES.

WASHBURN COLLEGE. A coeducational institution in Topeka, Kansas. The enrollment for the autumn session of 1933 was 859. There were 69 faculty members. Endowment was \$1,363,293. The income for the year was \$169,482. The library has approximately 40,000 volumes. President, Philip C. King, A.M., B.D.

WASHINGTON. POPULATION. The population of the State on Apr. 1, 1930, according to the Fifteenth Census, was 1,563,396, as against 1,356,621 in 1920. Seattle had (1930) 365,583 inhabitants; Spokane, 115,514; Tacoma, 106,817; Olympia, the capital, 11,733.

AGRICULTURE. The following table shows the acreage, production, and value of the principal crops for 1933 and 1932:

Crop	Year	Acreage	Prod. Bu.	Value
Apples . . .	1933	29,240,000		\$17,544,000
	1932	30,960,000		18,318,000
Wheat	1933 2,136,000	46,249,000		26,562,000
	1932 2,203,000	40,348,000		13,057,000
Hay (tame) .	1933 822,000	1,443,000 ^a		15,296,000
	1932 848,000	1,717,000 ^a		12,362,000
Potatoes . . .	1933 41,000	7,380,000		4,428,000
	1932 40,000	6,400,000		1,984,000
Oats	1933 179,000	9,487,000		3,131,000
	1932 166,000	8,300,000		2,158,000
Hops	1933 8,100	6,324,000 ^b		2,024,000
	1932 2,500	4,438,000 ^b		799,000
Corn	1933 41,000	1,558,000		779,000
	1932 38,000	1,311,000		498,000
Barley	1933 74,000	2,590,000		958,000
	1932 64,000	1,920,000		576,000

^a Tons. ^b Pounds.

FINANCE. State expenditures in the year ended Mar. 31, 1932, as reported by the U. S. Department of Commerce, were: for maintaining and operating governmental departments \$22,922,724 (of which \$8,530,863 was for local education); for interest on debt, \$539,800; for permanent improvements, \$15,512,726; total, \$38,975,340 (of which \$19,079,833 was for highways, \$4,420,394 being for maintenance and \$14,659,439 for construction). Revenues were \$40,265,584. Of these, property and special taxes furnished 34.1 per cent; departmental earnings and compensation to the State for officers' services, 6.1; sale of licenses, 42.1 (in which was included a gasoline sale tax that produced \$11,501,215). Funded debt outstanding on Mar. 31, 1932, totaled \$7,350,000, of which no part was offset by sinking-fund assets. On an assessed valuation of \$1,251,178,215 the State levied in the year ad-valorem taxes of \$12.-007,554.

EDUCATION. The State undertook, by legislation, to furnish a greater proportion of the total yearly cost of the public-school system. Its proportion, according to the *Journal* of the National Education Association, was raised to about one-half of that total. The apportionment of State aid, however, was made to rest not on the costs of the several school districts but on the numbers of pupils attending. Revenue for the consequent requirements on the State funds was provided by imposing a system of taxes on occupations.

The number of persons of school age in the State was reckoned for 1932 as 434,778. There were enrolled in the public schools, in the academic year ending with June, 1933, 342,077 pupils. Of these, 4381 were in kindergartens, 238,293 in elementary grades, and 100,003 (post-graduates included) in high schools. The year's expenditures for public-school education were: current, \$21,739,160; total (debt service and outlay included), \$24,065,702. The current total was about four-fifths of the corresponding figure for the year before. Teachers' salaries, for the year, averaged \$1388.35, which was about 14 per cent less than the figure for the year previous.

LEGISLATION. A regular session of the Legislature convened on January 9. It created a State convention of 99 delegates, to be elected by

popular vote on August 29, who should act for the State on the proposed repeal of the Eighteenth Amendment of the Federal Constitution. A tax on chain stores was voted by the Legislature but was vetoed by Governor Martin. A classified tax on occupations was enacted. Provision was made for the issuance of \$10,000,000 of State bonds to furnish the means with which to afford relief to the State's needy unemployed persons; to give the issue the color of conformity with the State constitution the law authorizing the issue represented it as needed to suppress an incipient insurrection arising out of widespread unemployment, hardship, and suffering. The Legislature voted the State's ratification of the proposed Federal constitutional amendment to limit child labor. A system of pensions for needy aged inhabitants of the State was created. Betting on horse races was rendered lawful under the pari-mutuel system.

POLITICAL AND OTHER EVENTS. A State banking holiday period of three days was declared on March 2 to prevent the insolvency of banks overwhelmed with withdrawals during the banking panic. The Federal closure of banks followed. When banks began to resume, 20 of those in the State were reported to have opened by the 15th. At an election on August 29 the voters, favoring repeal of the Federal Eighteenth Amendment by more than 2 to 1, chose delegates who met in State convention on October 3 and voted the State's adoption of repeal through the superseding amendment proposed by Congress.

The State's tax on incomes, which had been adopted by popular vote in November, 1932, was found unconstitutional by the State supreme court in September, in that it failed to conform with the State constitution's requirement that taxes be uniform on the same class of property. At the same time the court declared the State's law of 1933 taxing occupations and sales to be constitutional. In June the State supreme court affirmed the constitutionality of the measure of 1933 providing for the issuance of \$10,000,000 of State bonds without previous popular assent through referendum; the majority of the court upheld the theory that the State constitution permitted the State government to issue bonds without referendum in order to quell an insurrection, and that widespread distress and unemployment might be taken to create an "incipient insurrection." Allotment was made by the Federal public-works administration for the construction of a \$63,000,000 dam and hydroelectric station at Grande Coulee on the Columbia River.

At Seattle several thousand persons rioting because of discontent with the lack of greater provision for the relief of the needy forcibly seized the county and city building on February 14 and held possession of it for several days. The mob had gathered from many parts of the State to protest against a change from the distribution of doles through a public commissary to provision for the needy by the issue of vouchers.

OFFICERS. The chief officers of the State, serving in 1933, were: Governor, Clarence D. Martin; Lieutenant-Governor, Victor A. Meyers; Secretary of State, Dr. Ernest N. Hutchinson; Auditor, Cliff Yelle; Treasurer, Otto A. Case; Attorney General, G. W. Hamilton; Superintendent of Public Instruction, N. D. Showalter.

Judiciary. Supreme Court: Chief Justice, Walter B. Beals; Associate Justices, Warren W. Tolman, John R. Mitchell, John F. Main, O. R. Hol-

comb, W. J. Millard, W. J. Steinert, Bruce Blake, and James M. Geraghty.

WASHINGTON, THE STATE COLLEGE OF. A coeducational institution for higher learning at Pullman, Wash., founded in 1890 by an act of the State Legislature. The enrollment for the autumn of 1933 was 2591. The summer session had an attendance of 575. There were 323 faculty members. The land grant endowment amounted to \$3,199,497; the total income for the year was \$1,514,761. The library contained 245,000 volumes, President, Ernest O. Holland, Ph.D.

WASHINGTON, UNIVERSITY OF. A State institution of higher education in Seattle, Washington, founded in 1861. The enrollment for the summer term of 1933 was 1975; autumn quarter, 7255. The faculty numbered 339 members. For biennium (Apr. 1, 1933 to Mar. 31, 1935) the estimated amount of endowment and income combined was \$3,301,924. The John T. Condon Hall for the Law School, erected at a cost of \$376,565, was dedicated during the year. Volumes in the University Library numbered 270,819. There are also 69,575 volumes in the Law Library. Acting President, Hugo Winkenwerder.

WASHINGTON AND JEFFERSON COLLEGE. An institution for the higher education of men, located in Washington, Pa. Enrollment for the fall semester of 1933-34 totaled 426 undergraduates and 22 graduate students. The 1933 summer enrollment was 128. The faculty for 1933-34 numbered 33. The productive funds of the college amounted to \$1,545,441 and the income from all sources was approximately \$183,406. The library contained 51,561 volumes. President, Ralph Cooper Hutchison, Ph.D., D.D.

WASHINGTON AND LEE UNIVERSITY. A nonsectarian institution for the higher education of men in Lexington, Va., founded in 1749. The enrollment for the autumn of 1933 was 814. There were 53 members on the faculty. The productive funds of the university amounted to \$1,495,288, and the income for the year was \$293,230. The number of volumes in the library was approximately 70,000. President, Francis Pendleton Gaines, Ph.D., Litt.D., LL.D.

WASHINGTON UNIVERSITY. A nonsectarian institution of higher learning for men and women in St. Louis, Mo., founded in 1853. The enrollment on Nov. 1, 1933, was 6478. The faculty for 1932-33 numbered 597. The income for the year was \$2,452,974. Chancellor, George R. Throop, Ph.D., LL.D.

WATER POWER. The outstanding event of the year in the field of water power was the creation, by Congress, of the Tennessee Valley Authority, charged with a comprehensive social and power development of that section. As stated by David E. Lilienthal, one of the commissioners, the power policy involves two main objectives, namely, "more effective protection of the public interest, by setting up a measure of public operation of power as a yardstick, and greatly increased use of electricity in the homes, the farms and the factories." To this end, construction has already started on the Norris Dam and the Joe Wheeler Dam to supplement the power already available at Wilson Dam, and contracts have been entered into with several municipalities for the supply of power. With the completion of the two dams now under construction the total primary power available, including that at Wilson Dam, will be over 600,000 horsepower.

The treaty with Canada for the development of

St. Lawrence River power along the International Section is still pending ratification by Canada and by the United States Senate.

As a part of the Public Works programme, the Federal government recently provided funds for two large water-power developments on the Columbia River. One, the Grand Coulee in Washington, will have a capacity of 700,000 horsepower and the other, the Bonneville, 40 miles from Portland, Ore., will have 90,000 horsepower installed initially and 540,000 horsepower ultimately.

Work progressed during the year on the Boulder Dam (formerly called Hoover Dam) on the Colorado River. Four 115,000 horsepower and two 55,000 horsepower units have been ordered to date, the former being the largest capacity water turbines in existence. Owing to the immensity of the project, its location and the size of its components, a large fabricating plant has been erected on the site in which X-ray apparatus is employed to examine the welded penstocks and other parts subject to high pressures.

Abroad there is being built in Switzerland the Dixence Development of 157,000 kilowatts capacity which will establish a record for high-head plants as it will contain five Pelton-type water wheels operating under a head of 5740 feet. The Zappello Development in Italy, which was completed about a year ago, holds the record for the Francis type turbine as it operates under 1100 feet head.

Pumped storage has been used much more extensively in Europe than in the United States and several plants of that type are now under construction in Germany and Switzerland. In this connection turbine runners have been so designed that the units can be used alternately as water-turbine generators or motor-driven pumps.

In England, after seven years of study, the Severn Barrage Committee of the Economic Advisory Council recently made its final report on the large tidal-power development of the Severn River. The project involves two power stations, one at the barrage to utilize the tides directly and the other, a high-head, pumped-storage development on the River Wyre, about ten miles above. The tides on the Severn range from 15 to 50 feet and it is estimated that a maximum of 1,224,000 horsepower could be made available in seventy-two units. Construction has not yet started but a 50-foot model has been built and is to be seen at Manchester University.

According to the latest figures of the Edison Electric Institute the present hydro-electric generating capacity installed in central stations in the United States is 9,002,800 kilowatts out of a total capacity of 33,517,300 kilowatts. The proportion of utility power generated by water power for the first eleven months of 1933 was 40.2 per cent.

WATER TURBINES. See ELECTRIC LIGHT AND POWER INDUSTRY.

WATERWORKS AND WATER TREATMENT. Under its first five-year plan (see UNION OF SOVIET SOCIALIST REPUBLICS) Russia increased its number of waterworks from 293 in 1927 to 379 in 1932. It had 227 waterworks in 1917 and 151 in 1908 (see SEWERAGE). During the year work was continued on a number of large American and Canadian projects which have been described in earlier YEAR BOOKS: *Boston* and vicinity, by the *Metropolitan District Water Supply Commission*, ultimately 194,000,000 gallons

from the Ware and Swift rivers, including an immense storage reservoir on the Swift, formed by two large earth dams, and 24.6 miles of aqueduct in tunnel, both reservoir and aqueduct named Quabbin; the easterly 14 miles of the aqueduct, leading from a diverting dam on the Ware to the existing Wachusett Reservoir on the Nashua River, has been in use since 1931. *New York City*, a second deep under-pressure tunnel from the terminal reservoir of the Catskill Aqueduct to connections with various feeder mains in the distribution system; virtually completed except for gates and connections. *Chicago*, work well advanced on 11½ miles of tunnel from a new intake crib in Lake Michigan to a pumping station ten miles inland; also a new pumping station with six 50,000,000-gallon electrically-driven centrifugal pumps. *Denver*, bringing water from Fraser River and Jim Creek by way of the pioneer bore for the Moffat railway tunnel beneath the Continental Divide. *San Francisco*, Hetch Hetchy Aqueduct from the O'Shaughnessy Reservoir on the Tuolumne River in the Sierras, including the Coast Range Tunnel 28.6 miles long. *Los Angeles* and other cities forming the *Metropolitan Water District* of Southern California, several tunnel contracts let in 1933 for the construction of the Los Angeles—Colorado River Aqueduct.

WATER TANKS. A 6,000,000-gallon covered steel tank, resting on the ground, was completed for *Milwaukee*. It is 165 ft. in diameter and has a water depth of 37½ ft. It has electrically-welded joints (see *Engineering News-Record*, May 11, 1933; *Water Works and Sewerage*, July, 1933). At *Sheboygan*, Wis., there was completed in July a 4,000,000-gallon elevated covered steel tank, 185 ft. in diameter, with a water depth of 20 ft. Its bottom and roof plates have welded joints, and its side plates have riveted joints. The tank rests on a 16-in. concrete slab, projecting a few feet beyond the tank to support a pilastered and window-pierced brick wall for architectural effect. The elevated portion of the structure rests on reinforced-concrete columns and piers (see *American City* and also *Water Works and Sewerage*, September issues). An elevated steel water tank and aerator, an unusual combination, was built at *Garden City*, N. Y. The aerator consists of trays, hung from the roof trusses. Water is pumped to the trays and cascades into the tank, which has a capacity of 1,000,000 gallons. The tank and aerator are supported by steel columns 100 ft. high.

WATER TREATMENT. A census published during the year showed 3106 water treatment plants in the United States. Of these, 1722 employed various combinations of processes, generally including coagulation, sedimentation, filtration and chlorination, while 1384 used chlorination alone. Most of the 1722 plants are used for clarification and bacterial reduction, some for color removal. Several score plants soften the water; a few remove both iron and manganese. The population supplied with treated water totaled 58,500,000. The *Chicago* experimental water treatment station, operated from 1928 to 1932, was continued in use for special studies. The city engineering department, in November, recommended as a start toward the treatment of the billion gallons a day Chicago consumes and wastes a 304,000,000-gallon rapid filtration plant for the southern third of the city; also complete metering for that section; estimated cost, \$165,000,000. On No-

venber 14, the city council voted to request a loan for filters from the P.W.A. (q.v.) but took no action on meters. Both filters and meters were included in the United States Supreme Court decision of Jan. 14, 1929, in the suit against the Sanitary District of Chicago (see SEWERAGE in this and earlier YEAR BOOKS). Canada had 125 water filtration plants at the beginning of 1933. Chlorination was practiced in 180 cities, in 75 of which it was the only treatment given. A 48,000,000-gallon (U. S.) rapid filter plant was completed at Hamilton, Ont., and a 31,600,000-gallon (U. S.) plant at Calgary, Alta. Poland: An American company completed a 60,000,000-gallon rapid filter plant for Warsaw, where, a half century ago, slow sand filters, designed by a British engineer, were installed.

Consult Thomas, *Sanitation of Water Supplies* (Springfield, Ill.); Streeter, committee chairman, *Census of Municipal Water Purification Plants in the United States* (New York); and for Canada, "Water Works Statistics" in the *Canadian Engineer*, Mar. 23, 1933.

WAUTERS, EMILE CHARLES MARIE. A Belgian painter, died in Paris, France, Dec. 11, 1933. Born in Brussels, Nov. 29, 1846, he received his art education at the Academy of Fine Arts there, later entering the ateliers of Portaels, the Belgian painter, and Gérôme, the French master. Under such tutelage Wauters was destined to become one of the foremost historic painters of the latter part of the nineteenth century. At the age of 22 he exhibited at the Brussels Salon "The Battle of Hastings: The Finding of the Body of Harold by Edith" and "The Great Nave of the Church of St. Mark in Venice." The former was purchased by King Leopold II for the Belgian Royal Collection, while the latter secured for Wauters the commission from the Minister of Fine Arts of artist-delegate to the opening of the Suez Canal in November, 1869. The following year he created another sensation at the Brussels Salon with "Mary of Burgundy Entreating the Sheriffs of Ghent to Pardon Her Councilors Hugonet and Humbercourt" (now in the Liège Museum).

"The Madness of Hugo van der Goes," which Wauters exhibited in 1872, led to the conferring on him of further honors. Not only was the picture purchased by the State for the Brussels Museum but he was commissioned by the municipal government to decorate the Lions' Staircase of the Hôtel de Ville in Brussels with two murals, representing "Mary of Burgundy Swearing to Respect the Communal Rights of Brussels" and "The Armed Citizens of Brussels Demanding the Charta from Duke John IV of Brabant." At exhibitions in Brussels, Vienna, Munich, and The Hague there was displayed during the '80s his vast panorama, 380 feet long by 49 feet high, entitled "Cairo and the Banks of the Nile"; its final home was the Cinquantenaire Museum in Brussels.

About 1900 Wauters established his studio in Paris and there became known, with Boldini and Sargent, as one of the greatest portrait painters of the period. Among the distinguished persons who sat for him were the Princess Clémentine of Belgium, Baron Rothschild, General Wrangel, Madame Melba, Baron and Baroness Goffinet.

WEED DESTRUCTION. See CHEMISTRY, INDUSTRIAL OR APPLIED.

WEEVILS. See COTTON; ENTOMOLOGY, ECONOMIC.

WELFARE WORK. FEDERAL EMERGENCY RE-

LIEF. According to Mr. Harry L. Hopkins, Federal Emergency Relief Administrator, writing in September, there were 3,530,000 families receiving relief from public funds in the United States. He pointed out that while the number was large, it represented the decline of 1,000,000 from the 4,530,000 families who were receiving relief in March, 1933. These 3,530,000 families included approximately 15,850,000 persons, about 6,000,000 of whom were children under 16 years of age.

The Federal Emergency Relief Act was approved May 12, 1933. That act made available \$500,000,000 to be expended through the States for the assistance of the unemployed through either direct relief or work relief. Of this sum, half was to be allotted to the various States on a basis of \$1 of Federal funds for \$3 of local money, while the other half was to be expended in direct grants to States whose relief needs were too great or whose financial resources too inadequate to enable them to meet the situation. At the time the administrator provided for under the act took office (May 22, 1933) it was estimated that some 4,000,000 families, representing 18,000,000 persons, were receiving relief from public funds. Of the \$100,253,444 of Federal money disbursed under the relief act during the period ending July 31, all but \$6,937,459 was on the "matched-funds" basis. Since the latter part of July, 1932, the Federal government spent \$464,000,000 on unemployment relief. Of this sum \$300,000,000 was expended by the Reconstruction Finance Corporation's emergency relief division and \$164,000,000 by the Federal Emergency Relief Administration, which began to function as an independent organization on May 22 of the year. States and municipalities, during the first seven months of 1933—January to July inclusive—spent approximately \$190,000,000 for relief and the Federal government expended \$290,000,000 for that purpose. On September 18 the Relief Administration had a balance of \$336,000,000 in the Treasury for relief work. The decline of a million in the number of families who were on relief in March resulted from three causes, according to Mr. Hopkins: "First—Tightening up of administrative machinery throughout the United States. This, in substance, meant careful investigation of all families on relief and a more thorough scrutiny of the needs of new applicants. Second—A seasonal decline which always occurs in the summer months. Third—The first favorable results of the recovery programme." In projecting the extent of relief to be resumed during the winter, three things were to be borne in mind, according to Mr. Hopkins. First, that practically all of the unemployed were on relief rolls, together with a very large proportion of the old people. Second, far more of the new jobs would in all probability go to the self-sustaining unemployed who had never been on the relief rolls than to those who were cared for through public funds. This was because those employees who were last to be discharged were likely to be returned to employment first. Finally, a great many of the unemployed who, though they had been able to maintain themselves without relief up to the present time, would find it increasingly difficult to do so; the result would be that there would still be in every community new applicants for relief, a great majority of whom upon investigation were found eligible for assistance. Assistance to the three and a half million families was furnished largely by work relief; that is, work on public projects such as

buildings of parks, swimming pools, roads, and so forth, under the supervision of local agencies. This work was paid for at the minimum rate of 35 cents an hour and enough hours per month were given to each family to assure its members the necessities of life. The actual sum was determined by the size of the family and the cost of living in the region in which it lived. One of the most serious problems which confronted officials was the non-family group, the single men and women, in particular those who had no legal residence and who are known by relief workers as transients. A programme was being developed throughout the country, the primary purpose of which would be to provide for them and to discourage their wandering about seeking work in areas where there was little or no chance of their getting it.

FEDERAL CIVIL WORKS ADMINISTRATION. On Nov. 9, 1933, the President created the Civil Works Administration and appointed Harry L. Hopkins Federal Emergency Relief Administrator to act as administrator of the new agency. The purpose of the Civil Works Administration is to provide immediately "regular work at regular wages" for able-bodied unemployed persons now on work relief. To this end the administrator was to finance local civil works projects. In order to insure speed, local relief administrations were to be designated as civil works administrations and were to be given authority to pass upon projects submitted for approval up to a certain amount. Beyond that sum the matter was to be referred to the State Civil Works Administration. Under this procedure, only in unusual cases would reference have to be made to Washington for decision.

Before the year was over it was roughly estimated that at least 2,000,000 persons were working under the Civil Works programme and the Civil Works Service Bureau programme, which had been set up to provide employment for white collar workers. Prevailing wages under Civil Works projects went up as high as \$60 a week for the supervisory staff. On the other hand under the Civil Works Service Bureau projects, wages for white collar workers did not exceed \$35 a week for supervisors. The minimum wage rates under the C.W.A. were 40 cents to 50 cents an hour for unskilled and \$1 to \$1.20 an hour for skilled labor in terms of a thirty-hour week. It was indicated originally that the Civil Works programme was to continue until about the middle of February, 1934, in the hope that industry and trade by that time would have sufficiently improved and that the Public Works programme would be in a position to help absorb those who would be unemployed. However, before the year was over, the President declared it his intention to ask Congress for supplementary appropriations to make possible the continuance of the C.W.A. programme at least until the first of May. According to the Civil Works Administration its programme was based on the recognition that "relief is not enough." This statement went on to say: "Relief as a method of alleviating physical hardship has been unavoidable. It has served as a stop gap until we could devise a better way. It has maintained existence for millions but contributed nothing toward the recovery of human values. . . . It is the purpose of the C.W.A. to take all able-bodied persons now receiving relief and put them at work on regular jobs at regular wages. . . . This programme lifts millions of workers and their families from the low level of relief to the real

way of social and economic recovery, not only for individuals, but for the nation. It raises their manner of living from charity to self-sustaining consumers of goods earned by their own labor." It was estimated that the creation of jobs under the C.W.A. would involve the expenditure of approximately \$700,000,000, at least by the end of February. Of this sum, \$400,000,000 was to come from the Public Works Administration funds, \$100,000,000 from Federal Emergency Relief funds, and about \$200,000,000 from local jurisdictions.

COMMUNITY CHEST DRIVE. Despite the heroic efforts made by the government to cope with the problem of unemployment and distress, it was plain that the continuance of private agencies was still necessary, certainly to take care of case work problems, if not of outdoor relief. Private agencies providing medical care for the sick, homes for the crippled, orphans, aged, places of shelter for vagrants and transients, vocational instruction, institutions for rehabilitation and the like, were finding themselves particularly hard pressed for funds. Because of the existence of the national emergency the Federal government continued to express its interest in the financial drives of the local community chests and in the autumn gave its support for the third year to this campaign. In 1933 the campaign was called the "Mobilization for Human Needs" and was headed by Mr. Newton D. Baker, Secretary of War in President Wilson's Cabinet. Mr. Baker, pointing to the needs of the private welfare agencies, said:

Institutions which work in fair weather, but break down in times of stress, find no permanent allegiance united in their support. In this view our response to this crisis may in some degree measure the confidence with which we build upon democracy as a permanent form of social organization.

The combined community chest drive by the end of the year had collected \$50,299,875 in 195 community chest campaigns. According to Mr. Baker, in a New Year's letter which he sent to Mr. Roosevelt, there were still to be heard from 155 community chest campaigns and the 70 cities which made their appeals in the winter and spring. The funds gathered by these organizations were expected to increase the total to approximately \$64,000,000; also reports from joint campaigns in non-chest cities would further swell the amount to over \$80,000,000. Mr. Baker declared that one-half of the 195 cities that had completed their drives reached 86.5 per cent of their goals. Fifty-five reached or exceeded their goals and 25 raised more money than the year before. In 1932 the total amount raised by 394 chests reached the sum of \$101,181,949. In 1933, 397 chests, due largely to the advent of Federal relief, succeeded in raising only \$77,646,714.

WELLESLEY COLLEGE. A nonsectarian institution for the higher education of women in Wellesley, Mass. The enrollment for the academic year 1933-34 was 1505. The teaching staff numbered 173. The current income for the year 1932-33 was \$8,236,147. The library contained 154,000 volumes. President, Ellen F. Pendleton, Litt.D., LL.D.

WELLS COLLEGE. An institution of higher learning for women in Aurora, N. Y., founded in 1868. The enrollment for the autumn of 1933 was 228. The faculty numbered 43 members. The endowment amounted to \$1,552,761, and the income for the year from invested funds, tuition, etc., was \$344,112. There were approximately 74,158 volumes in the library. A new administration

building, containing offices, classrooms, departmental rooms, psychological laboratories, and a convocation hall, was completed during 1933; the total cost was about \$513,194. President, Kerr Duncan Macmillan, S.T.D.

WESLEYAN UNIVERSITY. An institution for the higher education of men in Middletown, Conn., founded in 1831. The 1933 autumn enrollment was 653. The faculty numbered 75. The productive funds of the university for 1933 were \$5,060,885, and the income for the year was \$609,390. President, James L. McConaughy, Ph.D.

WEST, MAE. See MOTION PICTURES.

WESTERN AUSTRALIA. The westerly state of the Australian Commonwealth, having a total area of 975,920 square miles and a population (1933 census) of 438,948. Perth, the capital city, had 207,464 inhabitants (1933). In 1932, births totaled 4115; marriages, 2904; deaths, 3715. There were a total of 4,259,000 acres under crop during 1932-33; wheat accounted for 3,387,940 acres from which the production amounted to 41,655,000 bushels.

In the fiscal year ending June 30, 1933, revenue amounted to £8,332,153; expenditure, £9,196,234; public debt, £83,514,698. Executive power is vested in a governor, acting through a responsible ministry, and legislative power in a parliament of two houses. Governor (vacant); Sir J. Mitchell was appointed in July, 1933 to succeed Sir J. A. Northmore as lieutenant-governor; Premier, Philip Collier. See AUSTRALIA under *History*.

WESTERN RESERVE UNIVERSITY. A nonsectarian institution for the higher education of men and women in Cleveland, O., chartered in 1826. The enrollment in thirteen colleges and schools for the autumn of 1933, excluding duplicates, was: full-time students 3357, part-time students 3277. Enrollment in 1933 summer session was 1147. The faculty numbered 612. The endowment amounted to \$11,877,576, and the income for the year 1932-33 was \$2,065,143. President, Robert E. Vinson, D.D., LL.D., L.H.D.

WESTERN SAMOA. See SAMOA.

WESTER WEMYSS, wester wēmz, ROSSLYN ERSKINE WEMYSS, FIRST BARON. A British naval officer, died at Cannes, France, May 24, 1933. Born Apr. 12, 1864, he entered the navy in 1877, being promoted to lieutenant in 1887 and commander in 1898. In 1901 he commanded the *Ophir*, on which the Duke and Duchess of Cornwall and York (later King George and Queen Mary) visited the British colonies and dominions, and on his return was made a member of the Royal Victorian Order and was promoted to the rank of captain. After serving as commodore during 1911-12 of the Royal Naval barracks, he was promoted to rear admiral in command of the Second Battle Squadron, his flag ship being the *Orion*. During the early part of the World War he commanded a cruiser squadron which patrolled the English Channel and acted as convoy in the transportation of British troops to France. Four of the cruisers acted also as convoys to the first contingent of the expeditionary forces sent by Canada. From the island of Lemnos, in the double capacity of governor and senior naval officer, he directed in April, 1915, the landing of troops in Gallipoli and the later withdrawal in December, when evacuation of the peninsula had been decided upon.

In 1916 Admiral Wemyss was made commander-in-chief of the East Indies and Egypt, but the following year was recalled by the Admiralty to

serve as deputy first sea lord. He succeeded Jellicoe as first sea lord in January, 1918, and in that capacity concentrated on the direction of anti-submarine operations. He was present with Marshal Foch, General Weygand, and Rear Admiral George Hope as the Allied representatives at the signing of the Armistice on Nov. 11, 1918.

On his retirement as first sea Lord in 1919 he was promoted to Admiral of the Fleet and was made Baron Wester Wemyss of Wemyss. He wrote *The Navy in the Dardanelles Campaign* (1924).

WEST POINT. See UNITED STATES MILITARY ACADEMY.

WEST VIRGINIA. POPULATION. The population of the State on Apr. 1, 1933, according to the Fifteenth Census, was 1,729,205; in 1933 (Federal estimate) it was 1,774,000. Wheeling had (1930) 61,659 inhabitants; Huntington, 75,572; Charleston, the capital, 60,408.

AGRICULTURE. The following table shows the acreage, production, and value of the principal crops for 1933 and 1932:

Crop	Year	Acreage	Prod Bu	Value
Hay (tame)	1933	626,000	690,000*	\$7,728,000
	1932	620,000	558,000*	5,636,000
Corn	1933	464,000	13,920,000	8,352,000
	1932	446,000	11,150,000	5,018,000
Apples	1933	.....	4,200,000	2,940,000
	1932	.....	4,191,000	2,515,000
Potatoes	1933	37,000	2,331,000	2,331,000
	1932	41,000	3,485,000	2,091,000
Oats	1933	124,000	2,356,000	1,013,000
	1932	138,000	3,036,000	941,000
Wheat	1933	124,000	1,798,000	1,546,000
	1932	116,000	1,276,000	727,000

* Tons

MINERAL PRODUCTION. The State ranked as the Union's leading producer of bituminous coal in 1932, moderately increasing its lead over Pennsylvania. With regard to the volume of its production, however, it receded, the gain over Pennsylvania being only relative and due to heavier recession in Pennsylvania's case. West Virginia's production of coal fell to 83,765,000 net tons (1932), from 101,473,172 (1931).

The smelting of iron from extraneous ores was much reduced, to 224,032 gross tons of pig iron (1932), from 605,634 (1931). The production of coke, of which about 95 per cent was in by-product ovens, attained the quantity of 950,514 net tons (1932) and the value of \$2,144,187. Petroleum production totaled 3,882,000 barrels (1932), as against 4,472,000 for 1931. The output of natural gas was restricted in 1932 by reduced domestic demand. There were produced 46,363,000 gallons (1932) of gasoline derived from natural gas, as against 52,844,000 (1931).

FINANCE. State expenditures in the year ended June 30, 1932, as reported by the U. S. Department of Commerce, were: for maintaining and operating governmental departments \$14,306,676 (of which \$1,710,964 was for local education); for interest on debt, \$3,599,956; for permanent improvements, \$13,716,448; total, \$31,623,080 (of which \$16,144,049 was for highways, \$4,048,923 being for maintenance and \$12,095,126 for construction). Revenues were \$24,118,342. Of these, property and special taxes furnished 20.5 per cent; departmental earnings and compensation to the State for officers' services, 7.9; sale of licenses, 55.2 (in which was included a gasoline sale tax that produced \$5,497,667). Funded debt outstanding on June 30, 1932, totaled \$86,070,400, of which \$81,730,000 was for

highways. Net of sinking-fund assets, the debt was \$82,843,930. On an assessed valuation of \$1,877,968,467 the State levied in the year ad-valorem taxes of \$3,568,140.

EDUCATION. The State was conspicuous for having, in the adverse year 1933, fundamentally reorganized its system of public schools. The old magisterial and independent districts, numbering 385, were abolished; in their place were created 55 county districts. Consolidations of schools, in connection with this change, reduced the number of teachers employed and, at the same time, rendered it possible to elevate the requirements for teachers' certificates. The State became contributor of nearly one-third of the current expenditures of the elementary and high schools.

The number of persons of school age in the State, as reckoned for the academic year 1931-32, was 541,545. There were enrolled in the public schools, in September, 1933, 432,949 pupils. Of these, 334,000 were in common schools or elementary grades; in high schools, 98,949. The expenditures of the year 1932-33 for public-school education totaled \$23,258,925. Salaries of teachers averaged \$1088.

LEGISLATION. A regular session of the Legislature convened on January 11. To act for the State on the proposed repeal of the Eighteenth Amendment to the Federal Constitution, it created a State convention to be composed of 20 delegates, who were to be elected at large by popular vote on June 27. In spite of strict prohibitory provisions in the State constitution, the sale of beer of an alcoholic strength not over 3.05 per cent was allowed by law and subjected to a tax of \$1 a barrel. Provision was made for submitting the question of repealing State prohibition to popular vote at the general election in November, 1934.

To save from bankruptcy banking institutions under State charter, at the time of the nationwide banking panic, a law was passed permitting State banks to be relieved of obligation to meet demands immediately, through the declaration of bank holidays. By another act, the Governor and the State banking commissioner were empowered to limit operations of individual banks, which might thus remain open for business without need to meet all demands in full or, alternatively, to suspend.

State, county, and local public pay was reduced, by a law affecting non-statutory salaries in excess of \$1200, at the rate of 10 per cent of pay above that figure, rising to 15 per cent for excess over \$2000 and to 20 per cent for excess over \$3000. Appropriations for the fiscal year current were reduced. Further reductions of State salaries, where non-statutory and non-contractual, were authorized to be made by the Governor. The system of local public school organization was recast, the duties of some 400 district bodies being transferred to 55 county boards of education. The three-man highway commission was abolished, and its functions were assigned to a single commissioner assisted by an advisory board of four members. To a conservation department were assigned the duties of the abolished game, fish, and forestry commission and also that of employing young men, with Federal aid, on a great State scheme of reforestation. A law affecting small loans gave fuller powers of regulation to the banking commissioner and reduced the lawful rates on such loans to 2½ per cent a month for amount of principal in excess of \$150.

A special session in May voted revenue measures. These included an act legalizing racetrack betting under the pari-mutuel system and levying, for the State school fund, a tax of 3½ per cent on the gross total of bets. One of the main features of the legislative plan to raise new revenue was a comprehensive tax on production, occupation, business, and incomes.

POLITICAL AND OTHER EVENTS. At the end of the period of Federal closure of banks which followed the nation-wide banking panic, all banks under State charter were reopened, by March 15, without State restriction on depositors' privilege of withdrawal. On June 27, by a popular vote in the approximate proportion of 5 to 3, were chosen 20 delegates favoring the repeal of the Federal Eighteenth Amendment, who met in State convention on July 25 and voted the State's adoption of repeal through the superseding amendment proposed by Congress.

The question of the validity of the State's beer law of 1933 was brought into the Federal courts; United States District Judge McClintic at Charleston instructed a grand jury to return indictments in cases where evidence showed beer to have been transported into the State, and asserted that the prohibitive feature of the State constitution not having been repealed, a Federal act to prevent the ingress of beer applied.

OFFICERS. The chief officers of the State, serving in 1933, were: Governor, H. G. Kump; Secretary of State, William S. O'Brien; Auditor, Edgar B. Simms; Treasurer, Richard E. Talbott; Superintendent of Free Schools, W. W. Trant; Attorney General, Homer A. Holt; Commissioner of Agriculture, J. B. McLaughlin.

Judiciary. Supreme Court of Appeals: President, Jo N. Kenna; Associate Judges, John H. Hatcher, Homer B. Woods, Raymond Maxwell.

WEST VIRGINIA UNIVERSITY. An institution for the higher education of men and women in Morgantown, W. Va., founded in 1867. In the autumn of 1933 the enrollment was 2303. The faculty numbered more than 220. President, John Roscoe Turner, Ph.D.

WHEAT. On the basis of early estimates the world's wheat production in 1933 was the smallest since 1926 and the production of the wheat exporting countries was the lowest and of the wheat importing countries the highest since the World War. The world's production exclusive of the Soviet Republics, China, Turkey, Persia, and Iraq was placed at 3,470,000,000 bushels as compared with 3,710,000,000 bushels in 1932. The total production for the year of 43 countries reporting to the International Institute of Agriculture, not including the Soviet Republics, was estimated at 3,516,718,000 bushels, a reduction of 5.8 per cent from the preceding year's yield and of 4.5 per cent from the average annual yield for the five years 1927-1931. The crops of the leading countries not including the United States were reported as follows: India 352,875,000 bushels, France 338,663,000 bushels, Italy 297,631,000 bushels, Canada 268,729,000 bushels, Germany 205,920,000 bushels, Spain 131,937,000 bushels, and Rumania 119,085,000 bushels. The Soviet Republics have reported an estimated yield of 1,018,893,000 bushels. Argentina reported a yield of 235,378,000 bushels in the crop year 1932-33 and estimated its production in 1933-34 at 256,173,000 bushels; Australia, 213,288,000 and 190,612,000 bushels for the two crop years, respectively. The world's exportable supplies for

the commercial year 1933-34 as estimated by the International Institute of Agriculture, amounted to 1,105,000,000 bushels to meet requirements of 525,000,000 bushels.

The total wheat production of the United States according to estimates published by the Department of Agriculture was 527,413,000 bushels harvested on 47,493,000 acres at an average yield of 11.1 bushels per acre. The production in 1933 was 29 per cent less than the 1932 crop of 744,076,000 bushels and 43 per cent less than the crop of 1931. The acreage harvested in 1933 was about 10,000,000 acres less than the acreage in each of the two preceding years. The low acreage and production were due to unfavorable weather and a heavy abandonment in both winter wheat and spring wheat sections. The yields of the leading States were estimated as follows: North Dakota 65,386,000 bushels, Kansas 57,504,000 bushels, Washington 46,249,000 bushels, Ohio 34,812,000 bushels, Oklahoma 33,095,000 bushels, and Nebraska 29,206,000 bushels. Of these States North Dakota reported only spring wheat and Oklahoma only winter wheat production, and Kansas produced only 52,000 bushels of spring wheat. The average farm price on Dec. 1, 1933, was reported at 67.8 cent per bushel and the total farm value of the crop on that date as \$357,525,000. These values compared with 32 cents per bushel and a corresponding total farm value of \$238,305,000 the preceding year.

The production of winter wheat in 38 reporting States was estimated at 351,030,000 bushels, the acreage at 28,420,000 acres and the average yield per acre at 12.4 bushels.

The 1933 production of spring wheat including durum wheat in 25 reporting States was estimated at 176,383,000 bushels grown on 19,073,000 acres at the rate of 9.2 bushels per acre.

The durum wheat production in 1933 was estimated at 16,109,000 bushels, the harvested acreage 2,310,000 acres, and the average yield at 7 bushels per acre.

During the fiscal year ended June 30, 1933, the United States exported only 20,887,000 bushels of wheat, 4,324,000 barrels of wheat flour, and 1,199,000 pounds of breakfast foods and other edible wheat products. The imports included 6,623,000 bushels for grinding in bond, 2,745,000 bushels for export to Cuba, 134,000 pounds of flour and 67,000 long tons of bran, shorts and other by-products and feeds of wheat of which 26,000 tons was withdrawn from bonded mills. The importation of macaroni and similar products totaled 1,956,000 pounds. As reported by the Department of Agriculture the aggregate volume of trading in wheat futures on the 12 grain exchanges designated as contract markets amounted to 10,890,295,000 bushels.

WHOLESALE PRICES. See STATISTICS.

WILBERFORCE, WILLIAM, CENTENARY. See CENTENARIES.

WILLIAM AND MARY, COLLEGE OF. An institution for the higher education of men and women at Williamsburg, Va., founded in 1693. The enrollment for the autumn of 1933 was 1232, of whom 569 were men and 663 women. The 1933 summer session had an attendance of 659 students, of whom 285 were men and 374 women. The faculty numbered 75 at the college, 17 in the Richmond division, and 13 in the Norfolk division. The endowment amounted to \$850,000, while the gross income for the year 1932-33 was \$809,009. The library contained 79,870 volumes.

President, Julian Alvin Carroll Chandler, Ph.D.
WILLIAMS COLLEGE. A nonsectarian college for men in Williamstown, Mass., founded in 1793. The enrollment for the autumn of 1933 totaled 748. There were 83 members on the faculty. The income for the year ending June 30, 1933, was \$752,513. The number of volumes in the library was 155,300. President, Harry Augustus Garfield, LL.D.

WIND. See METEOROLOGY.

WINDWARD ISLANDS. A group of British owned islands in the West Indies, consisting of Grenada, St. Lucia, and St. Vincent, together with the Grenadines. The seat of the government is in Grenada. Each of the islands is under its own government, but they are united for certain purposes which include a common court of appeal. Governor and Commander-in-Chief in 1933, Sir T. A. V. Best. See BRITISH WEST INDIES; GRENADA; ST. LUCIA; ST. VINCENT.

WISCONSIN. POPULATION. The population of the State on Apr. 1, 1932, according to the Fifteenth Census, was 2,939,006; in 1933 (Federal estimate) it was 2,992,000. Milwaukee had (1930) 578,249 inhabitants; Madison, the capital, 57,899.

AGRICULTURE. The following table shows the acreage, production, and value of the principal crops for 1933 and 1932:

Crop	Year	Acreage	Prod. Bu	Value
Hay (tame)	1933	2,949,000	3,685,000 ^a	\$37,218,000
	1932	2,881,000	3,633,000 ^a	36,603,000
Corn	1933	2,228,000	77,980,000	31,972,000
	1932	2,184,000	80,808,000	21,010,000
Oats	1933	2,457,000	63,882,000	19,803,000
	1932	2,533,000	88,655,000	15,958,000
Potatoes	1933	239,000	16,730,000	9,202,000
	1932	260,000	22,620,000	5,203,000
Barley	1933	805,000	17,710,000	9,209,000
	1932	789,000	23,670,000	7,101,000
Tobacco	1933	12,600	14,868,000 ^b	530,000
	1932	28,000	36,180,000 ^b	1,228,000
Wheat	1933	104,000	1,616,000	1,229,000
	1932	110,000	2,109,000	970,000
Rye	1933	228,000	2,260,000	1,288,000
	1932	254,000	3,048,000	914,000

^a Tons. ^b Pounds.

FINANCE. State expenditures in the year ended June 30, 1932, as reported by the U. S. Department of Commerce, were: for maintaining and operating governmental departments \$43,414,279 (of which \$8,198,630 was for local education); for interest on debt, \$88,459; for permanent improvements, \$29,366,944; total, \$72,869,682 (of which \$35,256,442 was for highways, \$7,802,342 being for maintenance and \$27,454,100 for construction). Revenues were \$65,016,140. Of these, property and special taxes furnished 29.5 per cent; departmental earnings and compensation to the State for officers' services, 9.0; sale of licenses, 48.4 (in which was included a gasoline sale tax that produced \$16,493,806). Funded debt outstanding on June 30, 1932, totaled \$1,183,700, of which no part was offset by sinking-fund assets. On an assessed valuation of \$5,952,939,506 the State levied in the year ad-valorem taxes of \$7,810,574.

EDUCATION. Acts of the Legislative session of 1933, according to report in the *Journal* of the National Education Association, had the effect of reducing the State's aid for elementary public schools by about 28 per cent. The minimum for teachers' salaries was reduced to \$65 a month, from \$75. The system of supervising teachers, however, and the teachers'-retirement law survived efforts to abolish them. There was reported

an inflow of high-school graduates back into the high schools; unemployed, they sought additional training.

For the academic year 1931-32, the latest for which the statistics had been tabulated, the number of persons of school age in the State was reckoned as 886,860. There were enrolled in the public schools 548,386 pupils. Of these, 427,291 were in common schools or elementary grades; in high schools, 121,095. The year's expenditures for public-school education totaled \$55,139,733. Salaries of teachers averaged \$1400 by the year.

LEGISLATION. A regular session of the Legislature convened on January 11. To act for the State on the proposed repeal of the Eighteenth Amendment to the Federal Constitution, it created a State convention of 15 members, to be elected at large by popular vote on April 4. To prevent general bankruptcy among banking institutions under State charter, at the time of the nation-wide banking panic of February and March, authority was given the State banking commissioner and the banking board of review to remove incompetent bank officers and directors of operating banks, to have full authority over banks' stabilizing and readjustment agreements, to extend the double liability of holders of bank stocks to one year after they had disposed of their stock, and the commissioner and board of review were empowered to limit withdrawals and cause the segregation of new deposits in banks still operating.

A proposal approved by the previous Legislature, to establish in the State the system of legislation by popular initiative and referendum, was rejected; it thus failed of the constitutionally required second consecutive approval and was lost. The payment of State bonds and interest was required by act to be made in priority to payments of general and operating expenses; but a statute requiring the Governor to levy a State tax on property whenever the State's balance in treasury fell below \$2,000,000 was repealed; and the maximum rate of direct tax for all purposes, requirement for bonds and interest included, was left at 1 per cent. The existing statutory time of grace in which foreclosed farmers and homestead owners might redeem their property was extended to three years, from one year; by another act, courts were required to order foreclosures only in conformity with a fair rental value of farm property. Milk was classed as a public utility, and the department of agriculture and markets was authorized to fix prices to be paid for milk.

POLITICAL AND OTHER EVENTS. Banks in the State, threatened with insolvency by the rush of depositors to withdraw in the course of the nation-wide banking panic, were relieved of the necessity to pay immediately, by the Governor's proclamation of a series of legal holidays starting with March 3. The majority of the State and of the National banks reopened on March 15.

At an election on April 4 there were chosen by popular vote 14 delegates, all committed to the repeal of the Federal Eighteenth Amendment, who met in State convention on April 25 and voted the State's adoption of repeal through the superseding amendment proposed by Congress. The popular vote was reported as 648,031 in favor of Federal repeal and 141,548 opposed.

The difficulties of farmers had produced among them great unrest, which took a violent form in a milk strike that began on May 10, in connection

with the National farm-holiday movement. Mobs seized milk in transit on the highways in divers part of the State and spilled the milk in order to prevent its reaching creameries and collecting stations. Governor Schmedeman issued on May 11 a proclamation closing all these places but undertaking that the State authority would open them and protect milk deliveries wherever a majority of the producers affected so petitioned. Many places were thus reopened, National Guard troops being called out to give protection. The strikers ceased opposition to milk deliveries on May 19 on assurance from the Governor that he would appoint a committee to study the farmers' problems.

The State conservation commissioner reported in April that the State had provided relief in the previous year to 12,790 men with some 40,000 dependents by employing them on conservation work, largely on the State's extensive forest lands, paying the men out of a \$500,000 fund supplied by legislative act.

OFFICERS. The chief officers of the State, serving in 1933, were: Governor, A. G. Schmedeman; Lieutenant-Governor, Thomas J. O'Malley; Secretary of State, Theodore Dammann; Treasurer, Robert K. Henry; Attorney General, James E. Finnegan; State Superintendent of Schools, John Callahan.

Judiciary. Supreme Court: Chief Justice, Marvin B. Rosenberry; Associate Justices, Walter C. Owen, Chester A. Fowler, Oscar M. Fritz, Edward T. Fairchild, John D. Wickham, George B. Nelson.

WISCONSIN, THE UNIVERSITY OF. A State institution of higher education in Madison, founded in 1848. The enrollment for the autumn term of 1933 was 7375, distributed as follows: Letters and science, 4243; engineering, 893; agriculture, 694; law, 361; medicine, 317; nursing, 131; library school, 42; and school of education, 694. In the 1933 summer session the enrollment was 3059. The faculty numbered 1287. The endowment as of June 30, 1933, was \$1,535,765, while the net income for 1932-33 was \$7,384,608. Gifts received during the fiscal year amounted to \$177,576. The library contained approximately 923,000 volumes and 430,000 pamphlets. President, Glenn Frank, Litt.D., L.H.D., LL.D.

WOLLE, wŏl'ě, J(OHN) FRED(ERICK). An American organist and conductor, died Jan. 12, 1933, in Bethlehem, Pa., where he was born Apr. 4, 1863. He began his musical education with David D. Wood in Philadelphia. In 1884 he went to Germany, where he studied under Josef Rheinberger at the Royal Conservatory in Munich. On his return the following year he became organist of the Moravian Church in Bethlehem and two years later of the Packer Memorial Church at Lehigh University. He held both these positions until 1905 when he was called to the newly-created chair of music at the University of California. While at Berkeley he served also as organist of the First Congregational Church (1907-09) and conducted in the Greek Theatre the concerts given by the university's symphony orchestra and during 1909-10 those of the California Bach Choir.

On his return to his former activity in Bethlehem in 1911 Dr. Wölle reestablished the annual Bach Festival, which he had organized in 1898 to be given by the Bethlehem Bach Choir. This choir, in turn, was an outgrowth of the Bethlehem Choral Union, which his enthusiasm for Bach's

music had led him to establish on his return from Germany and which in 1888 gave the first complete American performance of the *Passion* according to St. John. At the first Bach Festival, held in March, 1900, was given the *Mass in B-Minor*, which was to serve thereafter as the culmination of the three-day programme. There were later added to the choir's repertoire the *Passion* according to St. Matthew, the *Art of Fugue*, the *Christmas Oratorio*, and various chorals, for the singing of which a large children's chorus was recruited.

For almost a quarter of a century the Bethlehem Bach Choir was recognized as one of the most important forces in community choral music in the United States, its membership increasing from 110 in 1912 to more than 300 in 1933. Dr. Wolle, through his animated reading of Bach's works, made its spring performances at Lehigh University an event of the first magnitude among American music festivals. He was also responsible for the establishment of choral or oratorio societies in other Pennsylvania cities, such as Harrisburg, York, and Lancaster. As one of the foremost concert organists of the United States, he participated in the formation of the American Guild of Organists. He was the composer of numerous anthems and songs.

WOMAN'S CHRISTIAN TEMPERANCE UNION, NATIONAL. An all-partisan and all-sectarian movement which has as its purpose the protection of the home through the abolition of the liquor traffic. It is comprised of 10,000 local unions with an approximate membership of 600,000, and is organized in every State, territory, and dependency of the United States. President in 1933-34, Mrs. Ida B. Wise Smith. A legislative headquarters is maintained at the Methodist Building, 100 Maryland Ave., N. E., Washington, D. C. National headquarters, administrative offices, and a publishing house are in Evanston, Ill. See PROHIBITION.

WOMEN IN INDUSTRY. In her annual report for the year to her Chief, Secretary of Labor Perkins, Miss Mary Anderson, director of the Women's Bureau, points out justly that too much reliance must not be placed in the National Industrial Recovery Act to improve the position of women in industry. The act, after all, is only a two-year emergency measure while the safeguarding of minimum standards, the abolition of the double-wage and improvement in hours, require continual vigilance on the part of public authorities. As Miss Anderson said: "There is needed also a long-range programme including as one of its principal features the standard of a living wage for every man and woman at work and sufficient to enable them to maintain their dependents in health and comfort."

Miss Anderson also insisted that another need of the times was the abolition of a double-wage standard that countenanced one set of rates for men and a lower level of pay for women doing practically the same quantity and quality of work. A double-wage standard cut in two ways, spelling injustice to women by forcing them to accept less for their services, and causing hardships to men by tending to depress their wage whenever they came in direct competition with women. This resulted in the vicious circle of lower rates for women pulling down men's rates, which in turn necessitated more women joining the breadwinning ranks to supplement men's inadequate incomes. In the matter of standards to

safeguard workers from accidents and occupational diseases, Miss Anderson called for more rapid progress, particularly from the viewpoint of women. Women were paid less than men when injured at work, even when their disabilities were as severe as men's. This was due to the fact that such compensation ordinarily was based on wage, and women's earnings as a rule were less than men's. Women's lower wages also made the accumulation of savings for emergencies difficult, if not impossible.

The following are descriptions of the more important studies completed by the Women's Bureau during the year ended June 30, 1933:

Employment fluctuations and unemployment of women, 1928-31. This report covers data from six large industrial States receiving periodic employment reports, Illinois, New York, and Ohio furnishing these by sex, and Massachusetts, Pennsylvania, and Wisconsin, which, though not publishing data by sex, report upon certain industries important in woman employment; and material from other sources. The data obtained give overwhelming testimony to the severe extent to which women, in comparison with men, are affected by fluctuations in employment in every year in industries that are large employers of women, and to the extent to which women, as compared to men, are the sufferers from employment decline.

Hours, earnings, and employment in cotton mills. In this study pay-roll and other data were secured in 1932 from 132 establishments in South Carolina, 14 in Maine, and 13 in Texas, the numbers of women employees reported upon being respectively 16,678, 3143, and 941. The hours most commonly worked were 55 in South Carolina and Texas and 54 in Maine. The medians of a week's earnings were \$7.70 in South Carolina, \$7.60 in Texas, and \$11.10 in Maine. Night work was required of women in 44 of the 132 South Carolina mills, 3 of the 13 Texas mills, and none of the 14 Maine mills.

A study of a change from eight to six hours of work. This report describes the means by which, as much as two years ago, a well known food plant shortened its hours from eight to six and ran four six-hour shifts a day. By this plan it was possible to increase employment—one of the main reasons for the change—by 39 per cent. Through home visits made by agents of the Bureau to some 400 women, the workers' opinion of the shorter-hour shift, with its slightly lower earnings, was ascertained. The great majority of the women liked the six-hour shift. Of about 250 who had worked on both shifts, somewhat over three-fourths preferred the shorter hours, giving the following reasons for their preference: More time for home duties, more leisure, less fatigue, and increased leisure and less fatigue. The small group who preferred the eight-hour shift—almost one-fourth—gave more pay and less fatigue as their reasons.

Household employment in Chicago. Questionnaires returned by 250 housewives and by 250 household employees in Chicago in 1930-31 are the basis of this detailed analysis of working conditions, employment relations, and other matters in domestic service. In view of the fact that the 1930 Census of Occupations reports for the United States a 62 per cent increase since 1920 in the number of women household servants, and the further fact that even such low standards as existed have declined shockingly in the depression, this study is a distinct contribution to the scant literature on the subject.

Women workers in the third year of the depression. The industrial experience of 109 women and girls in the year ended June 1, 1932, is described in this study made by a group of students under the direction of Professor Amey Hewes at the Bryn Mawr summer school in 1932. Only 10 workers had known no unemployment during the past year; the remainder had been entirely without work for longer or shorter periods or had worked on short weeks, or both. Two women had been unemployed the entire year. The median of the year's earnings of the group was only \$480. More than three-fifths of the women earned less than \$600. If this median is compared with those of the 609 women workers in attendance at Bryn Mawr and three other summer schools in 1928, 1929, or 1930, it is found to be from \$313 to \$407 less than these, and it is \$216 less than that of students attending Bryn Mawr in the summer of 1931.

Besides writing several of the major reports of the Bureau, the research division has collected and analyzed material in response to large numbers of requests for information on matters connected with the employment of women.

Age and marital status of employed women. Within the past year the census of occupations has completed its reports showing the age and marital status of employed women. The youth of many gainfully occupied women is indicated in the fact that 15.5 per cent are under 20, and 87.3 per cent are under 25, while the respective figures for men are only 7.9 and 20.5 per cent. That more than 3¼ million employed women are 18 and under 25 years of age gives especial emphasis to the need for installation and maintenance of healthful working conditions and for hours of work sufficiently short to be consistent with health.

Effects of minimum-wage provisions. In this year when the general depression has stimulated the passage of minimum-wage legislation, the inquiry frequently made in the past has been renewed—as to the effects produced by such provisions—and a large number of such requests have been responded to for this type of information and considerable information compiled showing the real effects of such laws in raising and maintaining women's wages.

Wages of women in cotton mills. According to biennial reports of the Bureau of Labor Statistics, the decline in average full-time weekly earnings of women from 1924 to 1928 was nearly 13 per cent. This decline continued steadily, full-time earnings in 1932 being the lowest in the five biennial reports from 1924 to date. In 1932 this average was \$12.40 for women. It was \$15.25 for men. Average actual earnings in the week taken were higher in 1924 than in any subsequent year reported. From 1924 to 1932 such earnings declined 26 per cent for men and 31.5 per cent for women. At each biennial date reported, wages in this industry were lower than in the preceding report (with one exception for men's wages). The greatest decline was between 1930 and 1932, amounting to nearly 18 per cent for women and 15 per cent for men. Average actual earnings in the week taken in 1932 were only \$9.87 for women, \$12.91 for men. At the same time it should be noted that the average actual week's hours of women reported were 40.9 in 1930 but had increased to 42.2 in 1932.

WOMEN'S CLUBS. GENERAL FEDERATION OF. An organization founded in 1889 and chartered by act of Congress in 1901 for "the promotion of movements looking toward the betterment of life." In 1933 the General Federation was composed of approximately 14,500 clubs in the United States, having also a membership of 40,000 Juniors, and 72 clubs outside the United States; affiliated with it were 16 national and international organizations. The official publication is *The Clubwoman GFWC*. At the June, 1932, Convention in Seattle, Wash., Mrs. Grace Morrison Poole was elected President for the ensuing triennial period. Headquarters are at 1734 N Street, N. W., Washington, D. C.

WOOL. Wool showed the greatest price increase in 1933 of any of the principal livestock products. It was estimated by the Secretary of Agriculture that the farm price of wool in October showed a gain of 237 per cent over the price at the time of the low point in the depression.

Preliminary estimates by the United States Bureau of Agricultural Economics placed the total 1933 wool production in 19 countries which produce over four-fifths of the world's supply, exclusive of Russia and China, at 2,561,000,000 pounds, which was a reduction of 8 per cent as compared with 1932, and 5 per cent as compared with the 5-year average, 1928-1932. The decrease in the 1933 wool clip resulted almost entirely from a decreased production in Australia, New Zealand, and the Union of South Africa. The other important wool producing countries in the Southern Hemisphere, Argentina, and Uruguay, showed increases of 5 and 10 per cent, respectively. The decreased production from the five Southern Hemisphere countries as a whole was 11 per cent.

There were approximately 348,194,000 pounds of wool shorn in the United States in 1933, which was about 4,000,000 pounds more than was shorn in 1932. The increased wool production resulted from a greater average fleece weight which in

1933 was 7.90 pounds as compared with 7.75 pounds in 1932. The numbers of sheep shorn decreased slightly from 44,431,000 head in 1932 to 44,087,000 in 1933.

Wool imports into the United States were much heavier, there being but 56,000,000 pounds of combing, clothing, and carpet wools imported during 1932, as contrasted with 174,000,000 pounds imported during 1933. Further indication of the activity in wool marketing is obtained from the increase of 25 per cent in the receipts of domestic wool at Boston in 1933, as compared with 1932. The 1933 receipts were nearly 15 per cent above the 5-year average from 1928-1932.

WORCESTER ART MUSEUM. See ART MUSEUMS.

WORCESTER POLYTECHNIC INSTITUTE. A nonsectarian institution for the technical education of men in Worcester, Mass., founded in 1865. The enrollment for the fall semester of 1933 totaled 579. The faculty numbered 73. The productive funds of the Institute amounted to \$3,419,978, and the income for the year was \$324,216. There were about 24,000 volumes in the library. President, Ralph Earle, D.Sc., D.Eng., LL.D., Rear Admiral, U. S. N., ret.

WORKMEN'S COMPENSATION. ACCIDENT STATISTICS OF THE NATIONAL SAFETY COUNCIL, 1932. According to figures compiled by the National Safety Council, the accident-prevention movement in the United States can be credited with saving 175,000 lives since it was started in 1913, when the accidental death rate was 85.5 per 100,000 population. The succeeding years, with the exception of 1917, show lower though variable rates, with the estimated rate for 1932 at the lowest point for the period. The total number of accidental deaths of all types during the twenty years, 1913 to 1932, was 1,720,857, but would have been 175,000 larger if the 1913 death rate had continued. It is pointed out that the reduction would have been far greater except for the enormous increase in motor-vehicle fatalities, which rose steadily from 4.4 per 100,000 population in 1913 to 27.1 in 1931 and dropped, for the first time, in 1932 to 23.6. Separate rates are not available for accidental deaths in gainful occupations for the period, but combined rates in all except motor-vehicles fatalities show a reduction from 81.1 per 100,000 population in 1913 to 46.9 in 1932. The National Safety Council estimates that the total number of accidental deaths in the United States in 1932 was approximately 88,000, as compared with 97,415 in 1931. Accidental non-fatal injuries are estimated at 8,312,000 for 1932, as against 9,403,000 for 1931, and the wage loss, medical expense, and overhead insurance cost involved in all deaths and non-fatal injuries at approximately \$2,000,000,000 for 1932, as compared with \$2,308,000,000 for 1931. An approximate distribution of the estimated number of in-

TABLE I—DISTRIBUTION OF ACCIDENTAL INJURIES IN THE UNITED STATES IN 1932

Type of accident	Number of injuries Extent of disability			
	Death	Permanent	Temporary	Total
Occupational	15,000	45,000	1,155,000	1,215,000
Motor vehicle	29,500	85,000	945,000	1,059,500
Home	28,000	125,000	4,070,000	4,223,000
Other public	18,000	60,000	2,100,000	2,178,000
Total *	88,000	312,000	8,000,000	8,400,000

* Items are adjusted to eliminate duplications in figures for industrial and motor-vehicle deaths and injuries.

juries in 1932, by type of accident and extent of disability, is shown in Table I. It is estimated that 2500 of the occupational deaths and a proportionate number of non-fatal injuries occurred in accidents involving motor vehicles, so these appear under both types of accidents, but the duplication is eliminated in the totals. Temporary injuries shown in the table include only those causing disability extending beyond the day of injury.

The combined wage loss, medical expense, and overhead cost of insurance for the accidental deaths and injuries in 1932 is given as \$2,000,000,000. An approximate distribution of this amount, by type of cost and type of accident, is shown in Table II.

TABLE II—DISTRIBUTION OF ACCIDENTAL INJURIES IN THE UNITED STATES WITH SPECIFIED COSTS IN 1932, BY TYPE OF ACCIDENT [With 000 omitted]

Type of accident	Type of cost			Total
	Wage loss	Medical expense	Overhead cost of insurance	
Occupational	\$370,000	\$30,000	\$90,000	\$490,000
Motor vehicle	500,000	60,000	60,000	620,000
Home	390,000	120,000	10,000	520,000
Other public	360,000	80,000	10,000	450,000
Total *	1,560,000	285,000	155,000	2,000,000

* Items are adjusted to eliminate duplications in figures for industrial and motor-vehicle deaths and injuries

TABLE III—INJURY FREQUENCY AND SEVERITY RATES FOR ALL ESTABLISHMENTS REPORTING FOR 1932, BY INDUSTRY

Industry	Number of units	Man-hours worked	Frequency rates (per 1,000,000 hours exposure)	Severity rates (per 1,000 hours' exposure)
Automobile	69	129,442,000	13.19	1.10
Cement	112	27,939,000	4.65	1.80
Chemical	266	174,908,000	10.53	1.92
Clay products . . .	30	7,308,000	23.40	.38
Construction . . .	61	22,157,000	57.90	4.44
Electric railway . .	67	152,162,000	19.20	2.09
Food	283	242,022,000	15.27	1.15
Foundry	108	33,998,000	23.12	2.46
Glass	49	51,588,000	8.76	.73
Laundry	41	8,470,000	4.25	.06
Lumber	48	13,157,000	47.96	5.43
Machinery	282	247,976,000	7.76	.84
Marine	56	106,379,000	17.24	2.14
Meat packing . . .	74	138,684,000	25.50	1.13
Metal products, miscellaneous	200	81,901,000	13.25	.97
Mining	138	42,045,000	56.68	9.51
Nonferrous metals .	58	59,772,000	9.44	1.58
Paper and pulp . .	241	136,034,000	17.77	1.92
Petroleum	101	565,760,000	12.28	1.91
Printing and publishing	43	23,444,000	6.87	.25
Public utilities . .	621	694,808,000	9.32	1.83
Quarry	118	7,849,000	16.56	3.53
Railway car and equipment	36	21,669,000	11.12	1.05
Refrigeration . . .	69	26,259,000	23.58	2.04
Rubber	53	113,442,000	9.86	.71
Sheet metal	204	97,620,000	13.13	.88
Steel	121	212,884,000	10.19	1.81
Tanning and leather	57	45,270,000	10.60	.30
Textile	189	163,107,000	9.14	.45
Tobacco	13	18,481,000	1.89	.07
Woodworking . . .	109	28,290,000	15.77	1.71
Total *	8,937	3,754,481,000	13.20	1.59

* Totals include miscellaneous industries, not shown separately, and eliminate duplications between marine and petroleum industries.

The 15,000 accidental deaths estimated to have occurred in 1932 during the course of gainful employment, including all employees and self-employed persons and classified by the National Safety Council as "occupational" deaths, are distributed provisionally as follows: manufacturing, 2000; mines and quarries, 1800; building and construction, 1300; public utilities (gas and electric), 300; steam and electric railways, 800; seamen and stevedores, 300; agriculture, 3500; and all others, 5000. Based on 80 non-fatal injuries for each death, a total of 1,200,000 non-fatal injuries is determined for 1932. Actual rates for 1932, based on data from all establishments reporting, are also shown. These are presented by industry in Table III. The tobacco and laundry industries present the lowest frequency rates and also the lowest severity rates. Construction, mining, and the lumber industry have the worst records in both frequency and severity rates. Some of the other industries show great variation in the ranking of the two rates; thus, the cement industry, which has comparatively few accidents and is the third lowest in frequency, has a proportionately high death rate and ranks eighteenth in severity.

ACCIDENTS IN MANUFACTURING INDUSTRIES, 1926 to 1932. Figures collected and compiled by the Bureau of Labor Statistics in its annual survey of accidents in manufacturing industries showed an increase for 1932 in both frequency and severity rates. An average of 19.55 injuries were sustained in the combined industries during 1932 for every 1,000,000 man-hours worked, as against 18.85 in 1931, an increase in the frequency rate of 3.7 per cent. An average of 2.86 days was lost through the injuries received in 1932, as against 2.59 in 1931, an increase in the severity rate of 10.4 per cent.

WORLD ALLIANCE FOR INTERNATIONAL FRIENDSHIP THROUGH THE CHURCHES. See INTERNATIONALISM.

WORLD COURT. The World Court has handed down 20 judgments and 25 advisory opinions. In addition to the 19 judgments summarized in the book the American Foundation issued in 1933, the Court, on Apr. 5, 1933, handed down its judgment on the case regarding the legal status of Eastern Greenland, which is described as "pending" on pages 46 and 47 of the booklet.

The second "pending" case described in the booklet, on the legal status of southeastern Greenland, was withdrawn by the parties after the Court rendered its judgment upon the first Greenland case. The following cases were pending on Dec. 31, 1933:

Application of the Polish agrarian reform to certain members of the German minority group in Poland.

Franco-Grecian dispute concerning certain lighthouses.

Appeal from the judgment of the Hungaro-Czechoslovak Mixed Arbitral Tribunal regarding the Royal Hungarian University.

On Apr. 5, 1933, the World Court gave an important judgment upholding Denmark's claim to certain territory in Eastern Greenland. The judgment marks the close of a long-standing dispute between Denmark and Norway, and Norway's prompt acceptance of it, according to Prof. Manley O. Hudson, is a fresh reminder of the gain that the world has made in international organization since the War. This was the first judgment to be given in exercise of the Court's

compulsory jurisdiction under the so-called "optional clause," and the case may be viewed as a test of the value of such jurisdiction.

Forty-eight public sittings were devoted to the hearings of agents and counsel, which continued from Nov. 21, 1932 to Feb. 7, 1933. Literally hundreds of documents, including numerous maps, were filed by each of the parties; though it was confronted with a very voluminous record, the Court's judgment was handed down within two months after the conclusion of the oral proceedings.

The Court's judgment, reached by twelve votes to two, was "that the declaration of occupation promulgated by the Norwegian government on July 10, 1931, and any steps taken in this respect by that government, constitute a violation of the existing legal situation and are accordingly unlawful and invalid." Each party had asked the Court to order the other to pay costs, but the Court refrained from making any order as to costs.

In separate observations, Judge Schucking and Judge Wang expressed the opinion that Denmark did not have sovereignty prior to the overtures of 1915-1921, but they agreed with the majority of the Court that the Norwegian occupation was unlawful and invalid. Judge Anzilotti and M. Vogt, who sat as Judge *ad hoc* for Norway, dissented. Judge Anzilotti thought that the overtures made by Denmark from 1915 to 1921 showed conclusively that Denmark was raising merely a question of extending her sovereignty. With reference to the declaration by the Norwegian Minister for Foreign Affairs in 1919, Judge Anzilotti found that an agreement was concluded between the two governments "by means of purely verbal declarations" and that "declarations of this kind are binding upon the State." Though this agreement was made with a view to settlement of the Greenland question by the Peace Conference, the fact that Denmark was not permitted to raise the question at the Peace Conference did not invalidate the agreement. Judge Anzilotti concluded that the Norwegian occupation in 1931 was effected in violation of an undertaking validly assumed and was therefore unlawful. M. Vogt stressed the legal consequences of the overtures made by Denmark between 1915 and 1921, and concluded that they contained an admission by Denmark that sovereignty was not therefore possessed over all Greenland. He concluded that while Denmark had the *animus possedendi* she did not have the *corpus possessionis* for the period since 1921. He regarded the Ihlen declaration as made under a fundamental and excusable misapprehension, and thought that its effect was entirely obliterated by the rupture of the negotiations between Denmark and Norway.

The judgment of the Court was received with great public rejoicing in Denmark, and with corresponding disappointment in Norway. The government of Norway promptly announced its intention to abide by the judgment, however, and it proceeded to revoke the declarations of occupation of July 10, 1931, and July 13, 1932. On Apr. 18, 1933, the Norwegian Agent joined with the Danish Agent in informing the Court that the two governments desired to discontinue the proceedings instituted before the Court on July 18, 1932, with reference to Southeastern Greenland. The decision as to Eastern Greenland had indicated that Norway could entertain no hope of

winning the case as to Southeastern Greenland.

A triumph for the judicial determination of international conflicts through the World Court is to be noted in the settlement of the customs zones dispute between France and Switzerland. In accordance with a judgment of the Permanent Court of International Justice and a supplementary decision by three experts, France withdrew its customs line along the Franco-Swiss frontier on Jan. 1, 1934, and reconstituted the free zones of Upper Savoy and the district of Gex which had been established originally in 1815 and 1816. Availing itself of provisions in the Treaty of Versailles declaring the customs régime "no longer consistent with present conditions," France abolished the free zones in 1923 without the consent of the Swiss government. This action aroused resentment in Switzerland and was protested as illegal. Although the two governments agreed in 1924 to refer the question to the Permanent Court, it was not actually submitted until 1928. In an order of Aug. 19, 1929 the Court gave a preliminary opinion, fixing at the same time a period for further negotiations between the two countries. Negotiations having proved fruitless, the Court gave judgment on June 6, 1932 in favor of Switzerland. Since the Swiss, under the old régime, had been able to export their products free of duty to the zones without incurring a similar obligation to permit the free importation into Switzerland of the produce of these zones, the Court directed that a new régime, based on reciprocity, be worked out. Such an arrangement has now been inaugurated by the decision of three experts rendered on Dec. 1, 1933.

After interviews in Washington, the American Foundation reported that it could truthfully be said that the possibility of action on the Court is an open question. The general feeling in pro-Court Administration circles may be described as follows according to the Foundation:

"Action on the Court treaties should be had in a friendly atmosphere. The Court should not, on the one hand, be brought to the fore, at a time when, by launching a new controversy, it will stimulate cleavage that may react adversely on the domestic legislative programme. Nor on the other hand, should the Court be complicated with other international issues such as the war debts, as to which feeling is high and counsels divided. Ratification, when it occurs, should seem to be an entirely logical development, a natural confirmation of the present desires and feeling of the country."

This position, the Foundation declared, is logical, but it rests upon the premise that the Court issue has no pressing importance and is therefore "cold." The country, from the American Bar Association to the American Federation of Labor, from the press to the pulpit wants the Court and understands its vital present relation to war and peace. The strength of this public conviction, however, is perhaps underestimated at Washington. Hence (in spite of the fact that the two-thirds vote is, according to careful surveys, available) the tendency continually to put the Court over until that impossible time when no controversial measures, foreign or domestic, are pressing.

WORLD'S FAIR. See CENTURY OF PROGRESS EXPOSITION.

WORLD LEAGUE AGAINST ALCOHOLISM. An organization established in Washington,

D. C., in 1919 by temperance and prohibition workers from 11 different countries, including England, Canada, and the United States, whose object is the total suppression throughout the world of alcoholism. Its processes are entirely educational. The membership in 1933 comprised 61 national temperance organizations in 35 of the leading countries of the world. The work is carried on from offices at Westerville, Ohio; the Scientific Temperance Federation in Boston; and the Intercollegiate Association for Education on the Alcohol Problem in Washington. Branch Offices are maintained in London, England, and Lausanne, Switzerland. All the activities of the League are under the direction of the general secretary, Ernest H. Cherrington.

WRECKS. See SAFETY AT SEA.

WRESTLING. The professional heavyweight wrestling muddle still existed at the close of 1933 with no less than five world's champions reigning in different parts of the world. In the United States, Jim Browning, Jim Londos, Ed. Don George, and John Pesek claimed the title and the claim of Yussif Mahmoud of Turkey was generally recognized in Europe. Browning, who pinned Ed (Strangler) Lewis in New York in January, was considered champion in New York State and in twenty-two other States whose athletic commissions have a working agreement with the New York board. Londos, former champion in New York, was regarded as titleholder in Pennsylvania and several States further west. George's claim was called bona fide in Canada and in New England, and Pesek was rated champion by the Ohio commission.

Near the end of the year the various wrestling trusts of the United States appeared to amalgamate but when a pair of champions, George and Browning, wrestled in New York in mid-December, the outcome was a draw. Although the muddle and the every-other-day title defenses of the various champions bordered on the ridiculous, wrestling fans throughout the country still continued to crowd the arenas to watch the giants display their histrionic skill. The gates were not as large as the year previous and did not come up to the standards set in 1929 and 1930, but professional wrestling remained big business.

In the amateur wrestling rings Bob Hess of Iowa State College had the most distinguished record. Working in the 165-pound class Hess won a championship in the A.A.U. National tournament in Chicago and another in the 175-pound class in the National Collegiate A.A. tournament held at Lehigh. He was defending champion in the latter class. Gordon Ellison of Cornell was crowned A.A.U. National heavyweight titleholder. The teams of Oklahoma A. and M. and Iowa State tied for the N.C.A.A. championship. Lehigh's wrestlers won the Eastern Intercollegiate Association title, with Princeton second and Penn State third.

The New York Athletic Club dominated the Metropolitan A.A.U. championships. Harvard took the New England intercollegiates and the Big Ten Conference championship went to Indiana rather easily.

WÜRTTEMBERG. See GERMANY.

WYOMING. POPULATION. The population of the State on Apr. 1, 1930, according to the Fifteenth Census, was 225,565; in 1933 (Federal estimate) it was 231,000. Cheyenne, the capital, had (1930) 17,361 inhabitants.

AGRICULTURE. The following table shows the

acreage, production, and value of the principal crops for 1933 and 1932:

Crop	Year	Acreage	Prod. Bu.	Value
Hay (tame) .	1933	874,000	1,023,000*	\$6,756,000
	1932	828,000	1,005,000*	6,180,000
Sugar beets ..	1933	53,000	609,000*	.....
	1932	40,000	506,000*	2,515,000
Potatoes	1933	31,000	3,007,000	1,654,000
	1932	33,000	1,485,000	505,000
Wheat	1933	234,000	2,138,000	1,191,000
	1932	277,000	3,102,000	837,000
Corn	1933	219,000	2,080,000	874,000
	1932	228,000	2,052,000	575,000
Barley	1933	91,000	1,720,000	588,000
	1932	127,000	2,540,000	635,000
Oats	1933	151,000	3,246,000	1,039,000
	1932	154,000	3,465,000	797,000

* Tons.

MINERAL PRODUCTION. The quantity of coal mined in the State fell to 4,140,000 net tons for 1932, from 4,993,686 for 1931. There was a moderate decline in the production of petroleum, to 13,359,000 barrels, for 1932, from 14,834,000 for 1931. The Salt Creek field contributed 8,006,000 barrels to the production of 1932; it produced about 9 per cent less than it had produced in 1931. The re-injection of natural gas, stripped of its content of gasoline, into some producing wells was practiced to increase their flow. At the end of June, 1932, 194 natural-gas wells were reported to be operating under this process, thus consuming some 20,000 M cu. ft. a day of re-injected gas. Nevertheless the extraction of natural-gas gasoline declined to 44,211,000 gallons (1932), from 51,523,000 (1931).

EDUCATION. As in many other States, the lack of gainful employment for graduates of the public-school system led during the year to the return of many of them to the high schools for further education, and the demand upon the service of the high schools was thus augmented in the face of increased difficulty in providing these institutions' revenue. The number of returning postgraduates in the high schools was reported for the academic year 1932-33 as exceeding by 46 per cent the corresponding number for the year before. A State-wide system of testing was carried on during the year in the rural schools.

The number of persons of school age in the State, as of April, 1933, was reckoned at 70,090. There were enrolled in the public schools, in the academic year 1932-33, 56,425 pupils. Of these, 14,321 were in the rural common schools, 27,893 in elementary grades, and 14,211 in high schools. The year's expenditures for public-school education, falling about 14 per cent below those of the year before, totaled \$4,883,652. Salaries of teachers reflected much of the reduction, their average falling by some 10 per cent to \$1163 for the year 1932-33.

LEGISLATION. A regular session of the Legislature convened on January 11. To act for the State on the proposed repeal of the Eighteenth Amendment to the Federal Constitution, it created a State convention of 65 members, to be elected by popular vote on May 15, by counties on a basis of population. Provision was made for a popular vote in November, 1936, on whether to repeal the prohibition laws of the State. The traffic in beer of alcoholic content not over 4 per cent was made permissible under State laws. The Twentieth Amendment to the Federal Constitution received the State's ratification. Appropriations for State expenditure during the ensuing two fiscal years

were reduced below those for the previous like period, by rather more than one-fourth, to a total that, after the inclusion of proceeds from the mill levies, was estimated at \$3,244,661. The appropriations included \$200,000 for reimbursing counties for sums of which they had been deprived in the period 1931-33 by operation of a tax exemption for soldiers.

POLITICAL AND OTHER EVENTS. Governor Clark, to save banks from ruin in the banking panic, issued a proclamation on March 3 ordering that the banks pay not more than 5 per cent upon any depositor's credit balance. After the general Federal closure most banks reopened on March 16.

The State's action to repeal the Federal Eighteenth Amendment was taken in three stages. A popular vote was taken by 667 precincts on May 15. These so-called precinct conventions elected delegates, mainly committed to repeal, to county conventions, which in turn chose 65 delegates to a State convention, held on May 25; the State convention unanimously voted repeal through adoption by the State of the superseding amendment proposed by Congress. United States Senator John B. Kendrick died on November 3.

OFFICERS. The chief officers of the State, serving in 1933, were: Governor, Leslie A. Miller; Secretary of State, A. M. Clark; Treasurer, H. R. Weston; Auditor, Roscoe Alcorn; Superintendent of Public Instruction, Katharine A. Morton; Attorney General, Ray E. Lee.

Judiciary. Supreme Court: Chief Justice, Ralph Kimball; Associate Judges, Fred H. Blume and W. A. Riner.

WYOMING, UNIVERSITY OF. A State institution of higher education at Laramie, founded in 1886. The enrollment for the autumn term of 1933 was 1024. The faculty numbered 100. The income for the year from State and local funds was \$862,450, and from Federal and State grants for agricultural extension, \$119,315. The library contained 78,997 volumes. President, Arthur Griswold Crane, Ph.D.

YACHTING. While the 1933 yachting season, in United States waters and abroad, was unusually active, in view of the economic situation, there was no particularly outstanding event and it was difficult to single out any individual boat, skipper or race as the highlight. Perhaps the event that most stirred the yachtsmen of the world was the challenge that came in the fall to the New York Yacht Club for the ancient America's Cup, for three quarters of a century symbol of supremacy on the seas. The newest challenge for the cup, challenged for unsuccessfully five times in a row over a span of thirty years, by the late Sir Thomas Lipton, came from T. O. M. Sopwith, Briton, who named his yacht *Endeavor*. This presaged an unusually active season in 1934 and a New York Yacht Club syndicate, headed by Harold S. Vanderbilt, immediately placed an order with Herreshoff for a new Class J sloop, *Vanitie*, built for defense of the cup in 1914, when war curtailed activities, and *Weetamoe*, one of the unsuccessful candidates for rôle of defender in 1930, will sail against the new Vanderbilt boat for the honor of defending against *Endeavor* in September off Newport.

Dorada, small yawl already famous for deeds in United States and English waters, performed the outstanding feat of the year. Sailed by Roderick Stephens, Jr. and a crew of five, she crossed the Atlantic in twenty-five days, won for the second time the perilous Fastnet race, sailed back

across the North Atlantic in 22 days, 15 hours.

E. E. Dupont's *High Tide*, a schooner, won the Gibson Island ocean race from Newport to the upper Chesapeake in late June, leading a record fleet of forty-two boats. F. H. Prince's *Weetamoe* and Gerard B. Lambert's *Vanitie* were the only two America's Cup boats sailing and the pair staged a long series of match races on Long Island Sound and off Marblehead, Mass. *Weetamoe*, with her time allowance, won most of the contests but *Vanitie* finished first, boat for boat, in a good share of the races and also captured the coveted King's Cup at Newport R. I.

The International Star Class championships were sailed off Long Beach, Calif., and the title went to the San Francisco Bay yacht, *Three Point Two*, owned by Glen Waterhouse. Dartmouth captured the Intercollegiate championship for the first time. Williams was second, and Harvard, 1932 winner, finished third.

YAKUTSK REPUBLIC. See SIBERIA.

YALE UNIVERSITY. A nonsectarian institution for higher education in New Haven, Conn., founded in 1701. The enrollment for the autumn of 1933 was 5475. Of the candidates for degrees or certificates, 708 were in the graduate school, 1599 in Yale College, 425 in the Sheffield Scientific School, 204 in the school of engineering, 218 in the school of medicine, 218 in the divinity school, 329 in the school of law, 393 in the school of the fine arts, 92 in the school of music, 28 in the school of forestry, and 111 in the school of nursing.

The faculty numbered 1512. The following professors retired from active service at the close of the year 1932-33: George Pierce Baker, Charles M. Bakewell, Robert N. Corwin, Harry B. Ferris, William Lyon Phelps, and Charles F. Scott. Al-lardyce Nicoll was appointed professor of the history of the drama and dramatic criticism; Edgar Allen, professor of anatomy; Harvey Cushing, Sterling professor of neurology; and Einar Hille, professor of mathematics. The total endowment of the university amounted to \$95,574,096, and the income for the year was \$7,347,640. The libraries contained more than 2,130,000 volumes.

A significant change was made in undergraduate life during the year by putting into operation seven (Brandford, Calhoun, Davenport, Jonathan Edwards, Pierson, Saybrook, and Trumbull) of the contemplated 10 residential colleges, a procedure which recognizes the social and educational values inherent in small groups. In the life of the colleges every undergraduate has opportunities for membership in a social unit, for participation in informal college games, and for frequent meetings with members of the faculty. Surrounded by the resources of a large university, the colleges offer the advantages of small student bodies and the directness of social relationship which characterized Yale a generation ago, before the advent of large and unwieldy classes. The colleges co-operate with the undergraduate schools of the university to evolve whatever combinations of formal and informal instruction will make the work of each undergraduate most interesting and effective.

The residential college plan was made possible through gifts from Edward Stephen Harkness, B.A., 1897. Physically the colleges are self-contained, each with its own library, dining hall, kitchen, common rooms, squash courts, and accommodations for 160 to 200 students. Each college has at its head a master who lives in the

college. Associated with him as active fellows are 10 or 12 members of the faculty, some of whom reside in the college, and all of whom have rooms there in which to meet students. Attached to each college is a group of associate fellows who have a share in its life. Freshmen may apply in the spring of their first year for admission to the colleges in the following September. A student admitted to a college normally continues residence there during the balance of his undergraduate course. President, James Rowland Angell, Ph.D., Litt.D., LL.D.

YAMAMOTO, GOMBEL, COUNT. A Japanese naval officer and statesman, died in Tokyo, Dec. 8, 1933. He was born at Kagoshima, Satsuma Province, in October, 1852, and while attending the Naval Academy fought in the War of Restoration which insured the creation of a new Japan on Occidental lines. On his promotion to rear-admiral in 1895 he was made Director of the Naval Bureau, and the following year became Deputy Minister of the Navy with the rank of vice-admiral.

As Minister of the Navy from 1898 to 1906 Count Yamamoto became known as the founder of Japan's modern navy. On the outbreak of the Russo-Japanese War in 1904 the Japanese fleet was in such first-class condition that Admiral Togo was able seriously to cripple the Russian fleet in the two engagements at Port Arthur. From the war Japan emerged as one of the great naval and military powers. Yamamoto was honored by being promoted to full admiral in 1904 and by being raised to the peerage as a baron in 1902 and as a count in 1907. On the strength of his popularity as head of the Navy he was appointed Premier in 1913 to succeed Prince Katsura. His promises of economy and reform, however, were not fulfilled, and the following year he was obliged to resign on account of the scandals in the purchase of armament supplies.

After the death of Baron Kato in August, 1923, Yamamoto was again asked to become Premier. His ministry was charged with the work of reconstruction after the great earthquake but resigned in January, 1924, on account of the disgrace brought on it through the attempted assassination of the Crown Prince Hirohito.

YANAON. See FRENCH INDIA.

YAP. See CAROLINE ISLANDS.

YEMEN. See under ARABIA.

YOUNG MEN'S CHRISTIAN ASSOCIATION. An educational, social, physical, and spiritual movement for men and boys, which originated in London in 1844 under the leadership of George Williams. In 1933 there were in 54 countries of the world 10,619 local associations, unions, or fellowships with a membership of 1,442,315. These associations employed 5907 officers and owned and occupied 2212 buildings. The largest number of Y.M.C.A.'s were found in Germany, where there were more than 3600 associations. The United States, however, had the largest membership (857,241) and the largest number of Y.M.C.A. buildings, representing a net property value of \$193,221,000. Local associations numbered 1143, with 3416 employed officers and 151,669 directors and committee men.

The general board of the associations in the United States is the National Council of the Young Men's Christian Associations, with headquarters at 347 Madison Avenue, New York City. Frederic W. Smith was president in 1933; John E. Manley was general secretary. The National Council is one of 36 national movements of fed-

erated local associations which constitute the World Alliance of Young Men's Christian Associations, with headquarters at 2 Rue de Montchoisy, Geneva, Switzerland. Dr. John R. Mott, of New York City, was president in 1933; W. W. Gethman, of Geneva, was general secretary.

YOUNG WOMEN'S CHRISTIAN ASSOCIATION. An organization whose purpose is to advance the physical, social, intellectual, and spiritual interests of young women. The first association was formed in New York City in 1858. By 1933 there were throughout the United States 1015 associations, affiliated in a national organization whose active body is the National Board of the Young Women's Christian Associations. Of these, 259 were in cities, 132 in towns, 45 in rural districts, and 579 on college and university campuses. There were also 64 branches for colored girls and women and 50 International Institutes or centres for work among foreign-born girls and women. The total membership was about 600,000, of whom 100,000 were student members.

The organization employed, in 1933, 2106 professional workers, of whom 1976 were connected with local associations, 97 were on the national staff, and 33 were American secretaries serving in foreign countries. Working as volunteers, as board and committee members, and as advisers in local associations, were 55,026 women. At the association's biennial convention, held in Minneapolis, Minn., May 5-11, 1932, Mrs. Frederic M. Paist of Wayne, Pa., was reelected president of the national board, to which is entrusted the work of the national body during the interim of conventions. Headquarters of the national board are at 600 Lexington Avenue, New York City, with Miss Anna V. Rice as general secretary and Miss Emma P. Hirth as associate secretary.

YUGOSLAVIA. A Balkan state, formerly known as the *Kingdom of the Serbs, Croats, and Slovenes*. Capital, Belgrade (Beograd); sovereign in 1933, King Alexander I.

AREA AND POPULATION. At the census of Mar. 31, 1931, Yugoslavia had an area of 96,010 square miles and a population of 13,930,918 (12,017,323 at the census of 1921). The population of the chief cities in 1931 was: Belgrade, 241,542; Zagreb (Agram), 185,581; Subotica, 100,058; Sarajevo, 78,182; Skopljje, 64,807; Novi Sad, 63,966; and Ljubljana, 59,768.

PRODUCTION. Agriculture supports about 85 per cent of the population, the remainder being engaged principally in manufacturing, mining, lumbering, and cattle raising. Of a total area of 24,866,500 hectares (hectare = 2.47 acres), 13,792,995 hectares were under cultivation in 1931. Live-stock on Jan. 1, 1932, included 1,168,768 horses, 3,871,556 cattle, 8,425,634 sheep, 3,129,164 swine, and 1,928,224 goats. Production of the chief crops in 1932 with 1931 figures in parentheses, was (in metric tons): Corn, 4,392,965 (3,203,393); wheat, 1,454,532 (2,688,627); barley, 391,514 (391,891); rye, 211,534 (193,396); oats, 269,228 (264,782); potatoes, 1,371,446 (1,110,831); fodder beets, 414,524 (348,065); sugar beets, 733,460 (707,424). Yields of the chief crops in 1933 were (in metric tons): Wheat, 2,628,600; corn, 3,655,600; barley, 463,000; rye, 245,300; oats, 371,000.

Mining and metallurgical production in 1932, with 1931 figures in parentheses, was (in metric tons): Coal, 3,536,385 (3,929,333); lignite, 1,116,115 (1,033,519); iron ore, 26,636 (133,413); copper ore, 278,713 (456,931); pyrite, 15,729 (26,835); bauxite, 67,087 (62,018); lead ore, 554,-

504 (371,156); chrome ore, 43,925 (57,140); salt, 52,955 (52,682); cast iron, 9972 (37,735); copper, 30,159 (24,351); lead, 8321 (7931); zinc, 2530 (4508).

COMMERCE. Yugoslav imports and exports in 1932 were valued at 2,859,699,000 dinars and 3,055,576,000 dinars, respectively (the dinar, equal to \$0.0176 at par, exchanged at an average of \$0.0164 in 1932). The favorable balance of trade was 195,907,000 dinars. In 1931, imports totaled 4,800,281,000 dinars and exports 4,800,966,000 dinars, while in 1929 imports were 7,594,750,000 dinars and exports 7,921,708,000 dinars. Leading export items in 1932 were (in 1000 dinars): Timber, 419,746; crude copper, 247,158; leaf tobacco, 237,458; swine, 236,629; eggs, 182,183; wheat, 163,314; fresh meat, 153,540; fresh fruits, 149,056; corn, 135,971. Leading import items (in 1000 dinars) were: Cotton fabrics, 203,921; cotton yarn, 198,345; various iron goods, 177,094; machines, instruments, and apparatus, 138,154; woolen fabrics, 128,067; raw cotton, 117,004; electrotechnical articles, 107,138. Italy took 23.07 per cent of the value of all Yugoslav exports in 1932; Austria, 22.13 per cent; Germany, 11.28 per cent; Czechoslovakia, 13.17.

Preliminary 1933 trade returns showed imports of 2,883,000,000 dinars and exports of 3,378,000,000 dinars. Imports from the United States were valued at \$297,325 (\$444,652 in 1932); exports to the United States, \$1,495,003 (\$438,351 in 1932).

FINANCE. According to the *Quarterly Bulletin* of the National Bank of Yugoslavia, provisional budget returns for the fiscal year ended Mar. 31, 1933, showed revenues of 9,267,856,000 dinars and expenditures of 9,491,306,000 dinars, the deficit being 223,450,000 dinars. In the 1931-32 fiscal year, revenues amounted to 10,725,933,000 dinars and expenditures to 10,301,234,000 dinars, leaving a surplus of 424,699,000 dinars. The budget estimates for the fiscal year 1933-34 balanced at 10,438,300,000 dinars, or 7.8 per cent less than the estimates for 1932-33. At the end of 1932, the external debt was equivalent to \$619,362,538 and the internal debt to \$80,672,221. The service of part of the foreign debt was defaulted in 1932.

COMMUNICATIONS. The Yugoslav railways extended 5728 miles in 1931 (4263 miles of standard and 1465 miles of narrow gauge). Of the total, 3624 miles were under state operation. Wagon and truck loadings on the state railways in 1932 numbered 1,427,782, as against 1,608,778 in 1931. There were 24,695 miles of highways, roads, and paved streets at the beginning of 1932. Air lines connect Belgrade with Zagreb and Skopje and with the capitals of Europe. In 1932, 91,118 vessels, of 15,788,000 tons, entered the ports of Yugoslavia, against 100,962 vessels of 16,702,000 tons in 1931.

GOVERNMENT. Under the Constitution of Sept. 3, 1931, Yugoslavia is a hereditary and constitutional monarchy, in which legislative power is exercised conjointly by the King and the National Congress and executive power by the King through his responsible Ministers. The national parliament (Skupshtina) consists of a Senate of 76 members (47 elected and 29 appointed by the Crown) holding office for six years and a lower chamber of 305 members elected for four years. At the Chamber election of Nov. 8, 1931, and the Senate election of Jan. 3, 1932, only the list of nominees of the National party was presented to the voters. The royal decree of Jan. 6, 1929, dissolved all the old political parties and the Con-

stitution prohibited their reconstitution. The Ministry in 1933 was headed by Dr. Milan Srškić.

HISTORY

FOREIGN RELATIONS. King Alexander's dictatorship, which appeared to be tottering at the end of 1932, received a new lease of life in 1933 due to menacing developments in Europe which led his people to support their government despite its unpopularity. Chief among the disturbing new elements was the Hitler revolution in Germany, with its threat against the peace treaties by which Yugoslavia had so greatly benefited. Another alarming development was the signing by France of the Four-Power Pact, initiated by Premier Mussolini. Fearful that this move indicated France's intention to make peace with Italy and abandon her allies of Eastern and Southern Europe, Yugoslavia and the other members of the Little Entente (Czechoslovakia and Rumania) formed a more closely knit union to defend their mutual interests (see *LITTLE ENTENTE*). The weakening of the League of Nations through the withdrawal of Japan and Germany and the threatened withdrawal of Italy increased the sense of impending danger in Yugoslavia.

Relations between Yugoslavia and Italy were in a state of high tension at the beginning of 1933. The Hirtenberg arms affair (see *AUSTRIA under History*) and reports that Italy was encouraging schemes for Croat secession from Yugoslavia greatly excited the government. Then it was learned that Italy was attempting to force Albania to consent to an Italian-Albanian customs union. The Belgrade government immediately informed the British Foreign Office on Jan. 2, 1933, that it would prevent such a union by force, if necessary. The Yugoslavs were convinced that the customs union plan was another step in preparation for an Italian attack upon them, with Albania as a base. However, King Zog of Albania was unresponsive to the Italian suggestion and the subsequent friction between Italy and its Balkan protégé (see *ALBANIA under History*) temporarily eased Yugoslav apprehension.

The Yugoslav government, and particularly King Alexander, played an active part in the incessant diplomatic negotiations carried on by the Little Entente powers during 1933. These negotiations sought not only to forge a closer union among the Little Entente states but also to detach Bulgaria from Italy, to preserve Austrian independence as against Hitler's Germany, and to lessen the influence of the great powers in Central and Southeastern Europe. King Alexander visited his brother-in-law, King Carol of Rumania, in January and was reported to have received Carol's pledge to assist Yugoslavia in case of an Italian attack. Carol returned the visit later in the year.

The intense bitterness which had marked relations between Yugoslavia and Bulgaria since the second Balkan War was to a considerable degree dispelled during 1933. The first quarter of the year was marked by new raids of Moldavian and Macedonian revolutionaries into Yugoslavia from the Bulgarian border and the declaration of war against Yugoslavia by a Macedonian congress at Gorna Jumaja, Bulgaria. The Yugoslav Foreign Office vigorously protested but received non-committal replies from Sofia. The atmosphere improved when the Little Entente, led by Yugoslavia, offered concessions to Bulgaria to secure her inclusion in their group or else her neutrality in

the event of a European war. King Alexander made a conciliatory gesture by paying a short visit to King Boris at Varna, Bulgaria, on October 3 and Boris and Queen Giovanna returned the visit in Belgrade, commencing December 10. Meanwhile, the Bulgarian Premier had announced that his country was prepared to cooperate economically and politically with its neighbors, but not to enter the Little Entente or any Balkan alliance. In return for this cooperation, Bulgaria asked territorial concessions and the application of the minorities treaty for the protection of her nationals in neighboring counties, particularly Yugoslavia. King Alexander also conferred with President Mustapha Kemal of Turkey at Istanbul on October 4. In November a treaty of friendship and non-aggression with Turkey was signed at Belgrade.

INTERNAL DEVELOPMENTS. The demand for abandonment of the unitary state established under the dictatorship in 1929 had reached major proportions among Croats, Slovenes, and even a strong section of the Serbs toward the end of 1932. The Zagreb Manifesto of the Croatian party, headed by Dr. Vlatko Matčeh, had been issued in November, 1932. Its demand for a federation of autonomous states was approved by the leader of the Serb Democrats, L. Davidovitch, and most of the leaders of the other dissolved party groups. The dictatorship met this challenge toward the end of January, 1933, when all opposition political leaders except the Serbs were arrested or exiled. Among those arrested and banished to remote parts of the Kingdom were Father Anton Koroshetz, leader, and Dr. Marko Natlacen, vice president, of the Slovenian People's party; Dr. Matčeh, Dr. Anton Ogrisek, and Dr. Kulovetch, a former Minister of Agriculture. The Serb Radical Democrats and Serb Farmers parties protested against the banishment of Father Koroshetz and Dr. Matčeh. On June 2, a petition signed by 250,000 Croats in North America and some 60,000 in South America, demanding independence of the Croatian provinces of Yugoslavia, was presented to the League of Nations and to the Disarmament Conference at Geneva.

ECONOMIC DEVELOPMENTS. The repercussions of the world depression upon Yugoslav economy had caused the government in April, 1932, to declare a partial moratorium on public debt payments, to extend the term of payment of agricultural debts, and to lend financial assistance to the banks. During 1933, the government took a number of steps calculated to improve the economic and financial position. The new pact signed by the Little Entente states Feb. 16, 1933, contained provisions for strengthening economic relations between them.

In March, the government concluded an agreement with French holders of Yugoslav foreign loans, to which other foreign bondholders consented in July. The agreement provided for suspension of the redemption of these loans during a period of three years as from October, 1932. During this period interest payments falling due were to be paid in currency bills up to an equivalent of 10 per cent, the balance of 90 per cent being settled by the issuance, in favor of the holders, of so-called long-term "funding" bills bearing 5 per cent interest. The foreign loans were divided into four groups, the agreements varying somewhat for each group.

New trade agreements were concluded on May 15 with Hungary, on June 10 with France, on

July 20 with Greece, and on July 29 with Germany. Negotiations for a new Yugoslav-Italian commercial treaty were begun. On July 29, the government moderated the monopoly which it had established over wheat exports.

See FRANCE, ITALY, GERMANY, BULGARIA, CZECHOSLOVAKIA, RUMANIA, and TURKEY under *History*; LITTLE ENTENTE; LEAGUE OF NATIONS; REPARATIONS AND WAR DEBTS.

YUKON, yook'kōn. A territory occupying the extreme northwest part of the Dominion of Canada. Area, 207,076 square miles; population (1931 census), 4230. Dawson, the capital, had 819 inhabitants (1931). The mining of gold, silver, coal, copper, and lead is the principal occupation of the population. For the year ending Dec. 31, 1932 the production of gold was valued at \$839,421; silver, \$967,303. Pelts of fur-bearing animals taken in 1931-32 were valued at \$132,268. The territory is governed by a comptroller and a territorial council of three elective members and is represented in the Dominion Parliament at Ottawa by one member in the House of Commons.

ZANZIBAR PROTECTORATE. A British protectorate off the east coast of Africa, consisting of the islands of Zanzibar (640 sq. miles; population 137,741 in 1931), and Pemba (380 sq. miles; population 97,687). Total population (1931 census), 234,428. Zanzibar produces approximately 85 per cent of the world's supply of cloves from an area of 16,000 acres on the island of Zanzibar and 32,000 acres on the island of Pemba. Clove exports in 1932 amounted to 8100 tons valued at £488,000. The area devoted to coconut production in the same year totaled 55,000 acres from which was produced for export 11,800 tons of copra valued at £144,000. For 1932, total imports were valued at 12,598,000 rupees (rupee averaged \$0.2635 for 1932); total exports, 12,137,000 rupees (including reexports of 3,213,000 rupees). Revenue for 1932 amounted to £456,000; expenditure, £459,000; public debt—nil. The nominal ruler in 1933 was Sultan Syyyid Khalifa bin Harub. Actual control rested with the British Resident. Resident in 1933, Sir R. Rankine.

ZINC. Primary metallic zinc output from domestic and foreign sources in 1933 was nearly 49 per cent higher than in 1932 and was 5 per cent larger than the output of 1931, according to a preliminary summary of the U. S. Bureau of Mines. Apparent deliveries to domestic consumers were about 58 per cent higher than in 1932. Stocks at smelters and electrolytic refineries were reduced and on November 30 were 23 per cent lower than those on hand at the beginning of the year.

The output of primary metallic zinc from domestic ores in 1933, as reported by producers from figures of actual production for eleven months and estimates for December, was about 307,200 short tons, an increase of 48 per cent over the 207,148 tons produced in 1932. Nearly 800 tons of zinc were produced from foreign ores in 1933. No foreign zinc was reported at domestic plants in 1932 or 1931. In addition to the output of primary zinc, about 19,300 tons of redistilled secondary zinc was produced, as compared with 14,718 tons in 1932. Thus the total supply of distilled and electrolytic zinc in 1933 was about 327,300 tons, composed of 103,700 tons of high grade, 24,000 tons of intermediate, 66,100 tons of select and brass special, and 133,500 tons of prime western zinc.

According to statistics in trade journals, the

average monthly price of prime western zinc at St. Louis was 3.02 cents a pound in January. From this figure the average declined to 2.67 cents a pound in February, the lowest monthly average for the year, and then rose to 4.92 cents a pound in August, the highest monthly average for the year. From this level the price receded to close the year at 4.47 cents. The lowest daily price was 2.575 cents a pound in mid-February and the highest daily price was 5 cents a pound, which held for about a month beginning July 17.

ZONING. See CITY AND REGIONAL PLANNING.

ZONTA INTERNATIONAL. An organization of executive women in business and the professions, established in Buffalo, N. Y., in 1919 to encourage high ideals and ethical standards in business and the professions, to quicken the interest of each member in the welfare of her community, and to cooperate with others in its civic, social, and commercial development. Its name is derived from the Sioux word meaning "Trustworthy and Honest." In 1933 there were 115 clubs in the United States, Hawaii, Canada, and Europe with a membership of 3100. Membership is limited to one outstanding representative for each business or profession, who is devoting at least two-thirds of her time to that business or profession. The universal service project is the sponsoring of a constructive, educational programme so as to work for the advancement of understanding, good will, and peace through a world fellowship of executive women. The official monthly publication is *The Zontian*. Headquarters are at 59 East Van Buren Street, Chicago, Ill.

ZOOLOGY. The American Society of Zoölogy met with affiliated societies from December 28 to 30 at Cambridge, Mass. The British Zoölogists met as a section of the British Association for the Advancement of Science in September at Leicester.

The Silliman Memorial Lectures at Yale University were given in October by Dr. Hans Speman of Freiberg on "Embryonic Development and Induction." The Nobel prize in medicine for the year was awarded to T. H. Morgan of the California Institute of Technology, for his researches on heredity. Following the International Genetics Congress held at Ithaca in 1932 the press announced that the sex of human offspring can be predetermined by treatment which varies the acidity of the vaginal contents. In answer to inquiries Cole and Johanssen (*Jour. Hered.* 24, p. 263) discussed the treatment and exposed fallacies underlying the claims made for it. It seems certain that while sex ratios may be modified by factors which at present are mostly unknown, sex determination itself is brought about by the action of the X chromosome. (See YEAR BOOK for 1929.)

Contrasting interpretations of life activities are the mechanistic, which asserts that they are merely manifestations of complex chemical and physical forces, and the vitalistic, which claims that in addition to these mechanical forces there is some regulative mechanism not to be discovered by laboratory analysis, but which coordinates and regulates the distribution of energy set free mechanically. At the annual meeting of the British Association for the Advancement of Science both the president of the Association, Sir F. G. Hopkins and J. Gray, president of the zoölogical section, discussed this problem. The former concluded that such processes as growth, differentiation, reproduction,

etc. "are based upon organization which is in some sense higher than the chemical level." The latter held that the intrinsic properties of living matter are as mysterious and fundamental as those of an inanimate atom or electron, and it seems more logical to accept these properties as fundamental concepts than to assume that they can be defined in terms of purely physical laws. This was not intended as an argument for vitalism but as a plea against too great reliance on mechanism.

Rau (see INSECTS), in connection with his report on the behavior of jungle bees and wasps, concluded that all observations made on these animals indicate that psychic evolution has preceded organic evolution. He thought that there is first a mental "adventure" which by repetition becomes habit and finally is crystallized into instinct. This new instinct with its resulting mode of life places the animal into new relationship with its environment. In time, morphological variations appear which through the action of natural selection eventually give rise to adaptations. Earlier Allee had shown that many animals will live longer in a definite environment if they are present in considerable numbers than if they are solitary. This was the case with the flatworm *Procerodes* which lived longest in fresh water if moderately crowded, or if the water were some in which the same species had previously been living. Repetition of these experiments (*Phys. Zool.* 6, p. 1) corroborated these results and showed that a cane sugar solution, but not a number of other solutions, would give the same result. The reason for this reaction is not clear.

HEREDITY. It is now believed that identical (as opposed to fraternal) twins are produced as the result of the division into two of a single embryo at an early stage of development. Newman who based his conclusions on observations on the Texas armadillo in which quadruple births are the rule, thought that this division is due to the fact that for some reason there had been a temporary stoppage of the development processes which led to a loss of axial definition and when the development started up again it went on from two centres. Hamlett (*Quart. Rev. of Biol.* 8, p. 348) discussing this point brought forward evidence that such arrests of development are not necessarily followed by multiple births. It had been assumed that unfavorable physiological conditions arising during the delay were the immediate cause of the deformity, but Hamlett argued that similar physiological conditions arise elsewhere, and are not followed by abnormalities. He concluded that a definite genetic factor is responsible for the result, a belief which is generally held with respect to ordinary or fraternal twins. Detweiler (*Jour. Hered.* 24, p. 139) studied the records of 1333 descendants of Jean Bertolet, among whom there were 22 sets of twins. Adequate data concerning the female descendants were not available, but it seemed probable that if they had been, more twins would have been reported. The data seemed to indicate that twinning in this case was due to an inherited tendency transmitted through the male line. Hornboch and de Garis (*Jour. Morph.* 54, p. 37) reported on a human family history in which cataract appeared for several generations. In 59 individuals whose characteristics could be determined, 30 were affected. They decided that the gene for cataract is located on an autosome and

is irregularly dominant though in some cases it appears only under special conditions. These conditions may be endocrine or nutritional disturbances. Schultz (*Genetics* 18, p. 254) found that after treatment with X rays the next generation of the fruit fly *Drosophila pseudo-obscura* show as much as 66 per cent of deficiency of females as compared with controls. In *D. melanogaster* Muller got similar results except that the deficiencies are fewer in the latter species. It seems probable that treatment with X rays induces dominant lethal genes in the X chromosome and the fact that this chromosome is longer in the first of the above species explains why the per cent of deficiencies is greater in it. Hanson and Heys experimented extensively on the effect of irradiation on fruit flies. They found (*Am. Nat.* 67, p. 127) that, if the flies are starved before treatment, the death rate will increase but the per cent of sterility and rate of lethal mutation will decrease. It was suggested that as a result of starvation the cells are less active and hence less affected by irradiation. In a later paper (*l. c.*, p. 419), they stated that if flies are irradiated while under the influence of an anæsthetic the per cent of lethal genes increases, indicating that the physical condition of the animal is important in determining the effect of the treatment.

On the results of a study of 6000 relatively high grade Jersey cattle Gowen (*Genetics* 18, p. 415) reported that heredity accounts for most of the variations in size, environmental conditions having very little to do with it. His conclusion was that breeders have now utilized to a very high degree all of the naturally appearing hereditary characters. In the first edition of the *Origin of Species*, Darwin stated that in cats there is a correlation such that white cats with blue eyes are always deaf. In later editions the admission was made that there are many exceptions to this rule. Bamber (*Genetics* 27, p. 407) stated that whiteness in cats is either a dominant white or albinism. If dominant white occurs with blue eyes the animal is deaf. If the white is due to albinism this is not always the case. Geneticists designate as the "gene" the hypothetical thing that carries hereditary qualities from one generation to the next, and determines the appropriate differentiations in the cells of the developing body. Morgan decided that a gene is somewhat larger than a molecule. Also, it has been suggested that they are organic entities representing the most primitive forms of life. Holmes (*Science* 78, p. 309) offered as an alternative explanation the theory that they have arisen as the result of "crossing over" carried on through long series of generation of chromosomes. In mating, the chromosomes of egg and sperm come in contact and, later, either separate or exchange material, the latter process being known as crossing over. If the two chromosomes are not exactly alike at the beginning, it is evident that this exchange of material would produce variety in chromosomal composition, and this increased complexity carried on through millions of generations, has been the cause of diversifications in structure which have made evolution possible. Repeated crossing over throughout these millions of generations would have reduced the particles which cross to the smallest dimensions compatible with their perpetuation as individual units, and then they are genes. Without sex reproduction evolution could

not have gone beyond the production of simple organisms.

The nature of the gene was discussed by Demerec (*Jour. Hered.* 24, p. 369). He defined it as a minute organic particle capable of reproduction, located on the chromosome, and responsible for the transmission of hereditary qualities. Its size has been variously estimated at from 10 to 70 millimicrons. Probably it is a single organic molecule rather than a combination of molecules, and reproduces by forming a new gene by the side of the old one, rather than by a division of the latter. The chemical constitution of the gene may vary though some are more stable than others and there is generally a particular period in the life of the cell when changes are most apt to occur. The elimination of a gene, or its loss of power, probably would have a lethal effect on the body and for this reason gene changes which lead to mutations are not likely to have much effect on evolution unless they happen to coincide with favorable environmental conditions. The primary function of the gene is to regulate life processes of the cell.

If, as it is believed, identical twins develop from a single egg, which divides at an early stage of development, and because of this mode of origin, receive identical hereditary equipment, the study of identical twins, who were separated early in life and reared under different environmental conditions, should indicate whether environment or heredity plays the greater part in determining the adult personality. Newman (*Am. Nat.* 67, p. 193) reviewed the evidence collected by himself and others but called attention to the fact that environmental differences between twins reared apart might be much greater in some cases than in others. He decided, however, that the evidence indicates that hereditary influences are about twice as efficient as environmental. Later he recorded observations (*Am. Nat.* 67, p. 209), on twins now 13 years old who had lived apart from the age of one month. In this case the twin who had had the more varied and harder life showed more positive traits of character though this may have been due to slower development in the other. He found fewer differences between these twins than in other pairs but this may have been due to the fact that these twins were younger.

ANIMAL COLORATION. A much discussed problem is that of the meaning of animal coloration. From an examination of the contents of the stomachs of 80,000 birds McAtee concluded (see *YEAR BOOK* for 1932) that neither warning nor concealing coloration has any protective value, since insects possessing such coloration were found in the birds' stomachs in approximately the proportion in which they occur in the general population, and not in fewer numbers as would be expected if they were protected by their coloration. As a result of a study of the mammals in the Tularosa Basin, in southern New Mexico, Benson (*Univ. of Cal. Pub. in Zoology* 40) came to opposite conclusions. In this region there are two distinct areas, one of white sand dunes and one of lava beds which are very dark in color. The ground living small mammals, such as ground squirrels, mice, etc., in each locality are colored to catch their backgrounds, very light on the sand dunes and very dark on the lava. Benson was unable to discover any other environmental differences to which these colors could be referred as causal agencies, and concluded that they could

only be explained on the assumption of natural selection, the mammals being protected from their enemies by their coloration. McAtee's conclusions were criticized as not necessarily following from his observations.

Arguments for and against the protective value of concealing and warning coloration are based on the assumption that this coloration has the same appearance to the enemies of the animal that it has to man. So far as insects are concerned this is not an accurate assumption. Insects respond to the ultra-violet region of the spectrum in a way that indicates that this is the brightest part of the spectrum to them though it has no effect on the human retina. Lutz (*Nat. Hist.* 33, p. 565) recorded experiments showing that homing bees will be guided by the ultra-violet rays and also that such rays occur in the markings of many insects and flowers. From this it follows in many cases what an insect sees and what we see would be very different. Photographs taken so as to demonstrate the ultra violet areas on insects demonstrate that there are as many resemblances in these respects as there are in the colors which we see. Since it has not been shown that birds and reptiles are affected by these rays, it is questionable if such resemblances can have protective value. If these do not, it is doubtful if those that we see can have. A yellow spider sitting on a yellow flower is said to be concealed by this coloration from the vision of insects which approach and are caught. Photographs show that the flower has the ultra violet rays and the spider not, hence to insect vision there is no concealment.

PROTOZOA. While it has been customary to speak of protozoa as unicellular and metazoa as many-celled animals, some recent writers have argued that the original definition of cellular indicated that the body of an animal is divided into many definitely bounded areas or "cells," and since the body of a protozoon is not so divided it cannot be correctly termed cellular. Nowikoff (*Biol. Zent.*, in 53, p. 239) combating this notion, asserted that the older custom of referring to protozoa as unicellular is the correct one.

MOLLUSCA. In the oyster, action of cilia on the mantle and gills keeps up a flow of water through the shell which brings food and oxygen to the animal and carries wastes away. By means of a special apparatus Hopkins (*Jour. Exp. Zool.* 64, p. 469) was able to measure the rate of this flow under different conditions.

AMPHIBIA. Bacteria make up the food of some Protozoa but it has not been generally recognized that higher animals may also get their nourishment from these organisms. Burke (*Science* 78, p. 194) recorded results of experiments showing that tadpoles may live entirely on them.

INSECTS. Wheeler (Harvard Univ. Press) presented a suggestion as to the primitive method of colony formation in ants. His study was made on some Ponerine ants in Australia, this family of ants being regarded as primitive. Here the female founds the colony by digging a hole under a log or stone, thus making a cell in which the eggs are laid. From this nest she goes out for food for herself, and also after the larvæ appear, to get soft bodied insects for their food. In the higher ants the females have substituted such morphological specializations as large size, fat, etc., for the primitive foraging habits and the young are nourished at the expense of the materials of the female body.

Familiar insect pests are the "locusts" which in various parts of the world swarm in great numbers at irregular intervals and do an immense amount of damage to vegetation. It was thought by Uvarov (see *YEAR BOOK* for 1930) that the swarming individuals are a different variety from those that do not swarm, and differ from them in structural characters which have arisen in consequence of crowded conditions. Faure (*Bull. Ent. Res.* 23, p. 3) has experimental proof that the swarming can be transformed into the solitary phase and vice versa. Crowding of many individuals into limited space causes restlessness and perpetual activity on the part of the animals, and this results in rise of bodily temperature comparable to fever in higher animals. The final results are the peculiar structural changes and swarming.

BIRDS. The annual meeting of the American Ornithologists' Union was held in November at the American Museum of Natural History in New York City. At this meeting it was stated that an outstanding biological phenomenon is the recent disappearance of eel grass along the eastern border of North America and the consequent effect on bird life. Similar difficulties have arisen on the English coasts. By the end of 1931 fully 99 per cent of the eel grass along the Atlantic coast of the United States had disappeared and since it formed 80 per cent of the food of the brant the effect on the latter is disastrous. Other eel grass feeders, such as the Canada goose, are able to shift to other food and the mortality among them has not been so great.

While much is known concerning the facts of bird migration two questions are largely unsolved. One is why birds migrate when they do, and the other is, how do they find their way, often over very great distances. As to the first of these there is considerable evidence that the immediate stimulus is the condition of the sex organs. Increase in size of these organs due to ripening sex cells in the spring, and decrease due to ending of the sex phase in the autumn, afford internal stimuli for the northern and southern migration respectively. Cole (*Auk*, 50, p. 264) recorded results of experiments to test the theory that length of daylight hours determines the time of ripening of the sex cells. Cole kept a female mourning dove which in five previous years had never laid before April, in a room where under artificial light she was subjected to 19½ hours of daylight out of the 24. Control birds had only 10½ hours. The first bird laid eggs on Feb. 4, 5, 24, 25, while the first laid by the control was on March 15. The mourning dove breeds from Texas to Canada and Cole suggested that there are different geographical races, each of which is attuned to some particular length of day and, in its northern migration, stops where its appropriate length of daylight is found.

MAMMALS. Baker and Ranson (*Proc. Roy. Soc. Ser. B* 784, p. 486) reported on a study of the factors affecting the breeding of field mice *Microtus agrestis*.

ZUIDER ZEE. See RECLAMATION.

ZULULAND, zool'loo-land'. The northeastern portion of the Province of Natal, in the Union of South Africa, to which it was annexed Dec. 30, 1897. Area, 10,427 square miles; population (1921), 3985 Europeans and 254,371 non-Europeans. The European population at the 1931 census was 5790.

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